



Universiteit  
Leiden

The Netherlands

## **Prehistoric loanwords in Armenian: Hurro-Urartian, Kartvelian, and the unclassified substrate**

Nielsen, R.T.

### **Citation**

Nielsen, R. T. (2023, November 7). *Prehistoric loanwords in Armenian: Hurro-Urartian, Kartvelian, and the unclassified substrate*. Retrieved from <https://hdl.handle.net/1887/3656151>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3656151>

**Note:** To cite this publication please use the final published version (if applicable).

Kartvelian (also known as South Caucasian) is a small language family confined to the Caucasus region and its immediate surroundings. Four standard languages with respective dialectal subdivisions are distinguished. These languages are Georgian, the official language of the Republic of Georgia; Svan, spoken in the Svaneti region of northwestern Georgia; Megrelian (also spelled Mingrelian), spoken in the westernmost part of Georgia; and Laz, spoken along the Black Sea coast south of Batumi, mostly within the modern-day Republic of Turkey. Small pockets of Laz people also reside further to the south, west of Lake Van, and in and around Istanbul. Megrelian and Laz are collectively called the Zan languages. They show a high degree of mutual intelligibility and have often been considered dialects of a single language, Zan (Ge. *zanuri*) or “Colchian” (Ge. *kolxuri*). However, the modern distribution of these languages and their division across political boundaries has led to a convention of referring to them as separate languages. There is wide consensus about the internal subdivision of the Kartvelian family (see Harris 1991). Georgian and the Zan languages form a subgroup called Georgian-Zan (GZ, also known as Karto-Zan). This means that higher-order split is between Georgian-Zan and Svan. A tree depicting this simple phylogeny is shown in Figure 3.1.

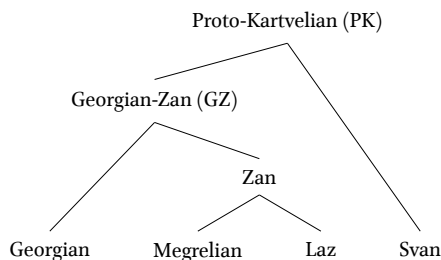


FIGURE 3.1: Phylogeny of the Kartvelian languages

Georgian is attested in the form of Old Georgian already since the fifth century CE, that is around the same time as the earliest attestations of Armenian. Like many of the other languages of the Caucasus, the remaining Kartvelian languages have no longstanding literary tradition, and their description thus began as late as the seventeenth century CE in the form of word lists collected by traveling explorers and merchants.<sup>1</sup> This naturally limits the understanding of their historical development, in particular that of the formally more divergent Svan. However, it appears that the divergence between Georgian and the Zan languages is not overly large and mostly characterized by transparent sound laws. Some key sound changes among these are covered in § 3.1.

Despite the relatively shallow time-depth separating the Kartvelian languages, as compared to the Indo-European, the location and dating of the Proto-Kartvelian and Proto-Georgian-Zan proto-languages remains disputed. Due to the paucity of early historical records from Transcaucasus, any hypothesis about the Kartvelian homeland and dispersal is forced to rely mainly on the scant documentation in Hittite, Assyrian, and Urartian sources.

By the beginning of antiquity, the present Kartvelian-speaking area was the home of two independent nations: Iberia (or Kartli) and Colchis (or Egrisi), roughly corresponding to the modern Georgian-speaking and Zan-speaking areas. The state of Colchis was in close contact with the Greeks, who established several trading colonies on the eastern Pontic coast. In Greek mythology,

<sup>1</sup>See Tuite (2008) for an account of early linguistic research in the Caucasus.

it is particularly famous for being the destination of Jason and the Argonauts in their search for the Golden Fleece. One of the larger Greek towns here, Φᾶσις, known already in Hesiod (ca. 700 BCE), can probably be identified with the modern day city of Poti, located at the mouth of the river Rioni. The Greek form of this place name suggests that its input *\*p<sup>h</sup>ati-* antedated the Greek assibilation *\*ti* > *si* on the one side, and the Zan vowel shift of *\*a* > *o* on the other (Schmidt 1962: 27, Gippert 2005: 154). It thus provides a *terminus post quem* for the latter change and an approximation of the time of the linguistic division of Zan from Georgian. Rayfield (2012: 17–8) emphasizes the events leading up to the fall of Urartu in the eighth and early seventh centuries BCE, when Transcaucasia and Anatolia were overrun by Cimmerian and Scythian invaders. This, he claims, caused a power vacuum that enabled Georgian-speaking groups to expand towards the Black Sea coast, effectively splitting the Zan-speaking area in two and giving rise to the current geographic separation of Megrelian and Laz. However, considering the aforementioned evidence of Gk. Φᾶσις and the close proximity between the Zan languages, it seems likely that shared Zan innovations still took place after the seventh century BCE. Certainly, a definitive cause of isolation between the two Zan groups would have been the later westward migration of Georgians due to Arab invasions in the seventh century CE.

### 3.1 Phonology

This section presents the most important phonological changes separating Georgian from the Zan languages. Here and in the following, the transliteration system applied to Kartvelian forms differs from the International Phonetic Alphabet and the Hübschmann-Meillet-Benveniste (HMB) system of Armenian transliteration in several respects. The character <ɖ>, which represents /dz/ (Armenian HMB *j*), is transliterated as *ṣ*. Its palatoalveolar counterpart <ʃ> (/dʒ/, Armenian HMB *j*) is transliterated as *ṣ̣*. Contrary to the traditional transliteration of Armenian, stops and affricates without diacritics (*p*, *t*, *k*, *c*, *č*) represent the voiceless aspirated series <ṗ ṑ ọ̄̀ ọ̣̄̀>, while the sounds of the voiceless glottalized series <ṗ̣ ọ̣̄̀ ọ̣̣̄̀ ọ̣̣̣̄̀> are marked with a diacritical dot (*p̣*, *ṭ*, *ḳ*, *c̣*, *č̣*).

### 3.1.0.1 Vowels

The Proto-Kartvelian vowels *\*e* and *\*a* are generally preserved in Georgian and Svan, but Zan regularly shifts *\*e > a* and *\*a > o*. Compare 1) Ge. *rʒe*, Sv. *ləʒe*, Laz *bʒa*, Meg. *bʒa* ‘milk’; 2) Ge. *ḱaci* ‘man’, Sv. *čaš*, Zan *ḱoči* ‘husband’. Word-finally PK *\*a* is preserved, however. PK *\*o* is usually preserved in Zan, but is raised to *u* in specific labial environments (Harris 1991: 13). This change affects also *\*o* from PK *\*a*, cf. Ge. *sami*, Zan *sumi* ‘three’. Zan shows umlaut of *\*a > e* when a front vowel appears in the next syllable, cf. Ge *laši*, Meg. *lečkvi* ‘lip’.

### 3.1.0.2 Sibilants and affricates

Like Armenian, all Kartvelian languages have two series of sibilant-affricates: a dental-alveolar, ‘hissing’ series (symbolized *S*) and a palato-alveolar ‘hushing’ series (symbolized *Š*). Both of these series have voiceless (aspirated) and voiced phonemes, while the affricates also have glottalized variants, mirroring the distribution of stop consonants. However, the correspondence between these series within the Kartvelian family is not parallel. An isogloss separates the Zan and Svan branches on the one side from Georgian on the other. Note the correspondence sets in Table 3.1.

	I	II	III
<b>Georgian</b>	<i>s, z, c, ʒ, ɟ</i>	<i>s, z, c, ʒ, ɟ</i>	<i>š, č, ʃ, ǰ</i>
<b>Zan</b>	<i>s, z, c, ʒ, ɟ</i>	<i>š, ž, č, ʒ, ǰ</i>	<i>šk, čk, ʒg, ǰk</i>
<b>Svan</b>	<i>s, z, c, ʒ, ɟ</i>	<i>š, ž, č, ʒ, ǰ</i>	<i>šg, čk/šg, ʒg, ǰk/šk/h</i>

Table 3.1: Correspondences of Kartvelian sibilants and affricates

These correspondences present at least two possibilities for the reconstruction of the Proto-Kartvelian system. One view, proposed by Mačavariani (1965) and Klimov (1964), and also employed in the etymological dictionary of Fähnrich (2007), holds that Proto-Kartvelian possessed three series of sibilants and affricates. For correspondence sets I and III, the reconstructed phonemes match their Georgian reflexes, i.e. *\*S* and *\*Š* respectively. For correspondence set II (*S* in Georgian, *Š* in Zan/Svan), an intermediary type of sibilant is reconstructed, called *sisini–šišini* ‘hissing–hushing’, and

variously notated as  $*S_j$ ,  $*\dot{S}$ , or  $*S'$ . Several objections can be raised against this reconstruction. First of all, a phonological system with such a large number of articulatorily close fricatives may seem typologically unusual. This is not the most important objection, however. A three-way opposition of sibilants can be found in, e.g., Polish and Serbo-Croatian, while a four-way opposition (i.e.  $/s/$ ,  $/\dot{s}/$ ,  $/\xi/$ ,  $/\epsilon/$ ) is known to Ubykh (West Caucasian). A more serious problem with the reconstruction, however, is the putative development of the  $\dot{S}$ -series in Zan and Svan, where it corresponds to clusters  $\dot{S}K$ . The velarization and fortition of a sibilant or affricate into a stop cluster is not phonetically impossible, but the opposite development is far more common typologically. At the same time, the rarity of such a development makes it all but necessary to assume that it did not happen independently in the Zan and Svan languages. Still, these two branches cannot be considered to form a subgroup within Kartvelian. Therefore, the reconstruction of a three-way distinction of sibilants and affricates in Proto-Kartvelian leads to the assumption that the “Western” dialects, Zan and Svan, formed a temporary *Sprachbund* after the dissolution of the proto-language. There are no other certain indications that this was the case, however. One way to circumvent the problem is to assume that the  $\dot{S}$  series was velarized already in Proto-Kartvelian (thus  $*\dot{S}^v$ ), but the fortition of the velar element in all positions is still a significant phonological innovation that could hardly have taken place independently. Furthermore, a system  $*S$ ,  $*S'$ ,  $*\dot{S}^v$ , where only the palatal series is also velarized, is quite strange. A system  $*S$ ,  $*S'$ ,  $S^v$  is more realistic, but it would render unexpected the development to Georgian  $S$ ,  $S$ ,  $\dot{S}$ , where the velarized series palatalizes, but the palatalized does not.

As a result of these problems, an alternative scenario is proposed by Schmidt (1961, 1962: 54–67, 1978), who holds that Proto-Kartvelian possessed only two series of sibilants and affricates:  $*S$  and  $*\dot{S}$  reflected by correspondence sets I and II respectively. For correspondence set III, on the other hand, the clusters found in Zan and Svan are considered to be inherited from Proto-Kartvelian  $*\dot{S}K$ . Schmidt envisages a push chain where Georgian simplified these clusters, followed by the merger of PK  $*S$  and  $*\dot{S}$ . This theory has the benefit that it only one, relatively late, change in Georgian needs to be assumed. It avoids the postulation of a phonetically unusual Zan-Svan isogloss. The principal downside to Schmidt’s reconstruction is the very small number of cases where a  $\dot{S}K$ -cluster seems to

have been maintained in Georgian. A straightforward explanation for some of these cases is borrowing from Zan, but the exact conditioning may be obscured by the rather limited material.<sup>2</sup> Another potential problem is Ge. *švid-*, Zan *škvit-*, Sv. *i-šgwid* '7', which is allegedly a Semitic loanword (cf. Ass. *šibittu* < Proto-Semitic \**šabʕ-*). If so, it would reveal the secondary nature of the ŠK-clusters as the input must have been something like \**šiwit-*. Even if the loan hypothesis is true, however, it could be that PK \**škwit-* reflects a metathesis of \*\**šiwkit-* where \**k* substitutes the glottal stop in \**šiwʕit-* (cf. Testelec 1995). Alternatively, Georg (2002) assumes that the Zan and Svan forms were influenced by the numeral '6' (Ge. *ekvs-*, Meg. *amšv-*, Sv. *usgwa* < PK \**ekšw-*), thus \**ekšw-* : \**šwid-* ⇒ \**ekšw-* : *škwid-*. After all, however, I find it most probable that the Kartvelian and Semitic numerals are simply unrelated.

Notwithstanding these minor caveats, I believe the reconstruction of clusters and two series of sibilants and affricates for Proto-Kartvelian is the most economical and phonetically realistic solution (see also Manaster Ramer 1994, Testelec 1995). Out of convenience, I follow the notation *S*, *Ś* (= /*š*/), and *Š* (= /*šK*/) in order to allow for easier comparison with the etymological dictionaries. However, the underlying phonetic reality of these symbols plays an important role in the research on loanwords and will be taken into account where it is relevant.

### 3.1.0.3 R-affrication

Proto-Kartvelian \**r* yields *ž* in both Zan languages in the position between any vowel and *i*, which frequently appears as the NOM.SG ending of consonant stems: GZ \**mćer-* > Ge. *mćer-* 'insect', Meg. *mčaž-* 'fly'; PK \**pur-* > Ge. *pur-*, Sv. *pirw*, Zan *puž-* 'cow' (for details, see Schmidt 1962: 77). The split of the PK phoneme \**r* is clearly seen in GZ \**qur-* > OGe. *qur-* 'ear', Meg. *ŋuž-* 'ear' vs. \**qura* > Meg. *ŋura* 'deaf' (Laz *quža* 'deaf' with generalized affricate). This shows that there was no separate phoneme \**rʲ* (vel sim.) but it may have been

<sup>2</sup>Note also that of the ten lexemes found in Klimov 1964 that begin with a ŠK-cluster in both Georgian and at least one other Kartvelian language, five are not attested in Old Georgian and are potential recent borrowings from Zan or Svan. Some of the remaining five have semantics that are perhaps liable to sound symbolic influence, cf. e.g. Ge. *skel-* 'thick, clumsy', Meg. *zirg-al-* 'clumsy'; (2) Ge. *škintl-*, *čkintl-*, Zan *čkinṭil-*, Sv. *škidil-* 'bird droppings'.

present as an allophone already at the Georgian-Zan stage. This is suggested by the reflex *ž* found in some Georgian dialects, e.g. Guruli, Imeruli *ḱvežo* ‘wooden hammer’ (presumably ← *\*ḱveži*), cf. Ge. *ḱver*-‘hammer’ (Schmidt 1962: 119).

#### 3.1.0.4 Wucherlaute

Within Kartvelian, in particular the Georgian-Zan languages, certain sounds, especially nasals *n* and *m*, but also frequently *r*, are inserted and/or dropped word initially and before other consonants, seemingly at random. Several examples and a discussion of these so-called *Wucherlaute* (or *Fülllaute*) are offered by Deeters (1927: 8–13), Neisser (1953: 10–12), and Schmidt (1962: 89–91). Compare again Meg. *čanž-*, Laz *mčaž-* ‘fly’ and Georgian *mčer-* ‘insect’ < *\*(m)čer-*, where the insertion of *-n-* in the Megrelian form and the initial *m-* of the Georgian and Laz forms has no known morphological function or phonological conditioning. While the metathesis of *-n-* is most common in the Zan languages, the word-initial *m-* before consonants (except labials) is widespread in both Georgian and Laz – less so in Megrelian. In Proto-Kartvelian reconstructions, the initial *\*m-* often appears in parentheses. The origin of these *Wucherlaute* is unknown, and so is the question of whether some of them used to have morphological content or result from sound changes that are still not understood. In the following, I follow the Kartvelological tradition of treating them as etymologically irrelevant, discussing them only when it has potential consequence for the source of a loanword into Armenian.

### 3.2 Indo-European, Armenian, and Kartvelian

The lexical and typological similarities of Indo-European and the languages of the Caucasus is a topic with a long research history, which continues to attract interest.<sup>3</sup> Often in this field of research, lexical matches between Indo-European and Kartvelian are identified on the basis of formal and semantic similarities and then presented as evidence for direct contact between their respective protolanguages. Thus, some scholars have claimed to identify a

<sup>3</sup>See, for example, the contributions to this problem in the thematic volume 47 of the *Journal of Indo-European Studies* (2019).



quite significant number of loanwords from Proto-Indo-European into Proto-Kartvelian and Proto-Georgian-Zan (e.g. Gamkrelidze & Ivanov 1995: 774–6, Klimov 1991 and 1994a, Smitherman 2012). Subjected to closer scrutiny, many of these proposals are phonologically and/or semantically problematic, at least under the assumption of direct contact between the two proto-languages (cf. Simon 2022).<sup>4</sup>

Of the various sources of loanwords in Armenian, the Kartvelian languages have received relatively little attention in mainstream research. A common claim, which to some extent is justified, is that given the long neighbourship between Armenian and the Kartvelian languages, the lexical influence from the latter upon the former is surprisingly limited in comparison with the influence from Middle Iranian, Greek, and Syriac. Less justified is the slapdash way in which all of the languages north of Armenian, frequently under the common geographic header “Caucasian”, have often been assigned a completely marginal role in the linguistic history of the region. Hübschmann (1897: 396) accepts exactly one loanword from a Caucasian source and does so with a rationale that might appear preposterous to twenty-first century readers: “[...] dass überhaupt die mit höherer Intelligenz und Kultur begabten Armenier den Georgiern, Albanern u. s. w. gegenüber stets mehr die Gebenden als die Empfangenden waren.” However, as outdated as this phrasing appears now, the assumption that Armenian, at the time of its prehistoric expansion into the South Caucasus, was a language of higher status (i.e. a superstrate) may in essence be true, as shown by typological (especially phonological) commonalities, which are discussed below.

