Dispersals and Diversification

Linguistic and Archaeological Perspectives on the Early Stages of Indo-European

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Contents

CHAPTER 12

Two Balkan Indo-European Loanwords

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1 Loanwords and Cladistics

All languages frequently borrow elements—roots, derivational morphemes and, more rarely, inflectional morphemes—from other languages that they are in contact with. It is only reasonable to assume that this has been the case ever since human language emerged. When a loanword has been fully integrated into the lexicon of a language, it generally behaves like any other word, being susceptible to the same phonological and morphological changes as inherited words. As a consequence, there are certain comparisons for which it is impossible to establish a direct ancestor form, and which display features that make a borrowing scenario more likely, or the only one possible. Such features may include a phonological make-up offending the phonotactics of the ancestral language, a very limited distribution, or extralinguistically, an incompatibility between the semantics and the established theories about the material culture and subsistence strategies typical of the speakers of the ancestral language. Sometimes, related forms in two or more branches may be traced to a common proto-form which at the same time cannot be reconstructed for the older parent language. When this is the case, and especially when similar, but incomparable forms are found among the other branches of the family, we can reasonably infer that the etymon was borrowed at a common pre-stage of these branches. This article examines two examples of such a situation in the hypothetical common pre-stage of Greek, Armenian, and Albanian.

Borrowing is a type of lexical innovation, but the probative value of loanwords is frequently understated when discussing the cladistics of a language family.[1] Thus, while shared innovations in the core linguistic structure (phonol-

1 Cf. e.g. Clackson (1994: 23–24) who distinguishes four basic types of lexical innovation: replacement of a root (e.g. through borrowing), innovation of form and meaning, of form only, and of meaning only. Clackson does not explicitly assign more weight to one over the other, however. In his summary (1994: 190), isolated roots which are borrowings are assigned to a special category, but no distinction is made between those lexemes that show regular sound correspondences, such as Arm. *sowṙn* = Gk. *κίων* 'pillar', and those that do not, such as Arm. *kamowrǰ* ~ Gk. *γέφυρα* 'bridge'.

ogy and morphology) are rightly considered key evidence, shared innovations that take the form of borrowed lexical material are often disqualified or disregarded. Shared innovations in (inflectional) morphology are surely still the pillar of cladistic evidence because they are often less easily repeatable; however, one may argue that also lexical borrowings represent unique, significant innovations when they can be traced to a common form for which there is no evidence in the previous clade. In such cases, borrowings are even more significant than lexical innovations based on inherited material, including lexemes that are completely isolated, but otherwise show no signs of being loanwords, thus still having a chance of being shared archaisms.

2 Evidence for Balkan Indo-European

The so-called Balkan Indo-European languages[2] have been shown to relate to each other in various ways. A common pre-stage of Greek, Armenian, Albanian, and Phrygian is primarily hypothesized on the basis of lexical evidence, but some morphological innovations like the analogical transfer of **m-* to the 1. person active middle ending, i.e. PIE **-h_2a̯i̯* → **-ma̯i̯* > Gk. *-μαι*, Arm. *-m*, Alb. *-m* (Klingenschmitt 1994: 245), may also be noted. The hypothesis is corroborated by shared innovations that can be established for only two of the constituent languages, e.g. the productive agent noun suffix **-ik$^{\text{w}}$i̯o-* > Arm. *-ič$^{\text{c}}$*, Alb. *-ës* (Matzinger 2016: 167). For an overview of isoglosses, see Matzinger 2005c: 381–382. On some points, Albanian and Armenian may show a similar treatment of the PIE gutturals (Kortlandt 1986), but their exact development is highly debated. At the same time, Armenian and Greek share a larger number of isoglosses, most famously the vocalization of initial, pre-consonantal laryngeals in e.g. Gk. *ἀνήρ*, Arm. *ayr* 'man' < **$h_2$ner-*, also seen in Phrygian *αναρ* 'husband'. Chiefly, Greek and Armenian show a relatively large set of lexical correspondences which caused them to be closely connected by many scholars since Pedersen (1924), who also noted a number of lexical isoglosses with Albanian.[3]

Based on a number of important isoglosses shared with Greek (Neumann 1988, Brixhe 2008: 72) and to a lesser degree, with Armenian (de Lamberterie

2 This widely used term is admittedly somewhat misleading. There is no direct evidence placing all of these languages or their hypothetical common ancestor on the Balkan peninsula itself. A discussion of the geographical circumstances is beyond the scope of this paper, however.

