

TORBJÖRN K. NILSSON

The Indo-European etymology of Fi. *peukalo* 'thumb'

In this paper it is argued that **pälkä*, the Uralic etymon for 'thumb' which is still preserved in Sámi, cannot account satisfactorily for Balto-Finnic *peukalo* 'thumb'. It is proposed that the latter is a superfluous loan word from a source with the form **beugalō*, from a base **beug-* 'bend, bow' + an instrumental/diminutive *-l*-suffix. Several features of the word point to Germanic as the probable source language: attested cognates are, e.g. Old Swedish *bøghil*, German *Bügel*.

Introduction

The Finnish word *peukalo* occurs with three main meanings¹, '1. thumb; 2. big toe; 3. mill wheel pivot'. The main, and thus original, meaning is no doubt 'thumb', as also shown by the many cognates elsewhere in Balto-Finnic (BF). According to SKES: 534–535, the Fi. *peukalo* corresponds to Karelian *peikalo*, *peigalo*, Veps *peigol*, Vote *peukolo*, *peiko*, Estonian *peial*, *põigel*, Livonian *pēgal*, *peigil*. The meaning is uniformly 'thumb'. In Fi. there are derivatives, such as *peukaloida* 'vidröra med tumme eller fingrar, tumma, fingra, manipulera, mäta med tummen; göra hjultappar, förse med kuggar; to touch with the thumb or fingers, manipulate, measure with the thumb, meddle, tamper with', again testifying to the original meaning 'thumb' of this word.

Turning now to other Uralic languages outside BF, their designation for 'thumb' is given in Rédei (1988: 363): the reconstructed proto-form is **pälkä*, as attested by the Sámi (Lule) *piel'kē*, Mordvin *pel'ka*, Udmurt *pel'ĭ*, and Komi *pel*, *pev*. As it is attested in Sámi, in the Volga-Finnic branch and in Permic, it belongs to the Finno-Permic lexical

stock. According to Janhunen (1981: 241), also Samoyedic *piâj* ‘outside’ ~ Finno-Permic *pēli* ‘reuna, ääri’ < Uralic **pexli* belongs here, making it an Uralic word: on this premise, he derives BF *peukalo* from **pälkä* through a derivative **pelkälo* which through irregular phonetic developments would have resulted in *peukalo*. But according to Rédei, the Samoyedic and BF words for ‘thumb’ cannot, owing to the incompatible sound correspondences, belong to the same etymon. Note that in SKES: 534–535, precisely the same lexical items as above are enumerated, but the phonetic incompatibility is not commented upon, giving the impression that the compilers of the SKES think that the BF *peukalo* does indeed belong to the same group as **pälkä*. On balance, most of the evidence suggests that *peukalo* is an innovation of unknown origin in BF which has replaced the inherited Finno-Permic designation for ‘thumb’, **pälkä* which is still retained in Sámi. This invites us to try and sort out whether it could have been formed from native BF language material, or alternatively, whether a loan word source can be singled out.

Fi. *peukalo* ‘thumb’

It is thus imperative to analyse this word according to its formants. I start with the ending, *-lo*. Penttilä (1957: 289–90) calls the suffix *-lo -lö* semi-productive. It lacks a definite meaning, but it often functions as a diminutive suffix, as in *kotelo*, *kotilo*, *metsälö*, *purtilo*. He also compares it with *-la -lä* (p. 285) which is productive in designations of place names and proper names, but otherwise unproductive. Examples are *Heinola*, *Heikkilä*, *manala*, *kauppala*, *kahvila*, *pappila*, *vankila*, *ravintola*, *sairaala*, *jumala*, *sukkula*, *kampela*, *hetula*. It also occurs in adjectives, such as *matala*, *ovela*, *nokkela*, *tukala*, *vetelä*. According to Hakulinen (1957: 114–115), the suffix *-lo -lö* as in *kohtalo*, *onkalo* is never deverbal (exception: *untelo*); further, writing of the suffix *-la -lä* (p. 86–7), as in *setälä*, *tuonela*, *tukala*, he says that it probably goes back to a FU diminutive suffix. It is a common feature of such suffixes that they are used to denote local relations. Another possible association is with the *-l-* formant of the series of external local cases in BF: allative *-lle*, adessive *-lla*, ablative *-lta*. However, this suffix is also

found in a large number of Germanic loan words: *humala*, *kapula*, *kattila*, *kavala*, *kynttilä*, *rinkilä*, *satula*, *siivilä*, *sinkilä*, *sämpylä*, *vintilä*, *vispilä*. From Baltic, there is one such loan word: *apila* 'clover'.