It seems likely that the nature of contacts between Armenian and respectively Kartvelian, Nakh-Daghestanian (ND), and West Caucasian (WC) was quite different. At least, typological influence from the latter two upon Armenian cannot be demonstrated. On the other hand, lexical exchange between Armenian, Nakh-

<sup>4</sup>For instance, one of the most frequently cited examples is PK *\*diɣwam*- ‘soil’ ← PIE *\*dʰ(e)ǵʰom*- ‘earth’. While the similarity of the forms is quite striking, the replacements *\*e* → *\*i*, *\*ǵʰ* → *\*ɣ* and *\*o* → *\*wa* are not easily explained. Moreover, the word is only found in Svan (Lašx) *diɣwam*- ‘fruitful soil’ and in Georgian (Imereti, Rača) *diɣvami* ‘wealth’, otherwise perhaps related to the toponym *Diɣomi* (Klimov 1994a: 51–3, Fähnrich 2007: 134). If the word actually existed in Proto-Kartvelian, we cannot really be certain whether it meant ‘soil, earth’ or ‘property’.

Daghestanian, and West Caucasian respectively, is a severely understudied research topic, and the reconstruction of their respective proto-languages is still in its early stages. A systematic study of the contact between Armenian and these languages will probably be more fruitful when the reconstruction of PWC and especially PND (not to mention the question of their potential relationship), has been further developed. Therefore, a systematic study of loanwords from West Caucasian and Nakh-Daghestanian falls outside the scope of the present study. Nevertheless, it appears destined to become an important topic in future investigations. A few loanwords from especially Daghestanian have been identified as part of this research but are mainly discussed in Chapter 4.

In contrast, the research of Armenian-Kartvelian mutual influence has a long history with relatively positive results. Marr (e.g. 1912) provided some of the first lexical comparisons. Deeters (1926, 1927) focused especially on phonological, morphological, and syntactic ‘isoglosses’, but stated that lexical borrowing had been insignificant. This claim was challenged somewhat by Vogt (1938), who poses not only Kartvelian (Georgian and Zan) borrowings in Armenian, but also loanwords into Kartvelian languages from a quite early period in the development of Armenian. Łap<sup>c</sup>anc<sup>c</sup>yan (1952) added several more borrowings to and from Zan, many of them concerning only Armenian dialects, however. Ĵahowk<sup>c</sup>yan (1973a) takes over from Vogt and focuses especially on the earliest loanwords from Armenian into Kartvelian languages, showing archaic phonological traits, in particular the preservation of the final syllable, adding to these in his later works as well (especially Ĵahowk<sup>c</sup>yan 1987). A discussion of both shared typological features and loanwords is provided by Cardona (1983), while Greppin (1999) provides another useful (but non-exhaustive) overview. More recently, important contributions have been offered by Gippert (1993) on shared loans from Iranian; as well as lexical and typological considerations (Gippert 1994, 2005).

Although the scope of this work is limited to lexical exchange, I shall briefly summarize some crucial phonological and morpho-syntactic features shared by Armenian and the Kartvelian languages. The following innovative features of Classical Armenian shared with the Kartvelian languages may be emphasized (cf. Deeters 1926, 1927, Schmidt 1992, Gippert 2005).

1. The Proto-Armenian paroxytone accent, followed by syncope, resulting in the fixed, oxytone accent in Classical Armenian. In the modern Kartvelian languages, accent is free, but historic syncope points (with some exceptions) to an older paroxytone accent (Deeters 1926: 47–57, cf. Meillet 1936b: 23).
2. The loss of length distinction in vowels and the lack of geminate consonants. The vowel systems of Armenian and Georgian are nearly similar, consisting of /i u e o a/ and no true diphthongs (except for a historic /ei/). Geminates cannot be reconstructed for PIE, so their absence in Armenian does not constitute an innovation and is less significant.
3. Armenian consonantal changes, including the sound shift of stops, the affrication of palatals (satəmization), and the secondary palatalization, all resulting in a system highly similar to the Georgian and Zan systems (see Table 3.2). This is arguably the most significant agreement between the two languages (cf. Gippert 2005: 142–4).
4. The Armenian metathesis in clusters of old mediae (aspiratae) and resonants has parallels in Megrelian, cf. Meg. *orko* vs. Ge. *okro* ‘gold’. Since this change is not universal within Kartvelian, it seems possible that the Megrelian changes is the result of Armenian influence, or influence from a shared substrate, rather than the opposite. On the possibility that the Armenian metathesis happened under the influence of Uartian, see Kassian & Yakubovich 2002: 46.
5. The complete loss of IE grammatical gender, which is also absent in the Kartvelian languages. At the same time, Hurro-Uartian languages also lack grammatical gender, but note, in contrast, the Nakh-Daghestanian languages, where only a few languages lack gender and as much as eight noun classes are found in Batsbi (Ganenko & Maisak 2020: 100). Within West Caucasian, a gender category exists in Abkhaz and Abaza.
6. The Armenian use of the genitive case to express the agent in transitive constructions with the past participle is claimed by Deeters to have been influenced by Kartvelian, which shows ergative-absolutive alignment limited to past tense verbal clauses (‘split ergativity’), cf. also Stempel 1983. However, the Armenian feature has also been ascribed to Middle Iranian influence (R. Meyer 2017: 109–60).

Armenian	p	p <sup>h</sup>	b	t	t <sup>h</sup>	d	k	k <sup>h</sup>	g	ts	ts <sup>h</sup>	dz	tʃ	tʃ <sup>h</sup>	dʒ
Georgian	pʼ	p <sup>h</sup>	b	tʼ	t <sup>h</sup>	d	kʼ	k <sup>h</sup>	g	tsʼ	ts <sup>h</sup>	dz	tʃʼ	tʃ <sup>h</sup>	dʒ

Table 3.2: Stops and affricates in Classical Armenian and Old Georgian

These observations imply that, upon entering its historical region, Proto-Armenian was subjected to a phonological substrate from the local, Kartvelian languages. Within a contemporary framework of contact-induced language change based on cross-linguistic typology (e.g. Thomason & Kaufman 1988, Aikhenvald 2006, Donohue 2013), this type of change is consistent with a scenario in which speakers of Proto-Armenian were an intrusive but socially dominant minority. In the event that Armenian received a morphosyntactic overlay from Kartvelian, it would indicate a contact situation where Proto-Armenian speakers were socially subordinate to Kartvelian speakers, contradicting the evidence provided by phonology. However, such a morphosyntactic overlay cannot be decisively demonstrated. Naturally, the social status of the various language groups may have changed over time, allowing for the shifting exchange of phonology, morphology, syntax and lexicon. As stated before, the main scope of the present work is limited to lexical exchange. Loanwords moving between Kartvelian and Armenian are thus the main focus of this chapter.

3.3 Kartvelian loanwords in Armenian

Of the earliest Kartvelian loanwords that can be identified in Armenian, the large majority seem to have been adopted from the Zan branch (cf. Ĵahowkyan 1987: 595–7, Greppin 1999). This is also the conclusion that presents itself on the basis of the comprehensive, but rather uncritical overview offered by Cardona (1983: 48–63). Loanwords that can be positively identified as Zan are discussed in § 3.3.1. Apart from these loans, it is possible that some words entered Armenian from other Kartvelian sources, in particular Georgian, but the examples are fewer and mostly ambiguous with respect to whether the donor language was Georgian or Zan. These forms are discussed in § 3.3.2. Even more words have similar forms in Armenian and one or more Kartvelian languages, but

the trajectory of borrowing is uncertain or unknown, because the etymon in question does not have a deeper etymology on either side. Some of this material is presented in § 3.5, but it does not permit much discussion.

I do not offer a detailed treatment of every single previous proposal for Kartvelian loanwords in Armenian, but limit myself to presenting the most convincing material. Some proposals worth explicitly rejecting are briefly discussed under § 3.3.3, however. I have generally ignored words with a narrow, dialectal distribution in Armenian as well as words not attested in the oldest literature, since these may be very late loans.

That said, these later loanwords are generally relevant to the study of Armenian, because they hold a sometimes untapped potential to solve a number of etymological issues. Moreover, they can help shed light on the prehistoric social interaction between speakers of Armenian and Kartvelian languages. Hitherto, the Kartvelian stratum of loans has not been given much attention in mainstream literature. For example, Clackson (2017: 1123) states that “there are almost no loanwords from South Caucasian languages which are widespread and long established in the Armenian lexicon”. With this in mind, it is clear why a discussion of these loans have a place in the present work.

### 3.3.1 Zan loanwords

The basis for distinguishing the source of these loanwords as Zan as opposed to Georgian are the phonological changes outlined in § 3.1. In some cases, a relevant Zan form is not directly attested. However, as we have seen, the split from Georgian happens comparatively late, meaning that the Zan form can be reconstructed with a high degree of confidence. In the following, note that the designation Zan is used as a cover term when forms in Megrelian and Laz are identical. Moreover, there are reconstructions that are either not reflected in both Megrelian and Laz or antedate one or more phonological changes shared by both these languages. Although in a strict sense, they thus belong to a “Pre-Proto-Zan” stage postdating the breakup of Proto-Georgian-Zan, they are conventionally labelled Proto-Zan (PZ) in the following.

III 1. *Էրինջ* *erinj* (o/u) ‘heifer, young cow’ ← Zan *\*erinǰ-*, cf. Meg. *orinǰ-*, *oriǰ-*, *orǰ-* ‘cow, cattle’ (Marr 1912, cf. Łap‘anc‘yan 1952: 19). Armenian borrowed the word from a form that had undergone the regular Zan umlaut (§ 3.1.0.1). The umlaut was reversed in the attested Megrelian form, presumably on the basis of other (unattested) derivatives of the same root.<sup>5</sup> This root may be PK *\*(a)r-* ‘to be’ (Meg. *or-*, cf. Fähnrich 2007: 336), and the suffix can be identified with Meg. *-e/i(n)ǰ-* < PK *\*-ar-* (cf. Meg. *ma-r-enǰ-* ‘being’). The semantic development is paralleled in Meg. *čxou* ‘cow’ from *\*čxow-* ‘to live’ (cf. III 9). Arm. *erinj* is usually compared to Gk. *ἐρίφος* ‘kid’, Li. *(j)éras* ‘lamb’, OIr. *heirp* ‘deer’ (EIEC 511, Olsen 1999: 185, EDA 144), but the semantics of these alleged cognates are quite disparate. The formation of the Armenian word with a feminine suffix *\*-nih<sub>2</sub>* > *\*-nǰa* is unusual and makes it necessary to assume secondary transfer from the *a*-stems to the *o*-stems. Moreover, the assumption of a loan from Armenian into Zan (e.g. from a form *\*u/wrinǰ*; EDA 265) is phonetically problematic. In comparison, the assumption of a Zan loan in Armenian is unproblematic, and the Zan word can be explained as a native derivation.

Marr (1912) further compares Arm. *arjaŋ* ‘herd of cattle’ < *\*ariǰ-ar* (? < *\*oriǰ-*). However, the Armenian suffix *-ar* is difficult to account for in this word, as it is generally rare and typically appears in adjectives only (see Greppin 1975: 50–1). Given the perfect semantic match with Meg. *oriǰ-*, however, I hesitate to reject the loan hypothesis entirely. At any rate, it is more convincing than the derivation from *arǰn* ‘black’ (EDA 144, following Scheftelowitz).

Arm. *oroǰ*, *aroǰ* ‘lamb’ has no established etymology.<sup>6</sup> I would propose that it is borrowed from a Zan form *\*oroǰ-*. This may likewise be a derivation of PK *\*(a)r-* ‘to be’, parallel to Meg. *orinǰ*. We can reconstruct GZ *\*ta-r-ar-i* > *\*o-r-oǰ-i*, with the same circumfix as in Ge. *sa-cxov-ar-* ‘cattle’, Zan *\*o-čxow-ar-* ‘sheep’ from the verbal root

<sup>5</sup>Alternatively, the ostensible substitution *o* → *e* in Armenian could be explained by assuming that the borrowing took place before the change of *\*o* > *a* in pretonic, open syllable. Subsequently *\*arinǰ* would have become *erinj* by generalization of the rule that the prothetic vowel has the quality *e*- when the root does not contain a labial vowel (EDA 716–7). This distribution is also seen in Iranian loanwords: compare *aroyr* ‘brass’ ← *\*rauḍa-* (MP *lwd*) vs. *erašt* ‘dry’ ← *\*raštV-* (NP *rašt* ‘dry’).

<sup>6</sup>Kölligan (2019: 181–2) treats it as an original compound *\*pro-g<sup>w</sup>h<sub>2</sub>ih<sub>2</sub>*, cf. Gk. *πρόβατον* ‘cattle’. For lack of other examples, it remains uncertain whether the laryngeal in the cluster *\*g<sup>w</sup>h<sub>2</sub>i-* would actually result in aspiration to *\*g<sup>w</sup>h<sub>2</sub>-* > Arm. *-j-*, as must be assumed.

\**ćxow*- ‘live’ (see III 9). In the form \**orož*-, the non-umlauted vowel of the second syllable shows that the loan must be older than *erinj*. Given this relatively old dating, we would expect the loan to predate the change of \**o* > *a* in the first (open) syllable. This change was presumably blocked in some dialects, because the second syllable contains another rounded vowel (cf. Kortlandt 1983b: 10).

III 2. *խոճկոր* *xočkor* (*a*) ‘piglet’ ← Zan \**γož*-(*kor*-) ‘pig’ (Ačaiyan 1909: 160, HAB II: 389). Cf. Zan *yeži*, Ge. *γori* ‘pig’ < PK \**γor*- with affrication of \**r*- before a front vowel (NOM.SG -*i*) in Zan (Fähnrich 2007: 491–2). The borrowing must have antedated the shared Zan umlaut of \**o* > *e* (§ 3.1.0.1, Schmidt 1962: 48), unless this form was never umlauted because it was part of a compound.

The element \**kor* seems to be a separate lexeme meaning ‘young of an animal’, but this word is not independently attested, and its etymology has not been given much attention in the literature. Ačaiyan (1909: 160, HAB II: 389) identifies \**kor* with the root of Arm. *koriwn* ‘whelp, cub’ without specifying their shared history much further. Arm. *koriwn* is often compared to Gk. βρέφος ‘foetus, infant, young of an animal’ and OCS *žřebę* ‘foal’, under the assumption of roots \**√g<sup>w</sup>reb<sup>h</sup>*- and \**√g<sup>w</sup>erb<sup>h</sup>*- with *Schwebeablaut* (Pedersen 1911). If this root etymology is correct, Arm. \**kor* ‘young of an animal’ cannot reflect an old thematic stem \**g<sup>w</sup>orb<sup>h</sup>-eh<sub>2</sub>*-, because there would be no way to explain the loss of \**b<sup>h</sup>*. For Arm. *koriwn*, Pedersen (1911: 492) thus suggests an original *n*-stem \**korb-n* with loss of the inter-consonantal \**b* and replacement of the suffix as in Arm. *ankiwn* ‘corner’ vs. Gk. ἄγκων ‘elbow’ (< \**√h<sub>2</sub>enk*-, cf. Pedersen 1906a: 395). In Arm. *xočkor*, however, the motivation for a subsequent transfer from an *n*-stem to the *a*-stem would remain unclear. Olsen (1999: 491–2) reconstructs \**g<sup>w</sup>reb<sup>h</sup>-nt*-, formally close to OCS *žřebę*, and assumes the insertion of a prop-vowel in the initial syllable to explain the outcome *kor*- (instead of \**Vrk*-). In this scenario, a connection with \**kor* would be even harder to defend.

At the same time, *koriwn* has also been treated as a loanword. Already Schröder (1711: 45) compares Syr. *gūryā* ‘young of an animal’. Hiwnk<sup>e</sup>earpēyēntean (1894: 35) compares Gk. κόρος ‘(unborn) boy, shoot’, κόρη ‘girl’. Bugge (1893: 85) adduces Chechen *korni* ‘young of an animal, nestling’ (cf. also Ingush *korig*; Budukh *korā*, Lezg. *qerex* ‘young of a domestic animal’; Nikolayev & Starostin 1994: 731–2). The Nakh-Daghestanian forms provide the best formal and semantic

match. The assumption of a loanword is quite unlikely for Arm. *korīwn*, however, because the suffix *-īwn* is synchronically associated with verbal nouns Olsen 1999: 492 and would be difficult to understand as a late addition. It is therefore likely that *korīwn* should be kept apart from *\*kor* after all. While the former may still be inherited, the latter form can be treated as a loanword. It was not necessarily borrowed into Armenian, however. Because the word is not found outside the compound *xočkor*, it is most economical to assume that it represents an unattested Zan form *\*kor-*, borrowed from a Nakh-Daghestanian language.