3 An exhaustive discussion of the Greek–Armenian isoglosses is given by Clackson (1994) who is sceptical about the idea of a subgroup. The hypothesis is even more explicitly rejected by Kim (2018).

2013, Kortlandt 2016), it seems sensible to include Phrygian in the Balkan IE subgroup.[4] However, the exact classification of Phrygian will not be given further attention here, where it suffices to repeat the received opinion that its closest known relative is Greek (Brixhe l.c., Ligorio & Lubotsky 2018: 1816–1817).

The establishment of the Balkan IE subgroup is frequently considered highly uncertain or unlikely. Many thus seek to explain the notable shared innovations through a period of intense contact alone, assuming an ancient *Balkansprachbund* which like the modern one may have encompassed a large area (Hajnal 2003). Especially the fact that the earliest attestations of Armenian and Albanian are relatively late (respectively 5th and 16th century CE) and highly deviant from PIE makes it challenging to judge the evidence these languages provide and lowers the amount of extant evidence. The judgement of the few key items is therefore of great importance. The following sections give a discussion of two loanwords which in their exact form are confined to Greek, Armenian, and Albanian, and may represent borrowings at the common pre-stage of these languages. Neither of these etymologies is new, but the chronology of borrowing relative to the dissolution of PIE does not seem to have been sufficiently stressed.

3 **aiĝ(i)-* 'Goat'

The comparison of Gk. *αἴξ* 'goat' (gen. *αἰγός*) and Arm. *ayc* '(nanny)goat', (gen.-dat.-abl.pl. *aycic^{c}*) has been recognized for nearly two centuries (cf. NHB s.v.) and has never really been questioned, even if there are in fact morphological difficulties. Thus, while the Greek noun shows root inflection with nominative **aiĝ-s*, many Armenian forms have an underlying suffixed stem **ayci-*, i.e. nom.pl. *aycik^{c}* (beside less frequent *ayck^{c}*) and gen.-dat.pl. *ayceac^{c}*, (beside less frequent *aycic^{c}*). Consequently, the Armenian nominative with its primarily feminine semantics is commonly analysed as an **ih$_2$*-derivative (Meillet 1936: 76; Martirosyan 2010: 58), but such a form is not likely to be reflected in the primary (non-collective) nominative *ayc*—it would probably yield †*ayč*[5] con-

4 Other *Trümmersprachen* of the Balkans and Italy may also belong to the group, e.g. Messapian, for which a particular affinity with Albanian has been suggested (Matzinger 2005b). Finally, some shared innovations with Tocharian may be noted (Klingenschmitt 1994: 245).

5 There is admittedly no certain example of the cluster **-ĝi-* in Armenian (but see e.g. Martirosyan 2010: 370 s.v. **koč-*). However, considering the development of other clusters with a stop and a semivowel, it is unlikely that the reflex was simply *-c-*. Cf. the recent discussion and references in Kocharov 2019: 30–31.

sidering the regular development[6] of final *-*ih*$_2$ > *-*i̯a* seen in *sterǰ* 'sterile', cf. Gk. *στεῖρα*, Lat. *sterīlis*, and in *verǰ* 'end', derived by Olsen (1999: 84) from **uperih*$_2$-. It is sensible to assume the coexistence of a root noun *ayc-* and a derivative **ayci-* in Proto-Armenian, perhaps with an original singulative and collective function respectively.

Outside Greek and Armenian, the only potential match, also showing the pattern of root noun versus feminine/collective derivative, is Alb. *edh* 'goat kid' and *dhi* 'nanny goat', reflecting PAlb. **aidza*, **aidzijā* respectively (Orel 1998: 85).