It is unclear whether Arm. *kočan* ‘porker’, with its divergent initial *k-*, is ultimately related to the forms discussed above, as assumed by Ĵahowkjan (1973a: 94 fn. 8) (cf. EDA 161). This word looks more similar to Ge. *goč-* ‘piglet’, but the suffix *-an* suggests that the immediate donor for the Armenian word was Iranian. Marr (1909a: 158) and Łapčanc’yan (1952: 22) compare Arm. *kinč*, *kinj* ‘wild boar’ with the Kartvelian forms, but this is both formally impossible and semantically questionable.

**Armenian *xoz*** I further propose that a reflex of PK *\*yor-* ‘pig’ was the source of Arm. *xoz* (*i/a*) ‘pig’. To explain the final *-z* against *-č-* in *xočkor*, I assume that *xoz* was an earlier borrowing of a form *\*yorj-*, *\*yo(r)ž-* (vel sim.) → PA *\*xoz-* (if not *\*xoji-*, later > *\*xozj-*).<sup>7</sup> The fact that Arm. *xoz* is frequently attested as an *i*-stem allows us to assume that it was borrowed before the apocope, and that the Kartvelian NOM.SG marker *-i* was reinterpreted as a stem vowel. While the intermediate stage in the development of intervocalic *\*-r-* > *-ž-* in Zan is not directly attested, it is reasonable to assume that

<sup>7</sup>The assibilation of intervocalic *\*-j-* > *-z-* is regular, cf. Arm. *lizem* ‘to lick’ < *\*lējem* < *\*leǵ<sup>h</sup>-e/o-*, but the relative dating of this change is difficult. Ravnæs (1991: 154, 280) suggests that it is “fairly recent”, claiming it did not affect affricates that became word-final after the apocope. However, the only example he provides has *\*-j-* instead, i.e. *měj* ‘middle’ (Lat. *medius*). Elsewhere (1991: 38 fn. 2), Ravnæs points out that the only example of the assibilation *\*-j-* > *-ž-* is *iž* ‘viper’ (< *\*h<sub>1</sub>eg<sup>whi</sup>-*, cf. Gk. ὄφις ‘snake’), which happens to contradict the idea that the assibilation postdates the apocope, unless one assumes levelling from the oblique. In any case, the vowel *i* must have been taken from the oblique in this word, since the expected development is *\*h<sub>1</sub>eg<sup>whi</sup>-* > *\*ēj/ž-*, OBL *iži-*. There are no examples of an etymologically clear, word-final *-j* that may confirm whether the affricate was preserved in this position. Assibilation before apocope is supported by *dēz* ‘heap’ (< *\*d<sup>h</sup>oiǵ<sup>h</sup>o-*, cf. Gk. τοῖχος ‘wall’), although we cannot exclude that it is borrowed from Iranian (Olsen 1999: 204).



the sound change must have passed through a stage that would have been close to Arm. *z* or *j*. In some western Georgian dialects, intervocalic *\*r* yields *-ž-*, cf. Guruli, Imeruli *kvežo* ‘wooden hammer’ (presumably ← *\*kveži*), cf. Ge. *kver-* ‘hammer’ (Schmidt 1962: 119). This suggests that *\*r* was already allophonically palatalized in the position before front vowels at the Proto-Georgian-Zan stage. In that case, Arm. *xoz* may be one of the oldest loans from Kartvelian, as we have no other examples of loans that must be from Proto-Georgian-Zan.

III 3. ღაღ *kał* ‘lame, crippled’ ← Zan *\*kał-*, cf. Ge. *kel-* ‘to be lame’ (Klimov 1998: 89). The donor form is unattested in Zan, but must be an adjective based on the verbal root found in Georgian and shows the regular Zan change of *\*e > a*.

III 4. ღაღ *kar* (*o*) ‘rope, string’ ← Zan *\*karo-*, cf. Ge. *ker-va* ‘sewing, stitching’ (Vogt 1938: 333, Cardona 1983: 50). Much like in the case of *kał* (3), this word is comparable to a GZ root *\*ker-* ‘to sew, stitch’ with the the Zan change of *\*e > a*. I assume that the donor form, like the Armenian form, was an *o*-stem, which additionally helps explain the lack of *r*-affrication in Zan (§ 3.1.0.3).

III 5. ღაღ *kčowč*, *kčič* (*o*) ‘vessel’ ← Meg. *čkuž-*, *čkud-* ‘vessel, coffin’, Ge. *čur-* ‘vessel’ (Łap<sup>c</sup>anc<sup>c</sup>yan 1952: 37). Since Armenian has no other examples of Zan loanwords with an initial cluster of affricate and stop, it is impossible to say whether the metathesis is a regular adaptation.

III 6. ღაღ *čanč* (*i*) ‘fly’ ← PZ *\*čanž-* ‘fly’ (Meg. *čanž-*, Laz *mčāž-*) (Marr 1909b: 72, HAB III: 184–5, Cardona 1983: 49, Schmidt 1992: 288). The Georgian cognate is *mčer-* ‘insect’, reflecting PK *\*mčer-* (Klimov 1964: 249).<sup>8</sup>

III 7. ღაღ *čipr* (*a*) ‘blearedness, rheum’ ← Zan *\*či(r)pur-*, cf. Ge. *čirpl-*, Meg. *čirp-* ‘rheum’ (Vogt 1938: 332, Łap<sup>c</sup>anc<sup>c</sup>yan 1952: 37–8, Schmidt 1992: 288). Either the Armenian or the Zan form underwent dissimilation from *\*čirp-ur-*. The expected outcome is Arm. NOM.SG *\*čpowr̥*, so the attested form must be a secondary creation on the basis of OBL *čp̥r̥o*.

<sup>8</sup>This stem is occasionally considered to be a derivation of *\*čer-* ‘to scratch, write’ (Fähnrich 2007: 648–9), which seems doubtful for semantic reasons.

III 8. ջալոտ *jalot* (*i*) ‘cudgel’ is apparently a derivation of Laz *žal-* ‘wood, tree’, Ge. *žel-* < PK *\*žel-*. A comparable formation is found in MidA *lakot* ‘puppy’ < Laz (Xopi) *laḳoṭ-* ‘puppy’, cf. Ge. *leḳv-* ‘id.’ (Vogt 1938: 332).

III 9. *ռջխար* *oč̣xar* (*a*) ‘sheep’ < PZ *\*o-čxow-ar-* (Vogt 1938: 332–3, Gippert 2005: 154–5). The Zan reconstruction is the expected reflex of PK *\*ta-čxow-ar-*, cf. Ge. *sa-cxovar-* ‘livestock’ (Fähnrich 2007: 586)<sup>9</sup>. The stem without this prefix is seen in *\*čxow-ar-* ‘live animal, sheep’ (Ge. *cxovar-*, Meg. *šxur-* [with unexpected spirantization], Laz (*m*)*čxur-* ‘sheep’; Klimov 1964: 231). This stem is derived from the verbal root *\*čxow-* ‘to live’, cf. OGe. *cxovreba* ‘live’, cf. also Meg. *čxou*, *čxu(u)* ‘cow’ (Fähnrich 2007: 585–6). Based on the chronology of Schmidt (1962: 150), the donor form belongs to a (Pre-)Proto-Zan stage, as it shows the change of *\*a* to *o* and the loss of initial *\*t-*, but not the assimilation and syncope of the internal vowels, which is a common Zan change.

III 10. *փարախ* *p̣arax* (*i*) ‘sheepfold, shed’ < Zan *\*porax-*, cf. Ge. *parex-* ‘winter sheepfold, garage’, *da-parex-al-* ‘former sheep pen’ (HAB IV: 485). The Zan form is unattested, but on account of the change *\*e > a* in the second syllable, it can be assumed as the source of the Armenian form.<sup>10</sup> In the relative chronology of Zan sound changes, *\*a > o* must have preceded *\*e > a*, since otherwise, GZ *\*a* and *\*e* would have merged. Thus, the donor form was not *\*\*parax-*, but *\*porax-*. This means that the Armenian form was borrowed early enough to observe the change of *\*o > a* in the pretonic, open syllable.

III 11. *փոցխ* *p̣oc̣x* (*p̣oc̣ṭ*) ‘rake’ < Ge. *pocx-* ‘rake, harrow; (dial.) branch’, *pucx-*, Laz *bucx-* ‘rake’, Meg. *pucxua* ‘to rake, harrow’ (HAB IV: 521). Taking into account Ge. *parcx-* ‘harrow’ < GZ *\*parcx-*, the form *pocx-* itself must be an original Zanism in Georgian, since this would explain the change of *\*a > o* and the loss of preconsonantal *\*r*. This form developed further to *pucx-* in Zan (the initial *b-* of the Laz form is irregular). Both the variants with *o* and *a* were loaned into Oss. *poxci* ‘harrow’ and *paxsa* ‘rake’ respectively (Abaev II: 238, 243).

<sup>9</sup>For the prefix, compare Ge. *sa-x(e)l-* ‘house’, Meg. *o-xor-* ‘house’, based on the verbal root *\*xol-* ‘to be amidst, near’ (Fähnrich 2007: 689–90). There is no good reason to consider the initial Arm. *o-* to be an assimilated prothetic vowel as Cardona (1983: 51) does.

<sup>10</sup>Meg. *parex-* ‘wasp’s nest’, if related, must be a loan from Georgian.

Although the Zan form is found in Georgian, it is most economic to assume that the Armenian form was borrowed directly from Zan, but this cannot be decisively demonstrated.

### 3.3.2 Zan or Georgian loanwords

This section contains unproblematic loanwords from Kartvelian that are not distinctly Zan, but for which Georgian can be assumed as the donor language, or for which it is not possible to distinguish between a Georgian or Zan donor. These loans can be established as Kartvelian loans into Armenian on account of cognate forms in other Kartvelian languages, or in some cases, because they have a phonological shape which makes it unlikely that they are inherited in Armenian.

III 12. *բոզ* *boz* (*i/a*) ‘whore’ ← Ge. *boz*- ‘whore’, *bozo-b*- ‘whore, adulterate’, Laz *bozo*, *bozomota* ‘girl, virgin, daughter’ (Ačařryan 1940: 212, HAB I: 459). Due to the semantic match between the Armenian and Georgian forms, it seems most likely that Armenian borrowed the word from Georgian, where the semantic shift may have taken place. It is theoretically possible, however, that the pejorative meaning of the Georgian word was secondarily influenced by Armenian. Ultimately, the (Georgian-)Zan forms were probably borrowed from West Caucasian, cf. Adg. *bzə*, Ub. *bza*, Ab. *a-ps* ‘female’ (cf. Nikolayev & Starostin 1994: 374–5).

III 13. *բոբր* *bowrd* (*o*) ‘wool’, *brdem* ‘cut up, crumble’ ← Ge. *burdo* ‘chaff which is not threshed out, tangled mass’. The Armenian word is usually considered to be inherited from a root  $\sqrt{b^{herd}h}$ , in which case the loan would have moved in the opposite direction. There are, however, severe problems with this etymology (see IV 21 for further discussion). The Georgian word appears to be cognate with Sv. *burdāl*, *birdw* ‘chaff’ < PK  $\sqrt{burdo}$ - (Fähnrich 2007: 83). It is evident that this noun derives from the verbal root  $\sqrt{burd}$ - ‘tangle up’, cf. Ge. *burdva*, Sv. *libūrde*, Meg. *burdua* ‘churn’. The usual ClArm. word for ‘wool’ is *asr*, and we can assume that the verbal meaning of *brdem* ‘cut up, crumble’ is more original, as it is difficult to derive from ‘wool’. Thus the latter meaning probably developed from ‘lump, mass of wool’, which harmonizes well with the Georgian meaning ‘tangled mass’. The Georgian word is not attested in older literary

sources, but this might simply be a result of its narrow semantic range.<sup>11</sup>

III 14. *qʰ gi (o)* ‘juniper’ ← \**ɣwiw-*, cf. OGe. *ɣw(v)a-*, Sv. *ɣwiw* ‘juniper’ (Simon 2022). The Armenian word is usually derived from \**ɣiHt-*, cf. Gk. ἵτεα, OHG *wīda* ‘willow’. The Kartvelian forms are therefore considered loans from Proto-Armenian (EDA 212, HAB I: 554). However, a semantic shift from ‘willow’ to the highly dissimilar ‘juniper’ is not likely. More importantly, the Svan form points to an internal glide *-w-*, which is difficult to explain from an Armenian starting point, as it can hardly be a substitution for intervocalic \**-t-*. Therefore, it is more prudent to assume borrowing in the opposite direction (see also Simon forthcoming). The substitution of Ktv. \**ɣw-* → PA \**ɣʷ-* > *g-* is unproblematic if the phoneme \**ɣʷ* was in existence at the first chronological stage of Armenian-Kartvelian language contact. This is corroborated by \**ɣwin(o)-* (III 55) and more indirectly by *cov* ‘sea’ (III 21).

III 15. *հոհի hoʰ-i* (GEN.SG) ‘the second month of the ancient Armenian calendar’ ← Ge. *or-* ‘two’ < PK \**ior-*, cf. Meg. *žir-*, *žər-*, Laz *žur-*, *žur-*, Sv. *jor-* ‘two’ (HAB III: 114). Initial *h-* in Armenian is sometimes hypercorrect (cf. *hoktember* ‘October’), but in this case, it may also indicate that the word was borrowed from a Pre-Zan source, at a time when the development of initial PK \**i-* > Zan *ž-* was at a stage \**ʃj* vel sim.

III 16. *լորձն lorjn* (*-in*, *-amb*, *-ownk<sup>c</sup>*, *-anc<sup>c</sup>*); *լորj (o)* ‘saliva, slobber’ ← Ge. *lorço*, *lorç-*, *lorçko* ‘slime, sticky sap’, *lorçk-* ‘foam (at mouth), slobber’ (Klimov 1964: 189). Since the formal and semantic variation among the Georgian forms is greater, I assume the word was borrowed from Georgian or Zan. This means that the Arm. *n*-stem, despite being attested earlier (1.Sam. 21.13 has ACC.PL *lorjowns*), must be secondary (on this phenomenon, cf. Weitenberg 1985).

<sup>11</sup>The root PK \**burdy-* (cf. Ge. *burdya* ‘down, plumage’, *brdyvna* Sv. *libindylawi* ‘pluck poultry’) is somewhat semantically close to \**burd-*, but it is unknown whether an old derivational relationship exists. If so, it would further confirm the native status of this form in Kartvelian. This root is impossible to regard as an Armenian loan. Jahowkyan (1973a: 92 fn. 3) mentions that Ačariyan had adduced them as loanwords from Armenian in the first edition of HAB (1926), but they do not appear in the second edition (1971).

III 17. *խիւ* *xîws* (*o*) ‘porridge, gruel’ ← \**xews*-, cf. Sv. *xews* ‘breakfast’. The Armenian word does not have an existing etymology, but initial *x*- suggests that it is non-inherited. The Svan word does not have comparanda within Kartvelian, but nothing hinders the assumption that it is inherited. The Armenian *iw* may be explained by levelling from the oblique cases if the word was adopted to follow the pattern \**xews*, OBL *xîws*- (cf. the discussion s.v. *ewt*, IV 31).

III 18. *խոփ* *xop<sup>c</sup>* (*o*) ‘coulter, ploughshare’ ← Ge. *xop*- ‘oar, (Mokhevi) depression in ground’, *xop*- ‘rudder, (Rachan) wooden scraper’, Meg. *xop*- ‘rudder, shovel, water barrier at the groove of a mill’, Laz *xopē* ‘shovel’ (HAB II: 423). The final *-p<sup>c</sup>* of the Armenian form shows that it is borrowed from Georgian. The alternation of *p* and *p̄* within Kartvelian suggests that this etymon is a borrowing there as well. The donor is probably a Nakh-Daghestanian language, cf. Akhvakh *q:obe*, Chg. *γ<sup>w</sup>ab* ‘ploughshare’.

III 19. *cep<sup>c</sup>* (*o*) ‘plaster, cement’ ← Ge. *čebo* ‘glue, resin’, *čebavs* ‘to glue’ < \**čeb*-, cf. Meg. *čabua* ‘glue, stomp’ (HAB II: 453, Vogt 1938: 48, Cardona 1983: 48). It is remarkable that the final *-o* matches the *o*-stem declension of the Armenian word, suggesting that the borrowing took place before the loss of final syllables in Armenian. Usually, this correspondence is taken as indication of a borrowing in the opposite direction (see § 3.4), but the Armenian word has no etymology, and the Megrelian cognate would require a loan from Armenian to have taken place at the Proto-Georgian-Zan level. Moreover, the devoicing of final *-b* > *-p<sup>c</sup>* is best understood as a secondary Armenian sound change.