No true cognates are found in other Indo-European languages. Skt *ajá-* 'goat' and Lith. *ožỹs, ožkà* 'goat' are, despite the identical semantics, not related etymologically with the form underlying the Greek, Armenian, and Albanian words. Rather, they formally presuppose *(*h*$_2$)*aĝ-*. The derivation of Skt *eḍa-* 'kind of sheep, ewe' from **aiĝ-* (Mayrhofer 1992: 264) is very implausible considering the phonological and semantic incompatibilities. So is the frequent comparison of Av. *īzaena-* 'made of leather', purportedly from a zero grade *(*h*$_2$)*iĝ-*; We do not know whether this term originally referred to goatskin, and more importantly, we do find the expected reflex of *(*h*$_2$)*aĝ-* in YAv. *aza-* 'billy goat', clearly identical with Skt. *ajá-*, showing no *-*i̯-*. There is also no clear evidence for a zero grade elsewhere, despite Martirosyan's quite complicated suggestion that *ayc* derives from "**h*$_2$*iĝ-* > *Hyĝ*, with *y* analogically after NSg **h*$_2$*eiĝ-*" (2010: 58), seemingly in order to explain the absence of initial *h-* from **#h*$_2$-. The implied, rather controversial sound law (PIE **#h*$_2$- > Armenian *#h-*) is probably valid after all,[7] but it seems far simpler to explain the lack of this reflex by assigning **aiĝ-* to a post-PIE stage.

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6 This development of *-*ih*$_2$*#* could well have been morphologically conditioned, i.e. the result of analogical leveling on basis of the oblique cases (cf. de Lamberterie 1990: 490), but that does not change the fact that its absence here would be unexpected. Based on its apparent presence in Tocharian as well (cf. Toch. B *läntsa* 'queen' < **ulh*$_2$*ntih*$_2$), this development may be assigned to a very old stage, but the alleged Albanian evidence, *zonjë* 'lady' < **desi̯ās potnih*$_2$ according to Klingenschmitt (1994: 244) is very uncertain. We can therefore assume that the change of *-*ih*$_2$*#* > *-*ya#* was not a change common to Balkan IE but rather to Graeco-Armenian only; we may even be dealing with completely independent developments.

7 See e.g. Polomé 1980, Martirosyan 2010: 712 with literature. Clearly, the most problematic counterexample, adduced by e.g. Olsen (2017: 430), is *acem* 'lead' < **h*$_2$*eĝ-e/o-*, cf. Gk. *ἄγω* etc. The alternative etymology comparing Lat. *gerō* 'carry' < **h*$_2$*ĝ-es-* leads to new problems such as the Arm. aorist *aci*. We may thus have to explain *acem* as influenced by compounds ending in *-ac* (Clackson 2005: 155). It is likely that initial *h-* in Armenian became an unstable phoneme which could sometimes appear and disappear irregularly, much like the situation in Albanian. In this light, the number of examples where Arm. *ha-* still seems to correspond to **h*$_2$*e-* is noteworthy.

Consequently, the root *$*h_2e\underset{\wedge}{i}\hat{g}$- 'goat' that frequently appears in Indo-European handbooks (e.g. Mallory & Adams 1997: 229) should be eliminated. One could of course try to salvage the PIE heritage by deriving the Baltic and Indo-Iranian word for 'goat' from the well-known root *$h_2e\hat{g}$- 'drive' (Gk. ἄγω) and abandon the connection with *$h_2e\underset{\wedge}{i}\hat{g}$-. The semantics of this derivation is not quite convincing. Furthermore, the theory of a substrate borrowing may in fact be corroborated by areal words for 'goat' in other IE languages. Lat. *haedus* 'kid' and Got. *gaits* 'goat' reflect *$g^ha\underset{\wedge}{i}d(o)$-, a substrate etymon frequently connected with Semitic, cf. Akkadian *gadû*, Aramaic *gaδ̰ā* 'kid'. The source of borrowing was most likely not Semitic directly, but a European substrate language which had borrowed the word from a third, common source (see Kroonen 2012: 246–247 with references). It is difficult to regard the vague similarity to *$a(\underset{\wedge}{i})\hat{g}$- and another limited, non-IE synonym, viz. OCS *koza* 'nanny-goat' < *$ka\hat{g}^h$-, as completely coincidental. In fact, as Kroonen (2012: 245) notes, none of the alleged roots with a meaning 'goat' are likely to be PIE but may all originate from the substrate languages spoken by the settled agriculturalists who were encountered by immigrating Indo-European pastoralists. It fits the data well to think of *$a\underset{\wedge}{i}\hat{g}$- and *$a\hat{g}$- as relatively early, post-PIE borrowings (thus already Specht 1939: 13; Solta 1960: 405). During the independent borrowings into Balkan IE on the one hand, and Balto-Slavic and Indo-Iranian on the other, the final consonant of the root, possibly some sort of palatovelar obstruent, was interpreted in various ways.