III 20. *ծուխ* *cowx* (*o*) ‘smoke’ ← *çux*- \**çux*- ‘smoke, ?soot’, cf. Ge. *çuxva* ‘sorrow, sadness’, *çuxra* ‘evening’, *mçuxr*- ‘dusk, nightfall’ (HAB II: 470, Vogt 1938). The comparison builds on the assumption that the Georgian meanings ‘sorrow’ and ‘evening’ both developed from \*‘smoke’ with potential secondary meanings ‘soot, darkness’ vel sim. Ačarjan (HAB II: 470) adduces the polysemy of NP *dūd* ‘smoke; anguish, sadness’ as a parallel (cf. also Gk. *θῦμός* ‘soul, spirit’ < \**d<sup>h</sup>(o)uHmo*- ‘smoke’). Although this is a circumstantial argument, the proposal can be accepted on account of the perfect formal match and the complete lack of alternative etymologies for the Armenian word.

III 21.  $\delta\pi\iota$  *cov* (*u*) ‘sea’ ← GZ (?)  $*z\acute{o}y\omega-$ , cf. OGe., Meg. *zyva*, Laz *zyua*, *zuya*, (*m*)*zoya*, Svan *zuɣva*, *zuɣva* ‘sea’ (Gippert 1994: 121–2). The reconstruction of the Kartvelian word is a matter of disagreement. Klimov (1964: 89) reconstructs PK  $*zywa-$ , but an epenthesis of  $*o/u$  in the Zan and Svan forms would be difficult to explain, and it is thus simpler to assume that this vowel was present in the proto-form. Schmidt (1962: 111–2) does not give an exact reconstruction, but crucially states that the initial  $z-$  of the Svan form must be primary. Gippert (1994: 121–2) suggests PK  $*zaywa-$ . This reconstruction requires, however, that the Svan form *zuɣva* is borrowed from Zan  $*zyɣwa$ , since the development  $*a > u$  would otherwise be unexpected. Fähnrich (2007: 177–8) thus reconstructs  $*zoyw-$ . The main obstruction is that in any case, several of the individual forms must be intra-Kartvelian borrowings. This is, at any rate, the case for Laz *zyua* and Meg. *zyva*, which must be loans from Georgian.

Despite the uncertainty about these details, I do not think that the similarity of the Kartvelian forms and Arm. *cov* ‘sea’ can be coincidental. The Armenian word is only forcibly given an Indo-European etymology, as recently discussed by Kölligan (2019: 152–63). He concludes by proposing a PIE compound  $*d̥̥eṃ-o-bʰh_2u-$  ‘sky-coloured’, which would represent a transferred epithet and a trace of Indo-European poetic language. The problem is that, while parallels for such a formation and the generalization as a noun can be adduced, the exact formation is otherwise unattested. The assumption of a loan from Ur. *šue* is less preferable because this word mostly refers to an artificial lake (see II 39).

If the Armenian word was borrowed from Kartvelian, it requires the assumption that the borrowing preceded the change of final  $-y^w > -w/-v$ . This is *a priori* unproblematic. The phonemic split of PIE  $*u$  into  $(-)g-$  and  $-w/-v$  is best understood as the result of a late phonemic split of  $*y^w$ , which was simplified to  $-v$  in word-final position after the loss of final syllables (cf. Kortlandt 1980). The existence of  $*y^w$  at the time of early Armenian-Kartvelian contact is corroborated by PK (?)  $*ywin(o)-$  on one side (III 55) and by the loanword *gi* ‘juniper’ <  $*y^wi-a-$  (III 14) on the other. If we assume that Schmidt and Gippert are correct in reconstructing the Kartvelian word with an initial affricate, and that Fähnrich is correct in posing  $*o$ -vocalism, we can assume a borrowing  $*zoywV \rightarrow$  PA  $*d^zoy^wV$ . This means that the borrowing must have taken place before the sound shift, as opposed to all other loans from Kartvelian languages, where

affricates retain their manner of articulation. Since loanwords from Hurro-Urartian also postdated the sound shift (see § 2.4), this would make *cov* the oldest identifiable loanword from a known language into Armenian.

III 22. *սահմի* *sahm-i* (GEN.SG) ‘the third month of the ancient Armenian calendar’ ← Ge. *sam-* ‘three’ < PK \**sam-*, cf. Zan *sum-*, Sv. *sem-* ‘three’ (HAB IV: 163, Klimov 1964: 161). The Armenian spelling with *-h-* is not easily explained. According to Lagarde (1866: 179), the Greek translation of Agat<sup>α</sup>angelos writes the name as Σαομῖ. Perhaps the spellings with <αο> and <ah> can be interpreted in the sense that the learned pronunciation was approximately /sɔm-/. That would indicate that the word was borrowed from a Pre-Zan form while at an intermediate stage in the development from GZ \**sam-* > PZ \**som-* (later > *sum-*). Notably, this assumption is consistent with the possibility that the month name *hori* was also borrowed from Pre-Zan (see III 15).

III 23. *փիճի* *p<sup>ci</sup>či* ‘pine’ (GEN.SG *-woy*) ← OGe. *pičū-*, *pičv-* ‘cedar, pine’, Laz *pinčo* ‘pine’ (HAB II: 504, Vogt 1938: 35). In Armenian, the suffix *-i*, commonly applied to tree names, was independently added to *p<sup>ci</sup>č<sup>\*</sup>*, itself borrowed from the Kartvelian *u*-stem.

We should not ignore the similarity of these forms with the “Mediterranean” forms reflecting \**pit(s)*- (Gk. *πίτυς* ‘pine, fur, spruce’, Lat. *pīnus*, Alb. *pishë* ‘pine’; cf. de Vaan 2008: 467 comparing also Lat. *pīx* ‘pitch, resin’).<sup>12</sup> However, if the Kartvelian forms were borrowed from Armenian, which in turn adopted the word from an unknown language, we would be forced to assume a very divergent quasi-IE form \**p<sup>hi</sup>d-ǵ-*. The assumption of a Kartvelian loanword in Armenian is unproblematic, on the other hand, but it is likely that the Kartvelian forms are ultimately borrowings from a source close to the Greek, Latin, and Albanian forms (Furnée 1979: 28).

III 24. *პტტ* *k<sup>ct</sup>cit<sup>c</sup>*, *k<sup>ct</sup>ct<sup>c</sup>elik<sup>c</sup>* ‘blinking of the eye’, *k<sup>ct</sup>ct<sup>c</sup>em* ‘blink, wink’ ← Ge. *kututo* ‘eyelid’ (Vogt 1938: 332, Cardona 1983: 50). Ačarjan (HAB IV: 577) assumes the opposite direction of borrowing, but the Georgian meaning appears to be more primary. The vowel of the

<sup>12</sup>The apparent alternation \**t* ∞ \**k* may perhaps be interpreted as the substitution of a non-IE phoneme /tʃ/, which would, in turn, be more faithfully reflected in the Georgian form.

Armenian simplex *k<sup>c</sup>t<sup>c</sup>it<sup>c</sup>* was falsely restored on the basis of the verb or verbal abstract (cf. e.g. *owmp* ‘drink’ ← *əmpem* ‘to drink’ < \**pi-m-be-*), and the meaning was transferred from the abstract.

### 3.3.3 Rejected proposals

This section briefly discusses previous proposals for Kartvelian loanwords in Armenian that are untenable, either for formal or semantic reasons.

III 25. *աղախ* *akanj* (i) ‘ear’ ← Zan *qūž-*, cf. Meg. *հւջ-* ‘ear’ (Łap<sup>c</sup>-anc<sup>c</sup>yan 1952: 15–6, Łap<sup>c</sup>anc<sup>c</sup>yan 1961: 93. The equation is formally impossible. Although the details are unclear, the Armenian word must be related to Arm. *ownkn* ‘ear’ (EDA 21–2).

III 26. *աղբ* *alb* (o) ‘dung, manure’ ← Laz *lebi* ‘dirt’ (Ačaiyan 1940: 212, HAB I: 124). Even if the word was borrowed with initial \**t-*, which would trigger vowel prothesis, the loss of *-e-* is unexplained. The Armenian word reflects \**slb<sup>h</sup>o-*, cf. Hit. *šalpa-* ‘excrement’ (Schindler 1978, Olsen 1999: 37, EDA 32). Łarabał *lep* ‘sediment’ may be borrowed from the Laz word or a Megrelian cognate, but it must be a more recent loan.

III 27. *ալ* *aj* (o) ‘right’ ← Ge. *maržvena*, Meg. *maržgvani*, Sv. *lärsgwan* ‘right (hand)’ (Cardona 1983: 48, Holst 2009: 104). The root must be PK \**ržw-* (Fähnrich 2007: 356) or better, \**ržgw-* (Schmidt 1962: 122). This does not match the Armenian form, which reflects PIE \**seh<sub>2</sub>d<sup>h</sup>io-*, cf. Skt. *sādhú-* ‘straight’ (EDA 100).

III 28. *ղալ* *gayl* (o) ‘wolf’ ← Ge. *mgel-*, Meg. (m)*ger-*, Laz *mge(r)-*, *gver-*, *mžver-* ‘wolf’ (Cardona 1983: 49). The substitution *e* → *ay* is unexplained. The Kartvelian word can only be reconstructed to GZ \*(m)*gel-*. The Armenian word may be derived from a (tabooistic) formation \**uailo-* ‘howler’, cf. Mr. *fáel* ‘wolf’ (see EDA 197 with references).<sup>13</sup> It is chronologically impossible that the Kartvelian forms were borrowed from dialectal Arm. *gel* with monophthongization (EDA 197), because the word is found already in the Old Georgian Bible. It is conceivable that a diphthong *ay*, which is not found in native Kartvelian words, would have been replaced by *e* at an earlier

<sup>13</sup>The direct derivation from PIE \**ul<sup>k</sup>wo-* (cf. Holst 2008) is formally problematic and requires several *ad hoc* assumptions.



point in time. Note the same replacement in loanwords from Georgian to Megrelian, e.g. Meg. *mesi* ‘May’ ← Ge. *maisi* (Schmidt 1962: 42). I would consider the assumption of a loan into Georgian uncertain. A loan into Armenian can be excluded.

III 29. *ჟრჟაძე xram* (*o/i*) ‘trench, ditch’ ← Laz *γorma* ‘hole, opening’ (Jahowkyan 1973a: 94). The sound substitution  $\gamma \rightarrow x$  is regular, but  $or \rightarrow ra$  is unexplained.

III 30. *დაჟი jax* ‘left, sinister’ ← Ge. *marcx-*, Meg. *ḵvarčx-* ‘left’ (Klimov 1964: 127, Cardona 1983: 50, Holst 2009: 104). Since *ma-* probably represents the same prefix as in *ma-rjv-ena* ‘right’, the root must be PK *\*rčx-*.

III 31. *\*\*čat* ‘bread’ ← Ge. (*m*)*čad-* ‘bread (of maize or millet)’ (Klimov 1964: 143, Cardona 1983: 49). Klimov gives the Armenian form as “*čat-*” (recte *čat*). This word does not exist (NBHL, HAB, HLBB, and Malxaseanc<sup>c</sup> 1944 *vacat*).

III 32. *ճճի čči* (*ea/o*) ‘insect, worm, vermin’ ← Ge. *čia* ‘worm, maggot’ (Vogt 1938: 332, Cardona 1983: 49). The Armenian form must be a derivation of a (reduplicated?) stem *čič\** or *\*čuč\**, cf. the variant *čiči*. A form *či* is only found in dictionaries (cf. HAB III: 206).

III 33. *միժ mic* (ABL.SG *micē*) ‘mud, dirt’ ← Ge. *miça* ‘earth, ground’ (Vogt 1938: 332, Cardona 1983: 51). The semantic agreement is not exact. The Armenian word may be a perfect cognate of OE *smitta* ‘smear, spot’ < *\*smid-je<sub>h2</sub>-*, cf. the root *\*√smeid-* in Go. *gasmeitan* ‘daub’; OCS *smědъ* ‘dark, brown’ (IEW 966–7). The Georgian word does not have Kartvelian cognates, so perhaps it was borrowed from Armenian, but the semantic disagreement remains a problem.

III 34. *նեխ nex* (*o*) ‘fester; rotteness’ ← Ge. *nexv-* ‘dung, manure’ (Vogt 1938: 331). The semantic agreement is not exact.

III 35. *շլան šlan* ‘ashes’ ← Ge. *šlam-* ‘silt, ooze’ (HAB III: 525, Vogt 1938: 333, Cardona 1983: 53). The semantics do not match and the substitution final *-m* → *-n* is unexplained. The Armenian word is a hapax in Chrysostom. The Georgian form is not found in Old or Middle Georgian sources and most likely borrowed from Ru. *šlam* ‘sludge, sediment’ ← G *Schlamm* ‘mud, ooze’.

III 36. *որոգայթ* *orogayt<sup>c</sup>* (*i*) ‘trap, snare’ ← Meg. *ragv-* ‘bird trap’, Laz *rag-* ‘trap’ (Łap<sup>c</sup>anc<sup>c</sup>yan 1952: 24–5). The equation is formally impossible. Even if initial *o-* is analyzed as a prothetic vowel, and *-ayt<sup>c</sup>* is an unidentified suffix, the root vowel differs from the Kartvelian forms (Zan *\*a* points to PK *\*e* or *\*a*). The Armenian word is more likely to represent an old formation with the preverb *\*pro-* and the root seen in *gayt<sup>c</sup>em* ‘stumble, trip’ (Klingenschmitt 1982: 105 fn. 27, cf. EDA 386).

III 37. *տարբի* *tarp<sup>c</sup>* (*o*) ‘love, desire’, *trip<sup>c</sup>k<sup>c</sup>*, *trip<sup>c</sup>k<sup>c</sup>* ‘desire’ ← Ge. *trpoba* ‘love, desire’, *turpa* ‘beautiful (woman), beloved’ (Vogt 1938: 336–7, Cardona 1983: 53). Due to the non-matching vowels, the Georgian and Armenian forms are probably independent borrowings from West Middle Iranian, cf. Av. *θraqf(ə)da-* ‘satisfied’ < PIE *\*√terp-* ‘satisfy, satiate’, cf. Skt. *tṛmpāti* ‘please, satisfy oneself’, Gk. *τέρπομαι* ‘enjoy’, Li. *tařpti* ‘thrive’ (LIV<sup>2</sup> 636).

III 38. *ցիր* Arm. *c<sup>c</sup>ir* ‘scattered, dispersed’, *c<sup>c</sup>rowem* ‘disperse’ ← Ge. *cer-\** ‘sift’, cf. OGe. *ay-cr-a* ‘sift’, *sa-c(e)ri* ‘sieve’ (Vogt 1938: 332, Cardona 1983: 48). A better phonetic match is Meg. *cirua* ‘sieve’. The semantic agreement is poor, however.

### 3.3.4 Results

Accepted proposals for loanwords from either Zan or Georgian, along with three new proposals (*xiws*, *xoz*, and *bowrd*) are given in Table 3.3.

### 3.3.5 Analysis

At least thirteen borrowings from Zan into preliterate Armenian can be identified (§ 3.3.1). It may be assumed that the earliest of these loanwords entered the Armenian lexicon before the dissolution of the Zan unity, when not all Zan sound changes had taken place. These unobserved sound changes include umlaut and internal syncope (*oč<sup>c</sup>xar*, III 9). The assibilation of GZ intervocalic *\*r* appears to be underway in *xoz* (III 2), but in other cases (*p<sup>c</sup>arax*, III 10), this sound change is not yet observed. In *xočkor* (III 2), on the other hand, it is completed. These observations indicate that Armenian contact with the Zan stratum was relatively prolonged, starting around the time of Georgian-Zan dialectal unity, and stretching up until the

Armenian	Kartvelian	Lemma
<i>gi</i> 'juniper'	Ge./GZ * <i>γwīw</i> - 'id.'	III 14
<i>xīws</i> 'porridge, gruel'	GZ (?) * <i>xews</i> - 'id. (?)'	III 17
<i>cov</i> 'sea'	GZ * <i>zoyw</i> - 'id.'	III 21
<i>hori</i> 'second month'	Zan (?) * <i>(i)or</i> - 'two'	III 15
<i>sahmi</i> 'third month'	Zan (?) * <i>sa/om</i> - 'three'	III 22
<i>erinj</i> 'heifer'	Zan * <i>erinj</i> - 'cow, cattle'	III 1
<i>xočkor</i> 'piglet'	Zan * <i>γoʒ</i> -( <i>kor</i> -) 'id.'	III 2
<i>xoz</i> 'pig'	Zan * <i>γor</i> - 'id.'	III 2, p. 53 ff.
<i>kał</i> 'lame, crippled'	Zan * <i>kał</i> - 'id.'	III 3
<i>kar</i> 'rope, string'	Zan * <i>kar</i> - 'id.'	III 4
<i>čipr</i> 'rheum'	Zan * <i>či(r)pur</i> - 'id.'	III 7
<i>oč<sup>c</sup>xar</i> 'sheep'	Zan * <i>o-čxow-ar</i> - 'a live animal'	III 9
<i>p<sup>c</sup>arax</i> 'sheepfold'	Zan * <i>porax</i> - 'id.'	III 10
<i>p<sup>c</sup>oc<sup>c</sup>x</i> 'rake'	Zan * <i>pocx</i> - 'id.'	III 11
<i>kčowč</i> , <i>kčič</i> 'vessel'	Meg. <i>čkuž</i> - 'id.'	III 5
<i>čanč</i> 'fly'	Meg. <i>čanž</i> - 'id.'	III 6
<i>jalot</i> 'cudgel'	Laz <i>jal</i> - 'wood'	III 8
<i>boz</i> 'whore'	Ge. <i>boz</i> - 'id.'	III 12
<i>bowrd</i> 'wool, *lump'	Ge. <i>burdo</i> 'tangled mass'	III 13
<i>lorjn</i> 'saliva'	Ge. <i>lorčo</i> 'slime'	III 16
<i>xop<sup>c</sup></i> 'coultter, ploughshare'	Ge. <i>xop</i> - 'oar, depression'	III 18
<i>cep<sup>c</sup></i> 'plaster, cement'	Ge. <i>čebo</i> 'glue, resin'	III 19
<i>cowx</i> 'smoke'	Ge. <i>čux</i> - '*smoke'	III 20
<i>p<sup>c</sup>iči</i> 'pine'	OGe. <i>piču</i> - 'id.'	III 23
<i>k<sup>c</sup>čit<sup>c</sup></i> 'blinking of the eye'	Ge. <i>kututo</i> 'eyelid'	III 24

Table 3.3: Kartvelian loanwords in Armenian

historical era, with the adoption of late and dialectal words such as *lakot* 'puppy' (III 8). There are at least twelve additional loanwords, for most of which it cannot be determined whether the donor language was Georgian or Zan (§ 3.3.2).