All this draws a picture of an old cultural word that slowly passed through various European languages, later to be adopted by the intrusive Indo-European speakers. In this scenario, it is indeed significant that Greek, Albanian, and Armenian exclusively share a common proto-form that could have been borrowed at a common pre-stage. Additionally, these three languages could have jointly formed a feminine/collective derivative. To take this thought a step further, we may speculate whether *-i-* was an element originally belonging to the donor form (cf. "*$a\underset{\wedge}{i}d\underset{\wedge}{i}$-" in Kroonen 2012: 247) In turn, this may provide an explanation for the unusual compositional vowel *-ι-* in clearly old compounds like *αἰγίβοτος* 'grazed by goats' (Od.) that existed next to compounds with the consonant stem, e.g. *αἰπόλος* 'goatherd'—cf. Myc. a_3-]*ki-pa-ta*, interpreted as *$a\underset{\wedge}{i}gipa(s)t\bar{a}s$* 'goatherd' (DMic I: 135, Duhoux 2008: 295). A segmentation *aigi-pa(s)t-* would in any case be clearer than that of Heubeck (1963: 15–16), i.e. **aig-iptās* 'he who forces the sheep together'.

4 **ĝʰrītʰ-* 'Barley'

No PIE word for 'barley' can be securely reconstructed. Mallory & Adams (2006: 164 s.v. 'barley') list three reconstructions:[8] **h₂élbʰit* (Gk. *ἄλφι*, Alb. *elb*), **meiĝ(h)-* (Lith. *miežỹs*, less likely Khot. *mäṣṣa-* 'field'), and finally **ĝʰrésdʰ(i)* (OHG *gersta*, Lat. *hordeum*, and Gk. *κρῑθή*, Hom. *κρῖ*, Myc. *ki-ri-ta*[9]). But the distribution of the former two is very limited, and the latter cannot directly underlie any of the attested forms. OHG *gersta* thus presupposes **gʰersd-*, Lat. *hordeum* is from **gʰord-eio-*, and Homeric *κρῖ*, already to be internally reconstructed as **κρῑϑ*, must reflect something like **gʰrīdʰ* or **gʰrītʰ-*[10] with no reflex of **-s*. These discrepancies alone are strongly suggestive of a substrate origin.[11]

Alb. *drithë* 'cereal, grain', a neuter since the earliest attestations (Demiraj 1997: 145), is frequently traced to the zero grade of a root nearly identical to the one reflected in OHG *gersta*, i.e. **ĝʰr̥(s/z)dʰ-*, (cf. Demiraj 1997: 145–146, Orel 1998: 75 with references). But the missing aspiration of **d* in Lat. *hordeum* remains a significant obstacle, leading to the assumption of a *Wanderwort*. It may then be preferable to derive *drithë* from a form identical to *κριϑή*, i.e. PAlb. **ðriϑā*[12] < **ĝʰrītʰā*. Some phonological issues with this etymology may be raised. Firstly, the lack of depalatalization, which has been explained by the assumption of a vocalic **r̥*, could also be caused by the fact that this rule was no longer fully effective at the time of borrowing (though see fn. 13 below). Secondly, the development **Tʰ* > Alb. *th* is perhaps not regular, though it may be seen in *djathë* 'cheese', compared with Skt. *dádhi* 'sour milk' (cf. Demiraj 1997: 135–136). According to Orel (1998: 67), *djathë* is a diminutive with the suf-

8 See also Blažek 2017 where most relevant material is presented.

9 Hapax legomenon on a tablet from Knossos, probably to be read as an acc. [kritʰan] or [kritʰans], the direct object of *e-ko-si* 'they have' (Ventris & Chadwick 1959: 215). It betrays a certain age for the thematic (collective) formation.

10 Although the reconstruction of a voiceless aspirated series for PIE can rightly be considered unsustained, it is probably fair to assume its monophonemic existence in later IE dialects, primarily as the outcome of **TH* clusters. See also Rasmussen 1987.