As already stated, the Zan-Armenian contacts must have antedated the dissolution of Proto-Zan, defined as the time when the last common innovation took place between Megrelian and Laz. The approximate dating of this event is difficult, not least since the Zan languages have historically been treated as a single language and probably enjoyed some mutual intelligibility until recently.<sup>14</sup> Never-

<sup>14</sup> One of the decisive factors in the loss of Laz-Megrelian mutual intelligibility seems to be the massive adoption of Turkish loanwords in Laz.

theless, the Zan dialects may have innovated jointly at least up until the seventh century CE, i.e. beyond the time when Armenian could have borrowed words that are attested in fifth century literature. It is likely that Zan-Armenian contacts began several centuries before, and we can in fact point to a potential *terminus post quem*. Since all identifiable Zan loanwords in Armenian show the change of GZ *\*a* > *o*, the first contact between Armenian and Zan proper must have postdated the colonization of the Western Pontic coast by Milesian Greeks around the sixth century BCE — that is, if the city and river name Φῶσις reflects *\*Pati*, matching the modern city name *Poti*.

The sound substitutions observed in the most of the material show that very few Armenian sound changes took place between the borrowing of these words and the beginning of the literary tradition. This is also consistent with the assumption that Armenian-Zan contact is relatively recent. A notable exception is the change *\*o* > *a* in pretonic, open syllables, which may be observed most clearly in *p<sup>h</sup>arax* (III 10). We thus find additional support for the assumption that this was one of the final sound changes that preceded the onset of Armenian literacy, affecting even some Greek loanwords (cf. Clackson 2020). Moreover, the fact that the Armenian reflections of Zan words are integrated into various declension classes (*a*-, *o*-, and *i*-stems) indicates that the loss of final syllables must have been completed in Armenian, since otherwise, we would expect most (if not all) loans to be reflected as *i*-stems. On the other hand, the deletion of the NOM.SG ending *-i* is regular in borrowings from Kartvelian, and it is admittedly conceivable that the change of declension class was secondary. Given, however, that almost no other sound changes can be observed, it is the most likely assumption that the apocope had taken place in Armenian.

Two remarkable exceptions to this chronology are Arm. *gi* ‘juniper’ ← *\*γwiw-* (III 14) and especially Arm. *cov* ‘sea’ ← *\*zoyw-* (III 21). The former word would have been borrowed before the change of *\*γ<sup>w</sup>-* > *g-*, while the latter word would have been borrowed before the shift of *mediae* to *tenues*. If the etymology of *cov* proposed here is correct, it demonstrates that Kartvelian loanwords began to enter Armenian before Hurro-Urartian loanwords, which do not undergo the Armenian sound shift (§ 2.4). Additional support for such an early onset of Armenian-Kartvelian contact is provided by the Armenian loanwords in Kartvelian (§ 3.4.5).

### 3.3.5.1 Semantics

The Kartvelian loanwords accepted in §§ 3.3.1–3.3.2 can be divided into the following semantic categories.

- The natural world/The human body (8–9): *gi* ‘juniper’, *kał* ‘crippled’, *čipr* ‘rheum’, *boz* ‘whore’, *lorjn* ‘saliva’, *cowx* ‘smoke’, *cov* ‘sea’ (?), *p<sup>c</sup>iči* ‘pine’, *k<sup>c</sup>et<sup>c</sup>it<sup>c</sup>* ‘blinking’.
- Animal husbandry (7): *erinj* ‘heifer’, *oroj* ‘lamb’, *xočkor* ‘piglet’, *xoz* ‘pig’, *oč<sup>c</sup>xar* ‘sheep’, *p<sup>c</sup>arax* ‘sheepfold’, *bowrd* ‘wool’.
- Tools/Technical terms (6): *xop<sup>c</sup>* ‘coulter, ploughshare’, *p<sup>c</sup>oc<sup>c</sup>x* ‘rake’ (agriculture); *cep<sup>c</sup>* ‘plaster’, *kar* ‘rope, string’, *kčowč*, *kčič* ‘vessel’, *jalot* ‘cudgel’.
- Other (2): *xíws* ‘porridge’, *čanč* ‘fly’.

It is especially remarkable that many of these loans are of a relatively non-specialized character and appear to belong to a low register. In particular, they refer to objects of daily life, the human body, and domestic animals. This suggests an adstratic contact situation and perhaps even prolonged bilingualism, which in this case must have been early or widespread enough to facilitate the spread of these loanwords to the entire Armenian language area. Furthermore, it is important that there are a few loanwords relating to agriculture: *xop<sup>c</sup>* ‘ploughshare’ (III 18), *p<sup>c</sup>oc<sup>c</sup>x* ‘rake’ (III 11), and perhaps *xíws* (III 17) ‘porridge’, which indicates that the technology of agriculture among Armenian speakers was advanced through contact with Kartvelian speakers. Additionally, there is a large group of words related to animal husbandry. Although the PIE word for ‘sheep’ may be preserved compositionally in Arm. *hoviw* ‘shepherd’ (< *h<sub>2</sub>oui-peh<sub>2</sub>-*), the simplex *\*hov* was presumably replaced by *oč<sup>c</sup>xar* because the shepherding traditions of Zan/Kartvelian speakers was perceived to be more advanced or prestigious. The inherited word for ‘pig’, PIE *\*suH-* (Gk. *ὑς*, Alb. *thi*, Lat. *sūs*), was lost entirely in Armenian; if not at an earlier stage, then as a result of contact with Zan.

## 3.4 Archaic Armenian loanwords in Kartvelian

Some of the most interesting evidence for early contact between Armenian and the Kartvelian languages is provided by the loan-

words in Kartvelian that preserve archaic forms of Armenian words, since altered by sound change. The relatively high degree of phonological conservativeness shown by the Kartvelian languages (especially Georgian and Zan) is a significant advantage for identifying these forms. One may compare the situation to that of the early Germanic loans in Finnic (Ĵahowkyan 1973a: 91). A groundbreaking study on this topic is that of Vogt (1938), while later contributions have been made by Ĵahowkyan, Gippert, and others.

The primary criterion for identifying loanwords in this stratum is that they have been inherited from an older Proto-Armenian stage, i.e. either from Proto-Indo-European or from a sufficiently early stratum of loanwords in Armenian. In some cases, it is possible to assume that a given form existed in Proto-Armenian, but was lost before the literary attestation. To be sure, this is to be expected since the majority of words inherited from Proto-Indo-European do not have attested Armenian reflexes. These forms can, however, be projected on the basis of existing reconstructions. I argue that such a form is reflected in Ge. *ĉero* ‘crane’ (III 54). Other proposals of this kind are harder to substantiate and can be found among rejected proposals (§ 3.4.4).

A second criterion applied to the Kartvelian words included here is that they preserve at least one phoneme that was changed or lost before their first attestation in Armenian. This consequently excludes a large number of Armenian loans in Georgian, stemming from the literary epoch, which are direct reflections of the attested Armenian forms. A wealth of such loanwords can be found throughout Aĉaryan’s etymological dictionary (HAB). A useful overview is also provided by Śluszkiewicz (1974), who, in turn, bases himself on the Georgian-German dictionary of Meckelein. Finally, Ĵahowkyan (1987: 590–6) discusses both literary and preliterate loans to (and from) Kartvelian.

In the following, Armenian loanwords in Kartvelian languages are grouped according to the highest Kartvelian clade for which they can be solidly reconstructed. Thus, distinction is made between those words attested in Georgian alone (§ 3.4.1), those that can be reconstructed for Georgian-Zan (GZ, § 3.4.2), and those that can be reconstructed for Proto-Kartvelian (PK, § 3.4.3).<sup>15</sup> In some sense, this

<sup>15</sup>It may be expected that some of the archaic Armenian loanwords that entered one of the higher clades are attested only in Zan or Svan. Such words have not been

grouping is a matter of formality and the lack of a better criterion, because their confinement to one clade does not necessarily mean that they did not exist at a higher clade. It should of course be noted that we would expect a significant overweight of archaic forms to be found in (Old) Georgian, being attested more than a millenium before the other Kartvelian languages, where cognate forms may easily have been lost in the meantime. Furthermore, the secure reconstruction for Proto-Kartvelian hinges on an attestation in Svan, a language with no literary tradition. This means that in many cases, we may be faced with an exclusively Georgian-Zan reconstruction that may well descend from Proto-Kartvelian, but lacks the evidence to prove it. On the other hand, the conservativeness of many Kartvelian forms leads to cases where cognate forms in all languages are virtually identical, making it impossible to exclude that they are not the result of later borrowing events (cf. e.g. Ge. *yvino-*, III 55).

### 3.4.1 Georgian

III 39. OGe. *ერდო* *erdo-* ‘flat roof’ ← PA *\*erdo-* > Arm. *erd* (*o*) ‘louver, skylight; house’ (Ĵahowkyan 1973a: 92, 1987: 590, Schmidt 1992: 300). The Armenian word is usually considered to be without etymology (HAB II: 44, Olsen 1999: 951, EDA *vacat*). However, it is possible to compare it with OCS *odrъ* ‘bed’, Cz. *odr* ‘pillar, frame, summerhouse’; OE *eodor* ‘fence’, and ON *jaðarr* ‘edge’ < *\*h<sub>1</sub>ed<sup>h</sup>-ro-* (Ĵahowkyan 1973a: 92). The original meaning may have been ‘frame’, which would make the meaning ‘louver’ the most primary of the Armenian meanings. This etymology provides us with an example of the metathesis *\*-d<sup>hr</sup>-* > *-rd-*, which, by coincidence, is otherwise unattested.<sup>16</sup>

III 40. Ge. *თარო* *taro* ‘shelf’ ← PA *\*t<sup>h</sup>a<sup>ro</sup>-* > MidA *t<sup>c</sup>ar* (*i*) ‘roosting perch, stake for supporting vines’ (HAB II: 155; see IV 32 for further discussion of the Armenian word). The principal objection to this equation is the semantic difference and the late attestation of the Armenian word in the 13<sup>th</sup> c. translation of *Geoponica*, where it is

identified during this research, however. One finds Armenian loanwords in Zan, but they are relatively few and in any case late. As such, they are not relevant to the present work. For such material, one may consult Łap<sup>a</sup>anc<sup>y</sup>an 1952 with due caution.

<sup>16</sup>Curiously, Ĵahowkyan (2010: 222) records a far less compelling etymology (with reference to Alayan). He reconstructs *\*per-to-*, comparing Av. *paratu-* ‘crossing, bridge’, Lat. *porta* ‘gate’. I would expect this form to yield *\*<sup>h</sup>herd*.

exclusively an *i*-stem. However, the otherwise impeccable derivation from PIE *\*trs-o-* shows that the Armenian word must be inherited and was originally an *o*-stem. As noted by Ačařyan (HAB II: 155), the meaning ‘shelf’ is also found in the ǰowla dialect. This dialect is spoken in Iran, i.e. not in direct contact with Georgian, which suggests that this (by-)meaning is relatively old, thus explaining the semantic difference between the attested Georgian and Armenian words.

III 41. Ge. თელა *tela* ‘elm’ ← PA *t<sup>h</sup>el-a-* > Arm. *t<sup>h</sup>el-i* (*ea*) ‘elm’ (Bugge 1893: 39, HAB II: 172). The Armenian form reflects a substrate word comparable to Gk. *πελέα* ‘elm’ (see iv 34). The derivation with *-i*, typical of tree names, is inner-Armenian. This means that the Georgian form preserves an original underived *a*-stem (< *\*ptel-a-*). The substitution Arm. *t* → Ge. *l* is typical of older loanwords from Armenian to Georgian, cf. Ge. *alkat* ‘poor’ ← Arm. *atk<sup>h</sup>at* ‘id.’, as opposed to the later substitution *t* → *γ* (cf. Słuszkiewicz 1974, ǰahowkian 1973a: 95).

III 42. OGe. კალო *kalo* ‘threshing floor’ ← PA *\*kalo-*, Arm. *kal* (*o*) ‘threshing floor, corn sheaves’ (HAB II: 483, ǰahowkian 1987: 590). The Armenian word has no clear etymology, but must contain the same root as Arm. *kasowm*, *kasem* ‘to thresh’ and *kamn* ‘flail, threshing sledge’.<sup>17</sup> ǰahowkian (1987: 528) assumes that this root is etymologically identical to *kasowm* and *kasim* (intr.) ‘to cease, diminish’ which seems less likely for semantic reasons. Klingenschmitt (1982: 241) tentatively proposes a root *\*g<sup>w</sup>ak-* ‘to beat’, reconstructing *kal* as an instrument noun *\*g<sup>w</sup>ak-tlo-* (cf. Olsen 1999: 35–6). His comparison with Gk. *βάκτρον* ‘stick’ is, however, not compelling since this likely represents a European substrate word with initial *\*b-*, cf. Lat. *baculum* ‘stick, staff’, OIr. *bacc* ‘hook, crooked staff’ (Schrijver 1991: 100).<sup>18</sup> Nevertheless, it is clear that a verbal root *\*kas-* ‘thresh’, whatever its origin, existed in Armenian. As suggested by Olsen (1999: 36), the phonetic development of quasi-IE *\*-ktl-* > *-l-*

<sup>17</sup>Arm. *kamn* has been compared to OCS *gumьno* ‘threshing floor’ (HAB II: 502), but the Slavic word is generally considered to be a compound ‘where cows step (on grains)’, see Vasmer 321.

<sup>18</sup>Klingenschmitt’s proposal of a Latin borrowing from Sabellic is not of much help, since the Celtic forms, from PC *\*bakko-*, cannot be from Latin. Additionally, the potential Germanic cognates, e.g. MDu. *pegge* ‘peg, pin’, would have to be ignored.



may be supported by *t<sup>c</sup>el* ‘thread’ if from *\*tek-tlo-*.<sup>19</sup> This renders it most probable that the borrowing direction of this word was from Armenian to Georgian (Gippert 2005: 152 fn. 59, *pace* Vogt 1938: 331, Cardona 1983: 50).

III 43. Ge. ლდრო *laro* ‘stonemason’s string, pronged weaving cord’ ← PA *\*laro-*, Arm. *lar* (*o*) ‘rope’ (HAB II: 268). The Armenian form is usually reconstructed as *\*(H)ulh<sub>1</sub>ro-* (Olsen 1999: 30, EDA 304), comparing Gk. ἀλῆρα, ἔλῆρα ‘reins’, Lat. *lōrum* ‘leather strap’. However, the formal issues involved suggest that this could reflect a substrate word. The assumption that the Georgian word was borrowed from Proto-Armenian, which is supported by the identical vocalism and the Georgian stem-final *-o* matching the Armenian *o*-stem, speaks against the reconstruction *\*(h<sub>2</sub>)ulh<sub>1</sub>ro-* because pretonic *\*i* and *\*u* is usually preserved in Georgian loans from Armenian, hence one would expect *\*\*ularo*. This may suggest that Arm. *lar* in fact reflects something like *\*ulāro-* with a consonantal *\*u* which was lost at an early point, as assumed for Latin. For further discussion, see IV 39.

III 44. OGe. მდელო *mdelo-* ‘grass’, Ge. *mdelo* ‘meadow (grasses)’ ← PA *\*deto-* > Arm. *det* ‘herb, grass’ (Jahowkian 1973a: 93, 1987: 590, Schmidt 1992: 300). The Armenian word reflects *\*d<sup>h</sup>elh<sub>1</sub>-o-*, perhaps originally from *\*g<sup>h</sup>elh<sub>3</sub>-* ‘green-yellow’ (see s.v. *dalar*, IV 26 for further discussion).

III 45. OGe. ფაწალა *pačala-*, *paçal-* ‘spleen’ (→ Laz *pa(n)čala* ‘spleen’), *pačil-* can be equated with Arm. *p<sup>c</sup>aycatn* (*-an*, *-amb*) ‘spleen’ (HAB IV: 478). The Laz form must be borrowed from Georgian, because *a* has not shifted to *o*. Alternatively, it was borrowed directly from Armenian, though this seems less likely due to the almost exact similarity of the Georgian and Laz forms. The Armenian word has long been connected with other Indo-European words for ‘spleen’, cf. Gk. σπλήν, Lat. *liēn*, and Skt. *plihán-* (EDA 648–9 with references). The impossibility of reconstructing an exact preform, probably the result of various taboo distortions, does not cast doubt on its inherited status.

The Georgian form can reflect an unsyncopated form *\*p<sup>c</sup>a(y)catan* with loss of the final *-n*. It is difficult to say whether the,

<sup>19</sup>The intermediate steps may have involved an assimilation of the intermediate cluster *\*-ét-* > *\*-t-* and subsequent simplification *\*-tl-* > *-l-* as in owl ‘kid’ < *\*putlo-*.

presumably epenthetic, -y- had not yet appeared in the Armenian form, or whether it was dropped due to the fact that diphthongs do not appear in native Kartvelian words. The epenthetic nasal of the Laz form can, however, easily be secondary as it frequently appears sporadically in both inherited and borrowed words (e.g. Meg. *ontka* ← Ru. *vódka*, cf. Deeters 1927: 11; see also § 3.1.0.4). Thus, it does provide positive evidence for an Armenian preform *\*(s)p(l)ng-*, as suggested by Martirosyan (EDA 649).

III 46. OGe. *ᄆᄆᄆᄆ* *pon-* ‘ford’ ← PA *\*p<sup>h</sup>on-(V)-* > Arm. *hown* (*i*) ‘ford’ (Tomaschek 1883, Čubinašvili 1887: 1312, HAB III: 123, Vogt 1938: 331, Bielsemeier 1994: 430, Gippert 2005: 151, EDA 425–6). The Armenian form reflects *\*pontH-*, a stem remodelled after PIE *\*pont-VH-/pnt-H-*, cf. Av. *paṇtā*, *paṇō* ‘road’, Lat. *pons*, *pontis* ‘bridge’ (Olsen 1999: 194–5, EDA 426). If Olsen (1989) is correct in suggesting that PIE *\*-nt-* became *-n-* only in originally pretonic syllables (otherwise *-nd-*), the loss of the dental in this word probably means that the oxytone accent of the oblique cases was generalized (cf. Kümmel 2017: 444). In any case, the loss of the dental shows that Ge. *pon-* must have been borrowed from an early form of Armenian, not PIE. Otherwise, the loan antedated the shift of *\*oN > uN* (cf. Ałayan 1985), but could have postdated the first stage of the Armenian sound shift, i.e. *\*p- > \*p<sup>h</sup>-* (or *\*f-*), the intermediate stage in the development to *h-*. I cannot verify the forms Meg. *poni*, *foni* and Sv. *fon*, *la-fan*, cited by Hübschmann (1897: 397) and Ačariyan (HAB III: 123), but given the considerable antiquity of this borrowing, it is likely that the word existed at the Georgian-Zan stage.

III 47. OGe. *ᄆᄆᄆ* *ru-* ‘runnel, channel’ ← PA *\*r<sup>u</sup>(y)-V-* > Arm. *arow* (*i/o/a*) ‘brook, channel’ (HAB I: 265). An isolated word in Georgian. The Armenian word is evidently inherited from PIE *\*sru-to-* (cf. Skt. *srutá-* ‘stream, river’, Gk. *ῥυτός* [adj.] ‘flowing’, Swiss G *Strod* ‘jet, gulp’) or a similar derivative from *\*sreu-* ‘to flow’ (Jahowkian 1987: 237, Olsen 1999: 38, EDA 115).<sup>20</sup>

<sup>20</sup>The derivation from *\*sru-ti-* (Gk. *ῥύσις* ‘flow, course of a river’) is equally likely, and it is possible that the competition between original *i-* and *o-* stems is still reflected in the vacillation of *i/o*-stems in the oldest Armenian sources. Among the other options noted by Martirosyan (EDA 115), the *o*-grade forms would have yielded *\*arow*, while the reconstruction *\*sru-i-o/eh<sub>2</sub>-*, going back to Hübschmann (1897: 420), would be morphologically isolated, as noted by Olsen (1999: 115 fn. 70).

The Georgian word is mostly assumed to be borrowed from NP *rōd* 'river', cf. OP *rautah-* 'river' (Čubinašvili 1887: 1042, Klimov & Xalilov 2003: 207–8). However, this borrowing would probably have been reflected as a consonant stem and thus given *\*\*rod-* or *\*\*rud-*, cf. the parallel OGe. *pol-* 'money' (Ge. *pul-*) ← NP *pūl* 'small coin'. At any rate, the loss of final *-d* cannot be explained. For the match with Arm. *arow* to be exact, the only required assumption is that it took place before the addition of the prothetic vowel *a-*, a development which at least did not end before the appearance of the first Iranian loanwords in Armenian, cf. Arm. *aroyr* 'brass' ← *\*rauδ-*, MP *rōy* 'copper, brass' (Hübschmann 1897: 111, HAB I: 331).<sup>21</sup>

III 48. OGe. *საღდა* *sala-* 'flat, round pebble, (adj.) steep', *sal-* 'cliff, (adj.) steep, hard' ← PA *\*sal-a-* > Arm. *sal* (*i*) 'slab, paving stone, anvil' (HAB IV: 155–6, EDA 564). PA *\*sal-a-* may be cognate with Skt. *śilā-* 'stone, rock, crag' (HAB IV: 155, EDA 564).<sup>22</sup> The Skt. *ā*-stem would match PA *\*sala-*, which underlies the Georgian form. The existence of an *a*-stem next to the attested Arm. *i*-stem may also account for the missing *i*-epenthesis (the reflex is not *\*\*sayl*, that is). This means that the reconstruction of a full grade form *\*kaHl-V* (Olsen 1999: 100–1) is not strictly necessary. Although an equation of the Georgian stem final *-a-* and the Armenian thematic vowel is entirely possible, this example calls for more caution, because Georgian also has a suffix *-a-* with a diminutive function (i.a.), cf. *ḱaca-* 'little man' next to *ḱac-* 'man'. Although we are clearly dealing with a loanword from Armenian to Georgian, we cannot be entirely sure of its antiquity.

<sup>21</sup> Ačaryan (HAB I: 331) also suggests that Ge. *rval-* 'copper, brass' is a loan from Armenian, in which case it would also antedate the addition of the prothetic vowel. The dissimilation of the second *\*r* > *l* is also seen in the Ge. PN *Grigoli* ← Arm. *Grigor* and is unproblematic. The medial *-va-* is, however, more unclear. Perhaps, it betrays the insertion of a supporting vowel, i.e. Arm. *\*rowr-* → *\*rowar-* > *\*rwar-*, but there would be no parallels for such a development. Bielmeier (1994: 431) reconstructs the input of the Georgian form as *\*ror*, which could explain *rval-* as a result of the frequent alternation of *\*o* and *\*wa* in Kartvelian languages (e.g. Ge. *ḱvaml-*, *ḱoml-* 'smoke'). The form *\*ror* cannot be accurate, however, because there is no way for it to develop into Arm. *aroyr*. For this reason, it is mostly assumed that the Armenian word was borrowed from a North-West Iranian form that still had a diphthong.

<sup>22</sup> Uralic *\*šVra* (Fi. *hiera*, Udmurt *šer* 'grindstone') may have been borrowed from PIIr. *\*čirā-*.

For Armenian *sal*, we may reconstruct a feminine *\*k<sup>h</sup>lH-eh<sub>2</sub>-* (Skt. *śílā́-*). By assuming an original PIE mobile *n*-stem<sup>23</sup> *\*kolH-ōn-*, *\*k<sup>h</sup>lH-n-* ‘stone, rock’, it is possible to compare PGM. *\*hallu-* (< *\*kolH-n-u-*; Go. *hallus* ‘rock’, ON *hallr* ‘stone’), and *\*hulli-* (< *\*k<sup>h</sup>lH-n-i-*; OE *hyll* ‘hill’), Lat. *collis* ‘hill’ (< *\*kolH-n-i-*), Gk. *κολώνη* ‘hill’ (< *\*kolH-ōn-eh<sub>2</sub>-*), and Li. *kálnas*, Ltv. *kālns* ‘mountain’, where the depalatalized velar may have spread from the oblique forms in *\*k<sup>h</sup>lH-n-*. Given these comparanda, it is noteworthy that the Georgian forms seem to have preserved the more archaic meanings of the Armenian word, unless the meaning ‘cliff’ is secondary.

III 49. Ge. სორო *soro* ‘den, burrow, hole’ ← PA *\*sor-o-* > Arm. *sor* (*o*) ‘cave, den, hole’. The Armenian word reflects *\*ke/ouHero-* or *\*kouH-r* (EDA 584), an old heteroclitic, cf. Av. *sūra-* ‘hole’, Skt. *śūna-* ‘emptiness, absence’, Gk. *ρύαρ* ‘hole (of the ear), eye of a needle’, Lat. *caverna* ‘cave, hole’, and perhaps ToB *kor* ‘throat’. The Georgian word is not attested in Old or Middle Georgian sources, but since a consonant stem *\*\*sor-* is not attested, I find it most attractive to assume that the stem-final *-o* reflects the Armenian thematic vowel in this case. This means that the missing attestation of the Georgian word in older sources is fortuitous.

#### 3.4.1.1 Uncertain comparisons

The following comparisons between Armenian and Georgian words remain possible, but are to be considered less certain compared to the comparisons in the previous section. This covers also cases where the etymological identity of compared forms is beyond doubt, but the direction of borrowing cannot be determined, either because neither form has an established etymology, or because one form has been borrowed from a third source, which could potentially have served as a direct source of the other as well.

III 50. OGe. თირკუმელნი *tirkumel-n-* (PL.TANT), Ge. *tirkmel-* ‘kidney’ ← PA *\*t<sup>h</sup>rik-mVn-* > Arm. *erikamown-k<sup>c</sup>* (GEN.PL *-anc<sup>c</sup>*) ‘kidney’. This ingenious equation goes back to Vogt (1938: 332). It has complications, which require some *ad hoc* assumptions, however.

<sup>23</sup>Martirosyan (EDA 565, 682) suggests that *\*k<sup>h</sup>lHn-* > Arm. *\*saln-* is reflected in the Arm. place names *Saln-a-jor* and *Saln-a-pat*, which seems acceptable, but this *n*-stem can also be secondary (Weitenberg 1985).

For the Georgian form, we must assume a sporadic metathesis of the first syllable, initial  $*t^hri^\circ \rightarrow tir^\circ$ . Additionally, we see a dissimilation  $*^\circ men^\circ > ^\circ mel^\circ$ , perhaps caused by a colliding  $-n-n-$  in the plural form, where Georgian added the suffix  $-ni-$ . This change may also have been caused or catalyzed by the common Georgian participial or appurtenance suffix  $-el-$  (cf. Gippert 2005: 150). Finally, we see an epenthesis of  $-u-$  in the Old Georgian form, which, according to Gippert (2005: 150), suggests a preserved labiovelar in PA  $*-k^wm-$ . Summing up, we must assume a PA input  $*t^hrik^{(w)}-men-$ , which underwent at least two sporadic changes in Georgian.

If the PA donor form contained the IE suffix  $*-men-$ , it shows an  $e$ -grade where the vowel had not yet been raised by the following  $n$ . This is consistent with the example Ge. *pon-* ‘ford’ (III 46). However, the attested Armenian paradigm only provides evidence for  $o$ - and zero grade forms ( $-mown-$ ,  $-man-$ ). If the Georgian form is indeed borrowed from Proto-Armenian, it entails that the Armenian word used to follow a paradigm like that of *harsn* ‘bride’ (GEN-DAT-LOC.SG.  $-in$ , NOM.PL  $-ownk^c$ , GEN-DAT-ABL.PL  $-anc^c$ ), or that of *azn* ‘tribe’ (NOM.PL  $-ink^c$ ). That is not surprising if it reflects an old participle, i.e. something like  $*treig^w-mh_1no-$  (cf. Olsen 1999: 503 on the type). The apparent zero grade of the root does not favour this assumption, however (cf. Gippert 2005: 151). It is possible to assume that the diphthong  $*ei$  of the first syllable would be substituted by Ktv.  $-i-$ , as diphthongs do not appear in native Kartvelian words. This would be consistent with the assumption that PK (?)  $*\gamma wino-$  ‘wine’ is borrowed from PA  $*\gamma^w ein-(i)o-$ , but other explanations are possible for these forms as well (see III 55).

The most serious problem is that the Armenian word has no certain cognates (cf. HAB II: 56, Olsen 1999: 940). Vogt’s derivation from  $*\sqrt{treik^w}$ - ‘twist’ relies on the comparison with Lat. *torqueō* ‘twist, turn’ and Gk. *τρέπω* ‘turn’, which is problematic. The Greek form is rather from  $*\sqrt{trep-}$  (LIV<sup>2</sup> 650), and the comparison with the Latin form requires the assumption of *Schwebeablaut*. In view of this problem, it remains possible that the borrowing had the opposite direction, from Georgian to Armenian. This does not improve matters considerably, since there are no comparanda within Kartvelian. In the end, however, a connection between the two forms in question is within the realm of possibility.

III 51. OGe. *ფართო* *parto-* ‘wide, broad’ ← PA *p<sup>h</sup>art<sup>h</sup>-o-* > Arm. *hart<sup>c</sup>* (*i*) ‘flat, even’ (Tomaschek 1883: 1254, Vogt 1938: 331). A parallel for the preserved Ge. *\*p-* is provided by *pon-* vs. Arm. *hown* ‘ford’ (III 46). However, there is no way of confirming whether the Armenian word is inherited. A direct comparison with Gk. *πλατύς* ‘wide’ (cf. Arm. *layn* ‘wide’) < PIE *\*plth<sub>2</sub>u-* is impossible since Armenian preserves PIE *\*l*. It is possible that the Armenian word is a very early borrowing of an Iranian *\*farθu-* (cf. Av. *pərəθu-* ‘wide’), where the initial *\*f-* would be the result of analogy with full grade forms like YAv. *fraθah-* ‘width’ (Gippert 2005: 152). Alternatively, it was borrowed from a (Pre-)Alanic language with the regular change of *\*p-* > *\*f-* (or *\*p<sup>h</sup>-*). If so, the final *-o* of the Georgian form suggests that the borrowing went through Armenian. Nevertheless, the comparison remains uncertain.

III 52. OGe. *ფორი* *poro-* ‘hole, pore’ ← PA *p<sup>h</sup>or-o-* > Arm. *p<sup>c</sup>or* (*o*) ‘cavity; belly, bowels’ (Ĵahowkyan 1987: 590). Again, uncertainty arises from the fact that the etymology of the Armenian word is not fully clear (Kölligan 2019: 277–8 suggests *\*p<sup>h</sup>eyoro-* ‘bloated’ of onomatopoeic origin). It cannot be compared directly with Gk. *πόρος* ‘ford, passage’ (< PIE *\*√per-* ‘penetrate’) because initial *\*p-* yields *h-* (Olsen 1999: 942 fn. 18 invokes taboo influence). If it represents a very early loanword in Armenian, it remains possible that Georgian borrowed it independently from the same source.

III 53. Ge. *ფოხი* *poso, posv-* ‘little hollow, niche’ ← PA *\*p<sup>h</sup>oso-* > Arm. *p<sup>c</sup>os* (*o/i*) ‘furrow, trench’ (HAB IV: 517). The Armenian word is usually considered a borrowing from Gk. *φόσσα*, itself from Lat. *fossa* ‘ditch, trench’ (Hübschmann 1897: 387, Olsen 1999: 928). According to Ĵahowkyan (Ĵahowkyan 1967: 123–4 fn. 105), this is unlikely, because the word is an *o-* or *i-* stem in Armenian, and because it is found in most dialects. However, the word clearly belongs to the early layer of Greek loanwords, in which final syllables are lost, and can thus be assumed to have existed in the common ancestor. In the assignment of these early Greek loans to an Armenian noun class, no strict pattern seems to be followed in general. As a parallel for both of these facts, cf. Arm. *pras* (*i*) ‘leek’ ← Gk. *πράσον*, recorded in the dialects of Karin, Erevan, Tiflis, Hamšen, and Nikomedia (HAB IV: 144). Due to the semantic difference between the Armenian and Georgian words (the latter only attested in Middle Georgian),

it is very much possible that the Georgian word was borrowed independently from Greek.