11 Rasmussen (1989: 91–92) offered an original alternative, instead analysing the root as an "*eRi*/*Rī*-type", i.e. having an original nom.-acc.sg. **ĝʰérHi̯-sdʰ-*, gen.sg. **ĝʰr̥hi̯-sdʰ-ós*, which later yielded **ĝʰérsdʰ-*, **ĝʰrihsdʰós*. For Arm. *gari*, explained as a Sievers–Lindeman variant **gʰr̥hisdʰ-*, it implies that the spread of the oblique stem to the nom.sg. happened quite early. Unfortunately, such discrepancies as the vacillation of **d* in Germanic and Latin, versus **Tʰ* in the Balkan forms, and the apparent lack of **s* in at least Greek and Armenian remain unexplained. For the depalatalization of **ĝʰr-* > **gʰr*, see fn. 13.

12 The dissimilation of initial **ð-* > *d-* was perhaps caused by the following sibilant, as in *dorë* 'hand' < **ĝʰesr-* (Orel 2000: 70), but it also seems to have occurred in other environments, as shown by *dimër* 'winter' < **ĝʰeimōn*, Gk. *χειμών*.

fix *-th*, but Demiraj (l.c.) more plausibly assumes either dissimilation with the voiced anlaut or devoicing in auslaut. Devoicing can also be seen in *mb-ath* 'to put on shoes' and *z(b)-ath* 'to take off shoes' < **(h₂)Vu-dʰ-* (cf. Arm. *awd* 'shoe'), where it later spread to the entire paradigm, e.g. *zbathur* 'barefoot' (B.D. Joseph apud Hyllested 2016: 74). This explanation is conceivable for *drithë* too.

Arm. *gari* 'barley' is sometimes compared to the Greek forms, but their formal relationship is not fully established (cf. Martirosyan 2010: 199). However, it is possible that they reflect the same root. In Classical Armenian, *gari* follows the "mixed", polysyllabic *ea*-inflection: gen.sg. *garwoy*, loc.sg. *garwoǰ*, gen.-dat.-abl.pl. *gareacᶜ*. This class most likely arose from old neuters with the suffix **-i̯o*, collective plural **-i̯ə₂* (Olsen 1999: 113; Matzinger 2005a: 65). The closely related *wo*-class (gen.-dat.-abl.pl. *-wocᶜ*) contains masculines with the same suffix. Assuming that Gk. κρῑθή́ reflects an original collective, we may thus easily understand why the Armenian reflex ended up in this class. In this case, however, the sequence **-i̯a* did not necessarily arise from the suffix. From a collective **ĝʰrītʰā* we may expect a regular development to **gʰriϑa*[13] > **griya* > **gri*.

A morphophonological parallel is provided by Arm. *eri* 'shoulder, side' (gen.-dat.-abl.pl. *ereacᶜ*) if this is compared with Lith. *ríetas* 'thigh, loin', Cz. *řit'* 'buttocks' (Olsen 1999: 444). Alternatively, one could of course presume a (possibly diminutive) derivation in **-i̯o-*, cf. Gk. κρίϑιον. In the oblique *o*-stem forms where **-i̯ó-* eventually yielded *-wó-*, the cluster **gru̯-* would possibly have been dissolved by a svarabhakti vowel at a stage sufficiently early for it to yield *a*, i.e. **gri̯óhyo* > **g(ə)ru̯óyo* > *garwoy*, which was later generalized in the paradigm.[14]

Formally, **ĝʰrītʰ-* may have been borrowed jointly by Greek, Armenian, and Albanian, who formed a neuter collective **ĝʰrītʰā*. In a larger perspective, this etymon could have been very widespread across non-IE languages early on,

13 The depalatalization of palatovelar stops before **r* is not universally accepted for Armenian. However, it is at least seen in internal position in *mawrowkᶜ* (pl.) 'beard' < **smoḱru-*, Skt. *smaśru-*, and perhaps in *garšim* 'to loathe' besides *jaṙ* 'curved, ugly' (see Martirosyan 2010: 199–200). Possibly depalatalization, also observed in Balto-Slavic, Albanian, and Indo-Iranian, occurred in several waves with slightly different conditions in extra-Anatolian IE, cf. Kloekhorst 2011. The fact that depalatalization in this word seems to have affected Armenian, but not Albanian, in turn requires the assumption of a later, perhaps analogical, application of this rule in Armenian.