### 3.4.2 Georgian-Zan

III 54. GZ \**čero*- ‘crane’ (Ge. *čero*, OGe. *mčero*- ‘crane’, Zan (?) *čaro* [lex.] ‘fishing bird nesting in trees’) ← PA \**čer-o*- ‘crane’ (Viredaz 2019: 9, Thorsø 2022: 106–7). The Megrelian form is only found in the 18<sup>th</sup> c. dictionary of Saba Orbeliani (1949: 882), and not explicitly as a Zan form, so it is necessary to assume a Zanism in Georgian. Orbeliani describes it as a bird which nests in trees, making it more likely to mean ‘stork’ than ‘crane’. If there was a semantic shift to ‘stork’, it is possible that the word is cognate with Sv. (Upper Bal) *čûēr*, *čōr*, *čer* ‘stork’ (cf. Nižaradze 2012: 197). According to other dictionaries (Gudjedjani & Palmaitis 1985: 280, Topuria & Kaldani 1994: 1936), this word means ‘crow’ or ‘rook’, in which case it must be cognate with Meg. *ķvaria* ‘crow’.

The similarity between GZ \**čero*- and the PIE word for ‘crane’, reflected in Gk. γέρανος, Lat. *grūs*, Li. *gėrvė*, Cz. *žeráv*, Oss. (I) *zyrnæg*, *zærnyg*, and Pashto *zāṇa*-, is noted by Rogava (1988) and Klimov (1994a: 162–3), who both place it in the general context of PK–PIE contact.<sup>24</sup> Rayfield (1996: 6) adduces Adg. *qerew* ‘crane’ as well, but there is no way to explain the discrepancy between initial *q*- and Ge. *č*-. As the only IE language where PIE \**ǵ* yields a voiceless affricate, (Proto-)Armenian is the most likely candidate for an immediate source of the borrowing.<sup>25</sup> The PIE NOM.SG \**ǵerh<sub>2</sub>-ōu*- (cf. Kortlandt 1985a: 120) would have yielded PA \**cerō/u*-, a nearly perfect match for the reconstructed Georgian-Zan form.<sup>26</sup> The Indo-European root is often reconstructed as \**gerh<sub>2</sub>-*, with a velar onset, which may better explain the Balto-Slavic reflexes. The Iranian forms, reflecting

<sup>24</sup>Already in one of the later works of Marr (1935: 256), the two words are juxtaposed as the Armenian word is considered to be an adoption from the later discredited “Japhetic” (Caucasian-Semitic-Basque) substrate.

<sup>25</sup>Klimov (1994a: 162–3) seems to view the Kartvelian form as support for a glotalistic reconstruction \**k’erō(u)*-. I would, however, expect a Kartvelian language to adopt such a form as \*\**ķero*-.

<sup>26</sup>I would also note Batsbi *čšeran* ‘crane’, which has no Nakh-Daghestanian cognates and possibly reflects a loan from an unattested Ge. \**čer-an*-. In turn, this Georgian form may have been borrowed from PA \**čer-an-V*-, identical to Gk. γέρανος < \**ǵerh<sub>2</sub>no*-. The Batsbi addition of the laryngeal ʃ after an ejective has a few parallels in other loans from Georgian, e.g. *pšerang* ‘shirt’ ← Ge. *perang*- ‘id.’.

Plr. *\*jar-na-*, must consequently be explained through contamination with a root meaning ‘sing’, e.g. Oss. *zar-* (Gašiorowski 2013: 56). On the other hand, the Balto-Slavic forms can rather easily be accounted for by assuming leveling from the oblique cases, where *\*ǵr-* would have been depalatalized (Kortlandt 1985a,b). The conflict between these reconstructions is difficult to resolve in itself, but the possibility of a Proto-Armenian reconstruction *\*cero-* helps tip the scale in favour of reconstructing a palatal.

An outstanding issue is the GZ affricate *\*č* whose place of articulation varies depending on the school of Kartvelian reconstruction followed (see § 3.1.0.2). The similarity to the Proto-Armenian form is greatest when employing the reconstruction of Mačavariani and Klimov, in which it is a “hissing-hushing” affricate. Yet, it is very likely that the articulation of PK *\*č* was still closer to the attested articulation of Armenian *c*. Therefore, it seems necessary, in any case, to assume that this borrowing happened at a time before PIE *\*ǵ* had shifted fully to a dental affricate, i.e. at an intermediate stage such as (a fronted) *\*č̣*.<sup>27</sup> Thus, following the reconstruction of Schmidt and reconstructing GZ *\*č̣ero-* does not appear to hamper the comparison with Armenian in any significant way. The lack of parallel examples obviously makes these considerations speculative.

Arm. *krownk* (GEN.SG *křnkan*) ‘crane’ is the only attested reflex of the PIE word.<sup>28</sup> It is the result of an unclear sequence of changes (whether phonological and/or morphological) and has perhaps been subject to onomatopoeic influence as well (cf. Greppin 1978: 103; EDA 377, noting Skt. *krúñc-* ‘crane’). As for initial *krow-*, it is possible to start with the oblique stem *\*ǵrh<sub>2</sub>-u-* > *\*ǵruh<sub>2</sub>-* (cf. Lat. *grūs*) which would undergo depalatalization, but the lack of expected metathesis in the initial cluster (not *\*\*Vrkownk*) makes it necessary to assume the insertion of a vowel which would have been reduced in the pretonic position, i.e. either *\*i*, *\*u*, *\*ē*, or *\*ō*. Kortlandt (1985b: 10) assumes that this vowel was an analogical lengthened grade *\*ē* after monosyllabic nouns, which seems speculative. Whether or not Arm. *krow*<sup>o</sup> ultimately reflects the original oblique stem *\*ǵrh<sub>2</sub>-u-* is not consequential, however. On the basis

<sup>27</sup>The existence of such an intermediate stage may be supported by Arm. *k<sup>ac</sup>ac* ‘bitch’, probably an old Daghestanian loanword closest to Lezg. *kač* ‘bitch’ (cf. Lak *kač*, Hunzib *kača*, Avar *gwaži* < PD *\*gwažV-*).

<sup>28</sup>In view of its consonantism, the late hapax *grē/greay* in Grigor Magistros is at best an Iranian loan (Greppin 1978: 103).



of the Georgian-Zan forms, there is basis for assuming that the morphologically unchanged NOM.SG survived long into the prehistory of Armenian.

### 3.4.3 Proto-Kartvelian?

III 55. PK \**γwin(o)*- ‘wine’, (OGe. *γwno*-, GEN.SG *γwn-isa*, Ge. *γvino*, Zan *γvin*-, Sv. *γvin-el/-äl*). The similarity with the Indo-European word for ‘wine’ has long been noticed (Klaproth 1823: 106, NBHL I: 553c, Bopp 1847: 28, Tomaschek 1883: 1254). On account of the initial PK \**γw*-, which may represent an intermediate stage of the Armenian development \**u* > *g*, it appears to be borrowed from an earlier form of Arm. *gini* (ea) ‘wine’ (NBHL I: 533c, Pedersen 1906a: 458, HAB I: 558–9, EDA 214–5, Gorton 2017: 22). The Armenian word is compared with Gk. *οἶνος*, Alb. *verë*, Lat. *vīnum* (< Pit. \**uīnom*, cf. Fal. *uino* (ACC.SG), Umb. *vinu*), and HLuw. *uījan(i)*- ‘wine’. Although the Indo-European pedigree of this etymon has often been questioned, it is without linguistic reasoning. It can be derived from a root \**√ueih<sub>1</sub>*- ‘to wind’. Beekes (1987) reconstructs a hysterodynamic *n*-stem: NOM.SG \**ueih<sub>1</sub>-ōn*, ACC.SG \**uih<sub>1</sub>-én-m*, GEN.SG \**uih<sub>1</sub>-n-ós* (cf. also Lipp 2019). Olsen (1999: 440 fn. 501) is sceptical of such a reconstruction, since it would “necessitate an analogical explanation for *οἶνος* and leave Lat. *vīmen*, Skt. *véman*- ‘Webstuhl’ on a sidetrack.” For Greek, an analogical introduction of the accented *o*-grade after the stem had become thematic is, however, quite trivial. This could have been a shared innovation with Albanian. On the other hand, Beekes (1987: 24) admits the possibility of starting from a NOM.SG. \**uoih<sub>1</sub>-ōn*-. Analogy is at any rate inescapable. For instance, the Italic forms require the zero grade of the root, which would be less explicable if starting from a thematic paradigm. Moreover, Kloekhorst (2008: 1012) points out that all Anatolian forms are explicable as *n*-stems. Lat. *vīmen* ‘bending twig, osier’ can reflect \**ueHi-mn*- or a later construction (cf. Schrijver 1991: 245), while the meaning of Skt. *véman*- is very uncertain (EWAia II: 583–4).

Already Hübschmann (1897: 397) is sceptical of the relation between the Armenian and Kartvelian forms, and considers the similarity to be fortuitous. To be sure, the assumption of a loanword poses a chronological problem, namely that it would seemingly require the reduction of unstressed (\**e/oi*- >) \**ē* > *i* to be later than the change of \**γ<sup>w</sup>* > *g*. This is apparently contradicted by the

treatment of Iranian loanwords where unstressed  $\bar{e}$  becomes  $i$ , but  $v$  is preserved, cf. Arm. *višap* (< \**vēšap*) and Ge. *vešapi* ‘dragon’ ← Mlr. \**uešāp*- (Ravnæs 1991: 85 fn. 1). On the other hand, there is nothing inherently unlikely about the assumption that, at some point in its development, Proto-Armenian possessed a phoneme \*/ $\gamma^w$ / (< PIE \* $\mu$ ) while at the same time, it introduced a new (markedly different) / $v$ / through loanwords. Following the logic of this objection, however, we would expect PK \*\**γwen*- if the borrowing antedated the change of PA \* $\gamma^w$  > \* $g$ , and \*\**gin*- if the borrowing postdated that change. At least two solutions may be adduced.<sup>29</sup> First, if we assume that the borrowing into Kartvelian was considerably earlier than the Iranian loanwords in Georgian, where the high diphthongs (= Arm.  $\bar{e}$ ) are uniformly reflected as  $e$  (see e.g. Gippert 1993), it is possible that PA \**ei* was not reflected as \* $e$  but as \* $i$ . In any case, this assumption is required if the borrowing was into Proto-Kartvelian.<sup>30</sup> This is admittedly hard to establish due to the lack of parallels. Alternatively, we may follow Gippert (1994: 120) and assume that, next to the PA stem \**γ<sup>w</sup>ein*- (< \**μoin*-, Arm. *gin-i*), there was a form \**γ<sup>w</sup>ino*- (< \**μihno*- = Lat. *vīnum*) which would have yielded \**gin*, GEN.SG \**gnoy* but was lost at the preliterate stage after being loaned into Kartvelian. The latter scenario is favoured by the fact that the Old Georgian word shows an irregular and unparallel declension pattern: NOM.SG *γwno*-γ, GEN.SG *γwn-isa*, i.e. a combination of  $o$ -stem and consonant stem. A consonant stem is found in Megrelian and Svan too. According to Neri (*apud* Lipp 2019: 204), this points to different “adaptations” of the Armenian stem in \**io*-. I find it more likely to reflect the fact that within Armenian itself, there was competition between the forms \**γ<sup>w</sup>ēn-io*- and \**γwin-o*-.

Fähnrich (2002: 35–6, 2007: 486) considers \**γwin*- to be a native Kartvelian root, a nominal derivation from \**γun*- ‘krümmen, biegen,

<sup>29</sup>At any rate, Klimov’s remark (1998: 227, but not found in the original Russian version) that “the change \* $\mu$  >  $g$  probably must have been accomplished there [in Armenian] long before the first Kartvelian-Armenian contacts in the 7<sup>th</sup>–6<sup>th</sup> centuries B.C.” is completely circular and otherwise baseless. Elsewhere (1994b), Klimov presents the idea that PK \**γw*- is directly borrowed from \**Hμ*-, but the Anatolian evidence makes it unlikely that the word for ‘wine’ had an initial laryngeal. In any case, this is impossible to demonstrate.

<sup>30</sup>This scenario does not require the assumption that the Armenian form reflects PIE \**μeiHn(i)o*-, because since the outcome of both \**oi* and \**ei* was eventually  $\bar{e}$  (pretonically >  $i$ ), there is ample reason to suppose that they initially merged in \**ei*.

winden' with "umlaut"  $*u > *wi$ .<sup>31</sup> Semantically, this is unproblematic, considering that the formation would be parallel to PIE  $*ueih_2no-$ . However, it does not seem to be the most economical solution. The extralinguistic argument, adduced by e.g. Klimov (1994b: 64–5), that the South Caucasus presents some of the oldest archaeological evidence for wine cultivation and processing is irrelevant. This material evidence goes back several millennia before the assumed existence of Proto-Kartvelian, and there is no way to tell if its ancestor language was spoken in the same region. Besides, it is far from unexpected for a language to borrow words for phenomena or technology for which words already exist (cf. Gamkrelidze & Ivanov 1995: 560 fn. 64, further Greppin 2008a).

In sum, the most economical assumption is that the preform of Ge. *yvino* was borrowed from Proto-Armenian. It must have preceded the change of  $*\gamma^w > g$  in initial position but otherwise, its dating presents a conundrum. In particular, we cannot be sure that the word actually existed in this form in Proto-Kartvelian, because the forms found in all the daughter languages are based on identical stems. The aforementioned vacillation between *o*-stem and consonant stem may in fact favour the assumption that the word spread posterior to the dissolution of the Kartvelian languages. On the other hand, the Svan diminutive suffix *-el/-äl* is no longer productive, suggesting that the word has some antiquity there (Klimov 1998: 227). After all, however, the word cannot be used as evidence for direct contact between Proto-Armenian and Proto-Kartvelian.

### 3.4.3.1 Discussion

Certainly, any hypothesis of direct contact between Proto-Armenian and Proto-Kartvelian remains controversial. This is because the diffusion of Kartvelian is usually assumed to have taken place around the beginning of the third millennium BCE (Klimov 1964: 34–5). On the other hand, this date is mainly based on glottochronological methods and therefore fraught with much uncertainty. The assumption that Proto-Kartvelian absorbed Indo-European loanwords (e.g. Klimov 1994a, Smitherman 2012) is not necessarily an

<sup>31</sup>I have not been able to find other examples of such an umlaut in the Kartvelian languages, however, and I suppose that Fähnrich follows Gamkrelidze & Mačavariani (1982) in assuming that the alternation of  $*u$  and  $*wi$  betrays a kind of *ablaut*.

obstruction to the assumption that PK was spoken later than PIE. Loans from PIE may have entered into an ancestor of PK, or alternatively, passed through a different language before entering PK at a later date. At the same time, as noted in the introduction to this chapter, none of the alleged PIE loanwords in Kartvelian are fully convincing. Direct contact between these two proto-languages is indeed unlikely under the usual assumption of a PIE homeland in the Pontic-Caspian steppe and a PK homeland not further north than the present location of the Kartvelian languages.

At the same time, as briefly mentioned in § 3.4, it is possible that in some cases, Proto-Kartvelian reconstructions showing virtually no subsequent sound changes actually reflect words that have spread throughout the Kartvelian language area after these languages had already diverged from one another. The case in point is *\*ɣwino-* ‘wine’ (III 55), where for phonological reasons, any connection to the Indo-European word for ‘wine’ most likely goes through Proto-Armenian. Nevertheless, it does not prove that Proto-Kartvelian and Proto-Armenian were in direct contact.

### 3.4.4 Rejected proposals

These rejected proposals include both words deemed to be incomparable, as well as loans that postdate the onset of Armenian literacy, and are thus outside the scope of this work.

III 56. Ge. *სმო* *amo* ‘tasty, pleasant’ ← PA *\*hamo-*, Arm. *ham* (*o*) ‘taste’ (HAB III: 17, Ĵahowkyan 1987: 590). The Armenian word reflects *\*sHp-mo-*, cf. Lat. *sapiō* ‘to taste’, ON *safi* ‘juice’ (Olsen 1999: 27). Although the comparison is compelling, it hardly belongs to the archaic loanwords with preserved thematic vowel. Given the adjectival meaning, the Georgian word must be an internal derivation with the adjectival suffix *-o* or a late borrowing of Arm. *hamov* (INST.SG) ‘tasty’, cf. also Ge. *si-amov-ne* ‘pleasure, delight’.

III 57. GZ *\*gza-* ‘way, path’ (OGe. *gza-*, Meg. *za-*, Laz (*n*)*gza-*; Klimov 1964: 62) ← PA *\*geza-* ‘road’ < *\*ueǵʰ-eh₂-* ‘road’, cf. Go. *wigs* (Ĵahowkyan 1991: 37–8, EDA 201). A continuant of *\*ueǵʰ-eh₂-* could theoretically have existed in pre-literary Armenian, and the formation is transparently a feminine/collective derivation of *\*√ueǵʰ-* ‘to convey’ (cf. especially Alb. *udhë* (fem.) ‘way, journey’ < *\*uǵʰ-eh₂-*). The substitution of PIE *\*u* for *g* in Kartvelian diverges from the

example *\*ɣwino-* (III 55). Thus, the loan would have postdated the final stage of the development to *g-* and thus be comparatively late. The assibilation of intervocalic (*\*ǵʰ >*) *\*j- > -z-* was potentially relatively late as well (see fn. 7). This makes it chronologically difficult to assume that the loan entered Georgian-Zan. The existence of this etymon at the GZ stage is supported by Ge. *sa-gz-al-*, Meg. *o-rz-ol-* ‘breakfast’, if the original meaning was ‘provisions for the road’ (Klimov 1964: 168). The Megrelian cluster *-rz-* (initial *z-*) also shows that the cluster *\*gz-* is old and not a result of syncope from *\*\*geza-*, as must be assumed if the word came from Proto-Armenian.

III 58. GZ *\*werǰxl-* ‘silver’ (Ge. *vercxl-*, Meg. *varǰxl-*) ← PA ? > Arm. *arcatc* ‘silver’ (Ĵahowkyan 1987: 590, Ĵahowkyan 1990: 31). The sound substitution *\*a (\*h<sub>2</sub>e?) → we* and the stem-final cluster *\*-xl-* cannot be explained. On the whole, the two etyma are only faintly similar.

III 59. GZ *\*werǰ-* ‘male, ram’ (Ge. *verǰ-* ‘ram’, Meg. *erǰ-* ‘male, ram’) ← Arm. *orj* ‘male’, *yorj* ‘ram’ (Ĵahowkyan 1987: 590, 1990: 31). The sound substitution *o → we* is unexplained. Martirosyan (EDA 540) proposes that the source of borrowing is Arm. *yorj* ‘ram, \*testicled’ (< *ǰ-* + *orj* < *\*h<sub>3</sub>erǰʰ-* ‘testicle’), assuming the Armenian word had the realization /uirdǰ/ or /werdǰ/. To support this, he adduces Ge. *xv(i)tk-* ‘crocodile’ ← Arm. *xoyt<sup>c</sup>-k<sup>c</sup>* ‘id.’. This must be a much later loan, however. The post-classical realization of Arm. *oy* as /uj/ and the lack of any such diphthong in Georgian words explains the substitution by /wi/. There is no support for the assumption that *yorj* was pronounced /uirdǰ/ or /werdǰ/, on the other hand.

III 60. Meg. *nosa* ‘daughter-in-law, sister-in-law’, Laz *nusa, nisa, nusava* ‘wives of two brothers’ ← PA *\*nusa-* > Arm. *now* ‘daughter-in-law’ (HAB III: 467). Ačariyan assumes that Adg. *nəsa* ‘daughter-in-law’ was also borrowed from a Proto-Armenian form. However, similar words for ‘daughter-in-law’ and ‘bride’ (vel sim.) are widespread in the Nakh-Daghestanian languages, which thus looks like the centre of distribution for the etymon, cf. Ch., Ing., Batsbi, Avar *nus*, Andi *nusa*, Akhvakh *nuša* ‘bride’, Archi *nus-du-r* ‘son’s wife’. The word is, however, not found in Svan or Georgian (apart from dial. *nusadia* ‘uncle’s wife’, perhaps borrowed from a Zan language).

Although the ultimate origin of this Caucasian *Wanderwort* is probably PIE *\*snuso-*, its distribution makes it unlikely that it originally spread from Proto-Armenian. More importantly, there are no

parallels for the preservation of PIE *\*s* in a loanword from Armenian. The change of *\*s* > *h* or  $\emptyset$  in Armenian is a very early sound change (Kortlandt 1980: 27–8). For this reason, a more conceivable source of this Caucasian areal word is an early Eastern Iranian (pre-Alanic) dialect, cf. Oss. (D) *nostæ* ‘daughter-in-law’ < *\*snauša-* or PIIr. *\*snuša-*. This is especially conceivable, if one assumes that the word spread through Nakh, where a cluster *sn-* is disallowed (Tuite & Schulze 1998).

III 61. ზტო (ზტო, რტო) OGe. *što-*, *što-*, *rto-* ‘branch’ ← PA *\*ost-o-* > Arm. *ost* (*o*) ‘branch’ (Vogt 1938: 332). The Armenian word is clearly inherited (< *\*He/osd-*, cf. Gk. ὄζος, Go. *asts* ‘branch’; EDA 534). The hypothesis of an archaic loan into Georgian is thus appealing on the surface, but there is no way to explain the loss of initial *o-* and the variants with *š-* and *r-* in Georgian. Ačaiyan assumes that the form with *š-* was borrowed from an unattested “Northern” dialect of Armenian (comparing the variants *anost*, *anošt* ‘without branches’). This is at least chronologically unproblematic, since the variant *što-* is not attested before Middle Georgian. On the other hand, this *što-* may also be a Zanism, which would point to a GZ *\*što-* that regularly became Ge. *sto-*. The variant *rto-* is attested already in Old Georgian, however, and finds no regular explanation. Although these Georgian forms may well be loanwords, it remains very uncertain whether they were borrowed from Armenian.

III 62. PK *\*soko-* ‘mushroom’, cf. Ge., Zan *soko*, Sv. *sokü* ‘mushroom’. The word is not attested in Old Georgian and may result from later contact, but no formal circumstances exclude Proto-Kartvelian inheritance. Nevertheless, Ačaiyan (HAB IV: 252) considers it a loan from Arm. *sownkn*, (*sowngn*, *sownk/g*) ‘mushroom’ (hesitantly, Thorsø 2022: 104). The Armenian word itself is usually analyzed as a substrate word connected to Gk. σπόγγος, σφόγγος ‘sponge’. Due to its late attestation (*Geoponica*, 13<sup>th</sup> century), it cannot be determined whether the forms with final *-n* are primary. As a consequence, a reconstruction PA *\*sonko-* is possible. If it is accepted that this form was loaned into Kartvelian, the most problematic issue would be the loss of the first *\*-n-*. After all, however, it is more likely that the Kartvelian and Armenian forms are both independent borrowings from Nakh-Daghestanian languages, cf. Tsez *zikü*, Bezhta *zoکو*, Avar *s:ak*, Udi *ša<sup>h</sup>mk:al*. For a more in-depth discussion, see IV 75.

III 63. GZ \*sx(a)l- ‘to hack, prune’ (Ge. *sxlevs* ‘to prune’, Meg. (dial.) *rsxilua* ‘pruning’) and *sxl-(e)t-* ‘to slide, glide’ (Ge. *sxleṭs* ‘to break off; slide, slither’) ← PA \*sxal- > Arm. *sxalim* ‘to err, fail, stumble’ (Vogt 1938: 333). The Armenian word reflects \*√skHel-, cf. Skt. *skhālati* ‘stumble, stammer, fail’. The Armenian and Georgian-Zan meanings are too distant, however. Klimov (1994a: 135–6) rejects that the donor is (Proto-)Armenian, but believes it was still an IE language. He reconstructs the meaning ‘sryvat’(sja) s mesta, ostupat’sja’ (be plucked off, stumble) closer to the putative derivative *sxl-(e)t-* and assumes that the meaning ‘to prune’ is secondary. This seems quite far-fetched.

### 3.4.5 Analysis

The most unproblematic part of the material in this section are those words that surface in nearly the same form in Armenian and Georgian. The only discrepancy they exhibit is the presence in Georgian of the thematic vowel, which was eventually lost in Armenian. A subsection of these words are clearly inherited from PIE, implying that they were borrowed from Armenian. Others do not have a secure IE etymology. Other words in this category are conspicuous, because they preserve additional phonemes that have since changed in the Armenian form.

Given the potential dating of the Georgian-Zan protolanguage in the late second millennium BCE, the language contact between Proto-Armenian and Georgian-Zan can perhaps be pushed back to the time of the Nairi confederation in North-East Anatolia, which formed following the collapse of the Hittite empire in the twelfth century BCE, and which, according to the Assyrian king Tiglath-Pileser I, consisted of 23 individual polities, stretching from the Lake Urmia area to Northeast Anatolia. Some of these tribes, such as the Kaškai, Tibal, and particularly the Diaueḫi have been considered Kartvelian-speaking (Sury 1994: 6). On the basis of the Proto-Armenian loanwords in Georgian-Zan, it seems possible that Armenian-speaking people were among the Nairi as well.

Additional support for this tentative dating and location comes from relative chronology. Most crucially, the form Ge. *poni* ‘ford’ (III 46) demonstrates that Armenian-Kartvelian contact took place before the Armenian change of initial \*p<sup>h</sup>-, \*f-, \*φ- vel sim. (< PIE \*p-) to *h*- and before the change of \*oN > *un*. Despite its uncertain nature,

we may also recall the example of OGe. *tirkumelni* and Arm. *erikamn* ‘kidney’ (III 50), which could represent a loan in either direction. If so, it would also precede the loss of Armenian initial *\*tʰ* (vel sim., < PIE *\*t*) before *-r*. Recalling the relative chronology of the Armenian–Hurro-Urartian contact (§ 2.4), postdating the spirantization of original PIE *tenues*, and probably the raising of *\*o* before nasals, the movement of Armenian loanwords into Kartvelian appears to have predated Urartian loanwords into Armenian by some time.

### 3.5 Loanwords with unknown trajectory

Table 3.4 contains etyma shared by Armenian and Georgian whose direction of borrowing is impossible to ascertain. Mostly, Ačariyan (see references to HAB) tends to consider these loans as having passed from Armenian to Georgian, but only occasionally, the Georgian stem-final *-o* supports this assumption. Out of caution, it is best not to conclude too much on the basis of this feature alone. Although comparatively rare (cf. Gippert 2005: 152), Kartvelian *-o* was a derivational suffix (cf. Fähnrich 2007: 324). Stems in *-o* may be, for example, original formations with the circumfix *\*ta-* *-o*, now restricted to proper nouns (Fähnrich 2007: 722).



Armenian	Georgian	References
<i>akowt<sup>c</sup></i> 'oven, stovetop'	<i>aḱuta</i> 'id.'	HAB I: 110
<i>baṇṇar</i> 'herb, vegetable'	<i>baṇṣar-</i> 'green herb'	HAB I: 409
<i>t<sup>c</sup>ep<sup>c</sup></i> 'bran, scale'	<i>tebo</i> 'dandruff'	HAB II: 178
<i>xawz</i> 'algae'	<i>mxavs-</i> 'moss'	HAB II: 432
<i>cor</i> 'barberry'	<i>çoro</i> 'rowan'	HAB II: 469
<i>čat</i> 'bier, sedan'	<i>čal-</i> 'chassis plank'	HAB III: 178
<i>čatag</i> 'thicket, woods'	<i>čalak-</i> 'riverbank grove'	HAB III: 178
<i>mtrowk</i> 'donkey foal'	<i>muṭruk-</i> 'id.'	HAB III: 369
<i>naxir</i> 'herd of cattle'	<i>naxir-</i> 'id.'	HAB III: 421–2
<i>owṛn</i> 'hammer'	<i>uro</i> 'id.'	HAB III: 609
<i>jaxem</i> 'crush, break'	<i>žax-</i> 'bang, slam'	HAB IV: 119
<i>soči, šoči</i> 'fir, pine'	<i>soči</i> 'fir'	HAB IV: 241

Table 3.4: Armenian-Kartvelian mutual loanwords with unknown direction

### 3.6 Shared loanwords from a third source

Table 3.5 contains words in Armenian and Georgian that are almost certainly related, as indicated by a significant similarity in form and meaning. However, they cannot be borrowings from one another, because they either do not comply with the established sound substitutions, or because they have divergent meanings. This invites the interpretation that the Armenian and Georgian forms are parallel borrowings from a third language. Apart from completely unknown donor languages, which make up the majority of the examples, it is well established that Georgian and Armenian independently borrowed many Middle Iranian words.<sup>32</sup> Likewise, shared loanwords from Greek were independently adopted in the two languages, on which see Greppin (1988). Furthermore, it may also be suspected that Urartian and unknown Semitic (e.g. Aramaic) languages were significant donors to both languages, but only in very few cases is it possible to establish the exact source.

<sup>32</sup>In some cases, however, Armenian was the mediator (Gippert 1993).

Armenian	Georgian	References
<i>ałtor</i> 'sumac'	<i>alałro</i> 'id.'	see p. 20 (Uratian?)
<i>ant<sup>ce</sup>el</i> 'hot coal, ember'	<i>anteba</i> 'burn'	HAB I: 194; IV 5
<i>bałarj</i> 'unleavened bread'	<i>blarž-</i> 'crude bread'	HAB I: 397
<i>bałbak</i> 'a herb'	<i>balba</i> 'marshmallow'	HAB I: 397–8
<i>bewekn</i> 'turpentine'	<i>belekon-</i> 'id.'	HAB I: 443–4
<i>gari</i> 'barley'	<i>ker-</i> 'id.'	HAB I: 521–2; IV 22
<i>gawař</i> 'region, district'	<i>gvar-</i> 'clan, tribe'	HAB I: 527
<i>erkat<sup>c</sup></i> 'iron'	<i>rķina</i> 'id.'	Vogt 1938: 334
<i>t<sup>o</sup>rořop</i> 'cuirass'	<i>tor-</i> 'armour'	HAB II: 199
<i>ciran</i> 'apricot'	<i>ķeram-</i> 'id.'	HAB II: 459–60
<i>cmel</i> 'spinach, beetroot'	<i>zumela</i> 'cockscorn'	HAB II: 464
<i>ktzi</i> 'island'	<i>ķunzul-</i> 'id.'	HAB II: 603
<i>kot<sup>o</sup>ol</i> 'obelisk'	<i>godol-</i> 'pillar, tower'	HAB II: 614–5
<i>korč</i> 'griffin'	<i>ķurč-</i> (OG) 'a bird'	HAB II: 652
<i>market</i> 'mattock'	<i>margl-</i> 'id.'	Vogt 1938: 334; IV 56
<i>k<sup>ac</sup>ax</i> 'vinegar'	<i>ķaçax-</i> 'sour, unripe'	HAB IV: 565; IV 84

Table 3.5: Armenian-Kartvelian shared borrowings from a third source

Some of these examples are discussed more elaborately in the following chapter (see the internal references). Here, it will suffice to comment on three of the words.

**Arm. *erkat<sup>c</sup>* 'iron' and Ge. *rķina* 'id.'** It is sometimes assumed that the element <sup>o</sup>*at<sup>c</sup>* in the Armenian word spread from *arcat<sup>c</sup>* 'silver'. This seems conceivable given that *arcat<sup>c</sup>* may have developed regularly from PIE *\*h<sub>2</sub>rǵnto-* 'silver' (see Kümmel 2017). In contrast, Vogt (1938: 334) assumes that *erkat<sup>c</sup>* is in fact borrowed directly from Ge. *rķina*. According to Vogt, the expected outcome *erkin-* is preserved in the form Arm. *erkin-k<sup>c</sup>* 'sky, heaven'. However, *erkin-* should perhaps not be separated from *erkir* 'earth' (see Kölligan 2019: 104–49 for a critical discussion). It is possible that both the Georgian and Armenian words for 'iron' are ultimately borrowed from a Nakh-Daghestanian source akin to Lezg. *raq*, OBL *raq-uni-* 'iron' (Thorsø, Wigman et al. 2023: 114–5).

**Arm. *ciran* 'apricot' and Ge. *ķeram-* 'id.'** Both of these forms are considered Urartian loanwords by Ačařyan (HAB II: 459–60),

solely because apricots are native to the Armenian Highland. It is tenuous to base an etymology on non-linguistic arguments alone, however. Olsen (1999: 450) assumes an input *\*dʒiran-* ‘golden’ from an Iranian dialect. If correct, the loan would have preceded the sound shift, for which only questionable parallels exist (see § 2.4). In this case, we would also expect to see the vowel weakening *\*ciran* > *cran*. More compelling is the proposal of Viredaz (2009), who assumes a *Wanderwort* with an origin in the mountainous area of South-Central Asia, cf. e.g. Yazgulami *čīrai*, Ashkun *cirä*, Kashmiri *cēr* ‘apricot’. This aligns well with the assumption that one of the early diffusion routes of apricots reached from Central Asia to the Caucasus (cf. Bourguiba et al. 2020).

**Arm. *ktzi* ‘island’ and Ge. *ḱunzul-* ‘id.’** The Armenian form can reflect *\*kuluz-i*. Gippert (2005: 149–50) assumes that this form was borrowed by Georgian, after which it underwent metathesis *\*kuluz-* → *\*kuzul-*. The epenthetic *n* can be classified as a *Wucherlaut* and ignored (§ 3.1.0.4). However, the replacement of Arm. *z* → Ge. *ḱ* is irregular. As admitted by Gippert himself, the etymology of the Armenian word is unknown. Ačaiyan (HAB II: 603) considers it to be a borrowing from a Semitic language, cf. Syr. *gazārtā*, Arab. *jazīra* ‘island’, but this would require us to infer an unattested Semitic language. The source of the forms in Armenian and Kartvelian thus remains unknown, and it may be safest to assume that they were borrowed independently.