14 Admittedly, the relative chronology in the development of the *wo-* and *ea*-stems is uncertain. A development **-i̯o-* > **-i̯u̯o-* with subsequent regular loss of unstressed *i* could also be assumed (cf. Pedersen 1905: 199).

judging from forms with a similar consonantal shape in mutually unrelated languages, cf. Georgian *kʰeri*, Basque *gari* 'wheat', *garagar* 'barley', Burushaski *gur* 'wheat' (Berger 1998: 161), Dargwa (NE Caucasian) *ġar* 'grass', and perhaps even Tibetan *k're* 'millet'.

5 Discussion

Despite the quite limited evidence, the analyses given above support a scenario in which Greek, Armenian, and Albanian descend from a common prestage posterior to PIE. This is in line with other isoglosses, of which some were mentioned in the beginning of this article. There is admittedly a great deal of insecurity involved, especially concerning the position of Albanian. Due to the larger number of possible shared innovations between Armenian and Greek, it thus seems reasonable to assume, at least tentatively, that Albanian was the first of the Balkan IE languages to branch off. Probably, this and the subsequent splits were very close in time (cf. Pereltsvaig & Lewis 2015: 85) leaving only a narrow chronological window for shared innovations. In this light, the findings that can after all be made should be considered significant.

The so-called Graeco-Armenian hypothesis (excluding Albanian) remains quite strong despite the criticism of Clackson (1994) and, recently, Kim (2018). Aside from the phonological correspondences, perfect, exclusive agreements like Arm. *katin*, Gk. *βάλανος* < **gʷl̥h₂-no-* and the more clearly innovated Arm. (*amis*) *ara-c'* 'month of harvest', Gk. *ὀπ-ώρα* < **h₁os-r-eh₂* (Martirosyan 2013: 110) must be considered in light of the general scarcity and late attestation of the Armenian data. However, a popular opinion seems to be that Greek, Armenian and Indo-Iranian all branched out from the same PIE dialect, while the Greek–Armenian agreements all developed through subsequent, long-lasting contact (Martirosyan 2013: 126). This scenario seems to imply that these branches split off almost simultaneously—something that is a priori rather implausible, as language splits are most often binary (cf. Gąsiorowski 1999: 41–42). In other words, Armenian cannot be equally close to Indo-Iranian and Greek genetically, although it may be reasonable to maintain this scenario as an agnostic position. Without doubt, Greek, Armenian, and partly Albanian also underwent a longer period of contact (shortly) after they had diverged from one another, as betrayed by irregular correspondences like Gk. *σκόρ(ο)δον*, Arm. *sxtor, xstor*, Alb. *hudhër, hurdhë* 'garlic'. Later, there were certainly intense Greek–Albanian contacts, all things that potentially distort the picture. However, subsequent contact naturally does not exclude genetic affinity, which is

the tentative conclusion that we may draw from this limited material. Furthermore, the distribution of forms in the two examples given here seem to suggest an early dialectal division of extra-Anatolian IE into Germanic–Italo-Celtic, Balto-Slavic–Indo-Iranian, and Balkan IE, of which the latter two in turn seem to be more closely related. However, this is an extremely complex issue that should be judged in the light of more possible evidence.

The two etymological analyses presented in this article are admittedly burdened with some uncertainty, especially that of part 4 (*$\hat{g}^{h}r\bar{\imath}t^{h}$-). However, if it ultimately has to be rejected, the central point of this paper remains; the attempt to reconstruct intermediate, post-PIE stages and clarify their particular innovations, whether internally or externally conditioned, should be an important objective of Indo-European linguistics and can indeed be aided by utilising loanwords as evidence.

The study of post-PIE loanwords has become increasingly popular in the last few decades, and more scholars are aware of its usefulness in reconstructing prehistoric contact interfaces and migrations, especially when combined with the still accumulating evidence from archaeology and ancient DNA. At the same time, loanwords may constitute significant evidence for language cladistics when combined with the stronger cladistic evidence of morphological innovations.

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