Proceeding now to the root vocalism, the diphthong *-eu-* is itself quite rare in BF (as it should be in Uralic, which avoids diphthongs in general), and when present has usually arisen through recent developments (see e.g. Hakulinen 1957). This is an indication that we may be dealing with a loan word. However, as listed by Hofstra (1985: 44–47), the number of loan words with Gmc. *-eu-* < IE *-eu-* is also rather small. It is represented by:

keula 'prow, bow of a boat' < Gmc. **skeula-*
teura 'Steuer' < Gmc. **steura-*
teuras 'slaughter' < Gmc. **þeuraz* 'Stier'
leukojainen 'Motte' is uncertain, possibly < Gmc. **fleugōn-*.

BF *-eü-*, Fi. *-öy-* occurs in a number of instances:

köyhä 'poor' < Gmc. **skeuχwas*
pöytä 'table' < Gmc. **beuða-*
röytä 'Vordach' < Gmc. **greuta-*

BF *-iu-* occurs in:

kiusata 'tease' < Gmc. **keusan-*
liuta 'swarm' < Gmc. **leuða-*
riutta 'sand bank' < Gmc. **greuta-*
tiuris 'teuer' < Gmc. **deurjaz/*deuriz*

The oldest layer is that which shows *-öy-*, and the more recent loan words show *-iu-*. Those with *-eu-* are also judged to be very old, they should at least predate the Proto-Nordic period.

To sum up, the ending as well as the root vocalism, although not decisive, do arouse the suspicion that BF *peukalo* may be a loan word belonging to a rather early IE layer, e.g. Proto- or even Pre-Gmc.

The Elbow and the Arm as “Bows”

In seeking an explanation for Tokharian B *pauke*, Tokh. A *poke* ‘arm’, Giuliano Bonfante (1980) compared this word with the German *Ellenbogen*, and Eng. *elbow*, which are derived from verbs of the group exemplified by German *beugen*, *biegen* ‘to bow, to bend’. Other nominals can be found, such as *Bucht*, an old derivative in *-ti* from the zero-grade form of the verb (cf. Modern German *bücken*). This all led him to propose a reconstruct **bhoughos* for ‘arm’ in Proto-Tokharian. To this one would like to add that recent studies have shown that, based on shared lexical items, Tokharian is more closely related to Germanic than to Baltic and Slavic (Adams 1982). This makes it more plausible to adduce a similar word formation principle for the upper extremity. In a subsequent refinement of his idea, Bonfante (1981) finds that the traditional equation of the Tokh. words with the IE *bhāghús* ‘forearm, elbow’, attested in Greek, Indo-Iranian, and Germanic, is phonologically impossible because in Tokharian, although the stem vowel is lost in the *u*-stems, it has usually left traces, e.g. in the plural and in nominal compounds (Van Windekens 1976: 131) and in dual forms (Bonfante 1981). The rejection of the traditional etymology by an argument based on a regular sound correspondence naturally adds to the strength of the new proposal made in his 1980 paper. However, his own positive argument was based on the Tokh. B diphthongized form *pauke*, which was important to him because Tokh. B differs from Tokh. A in retaining original *ou*-diphthongs. Now, Thomas (1985: 115) has stated that the reading of the original Tokh. B document containing this word actually has to be amended to *poke*, so that both Tokh. A and B show the same word *poke* for ‘arm’. Therefore, although it was feasible, given the premises that were available when it was presented, Bonfante’s etymology probably has to be rejected. His indication of the importance of words for ‘bend, bow’ in words for the upper extremity remains valuable, however.

The thumb as a “Little Bow” or “Bender”

As recently pointed out by Peeters (1989: 201), “etymological studies are generally retrospective, i.e. a word is brought back to its source, but

it could also be prospective. In that case we start from a given etymon and see how it develops into a word in the language we are interested in. This is where etymology and historical phonology or historical grammar are most closely related". He then proceeds to demonstrate his novel idea with examples of Old English reconstructs which he follows down to Modern English attested forms.

Here, I now wish to test, by means of such a prospective method, whether an IE etymon "little bow", or "the bender", along Bonfante's line of thought as quoted above, could be the source of the Fi. *peukalo*. Thus, as a purely arithmetical exercise, we construct a diminutive formation from the IE root **bheugh-*, to form a noun meaning 'little bow'. The diminutive formant *-lo* is typical in such instances, cf. Kluge (1926: 29–30). In an alternative analysis, this *l*-formant may be motivated as an instrumental suffix, as in e.g. Sw. *töril* ~ *tyril* < Gmc. *þwerilo-* 'stirring rod', OE *bītl* 'hammer', OHG *loffil* 'spoon' and other nomina instrumenti (Olson 1916: 238–55, Kluge 1926: 47–48). We would arrive at a Gmc. protoform **beugVlō-* or **beugVla-* depending on the gender (for the moment, I leave the question of the quality of the connecting vowel *V* unresolved). Applying the usual sound substitutions, we find that such a word for 'little bow' or 'bender' would be rendered in BF with *p-* for *b-*, *-k-* for *-g-*, the suffix would probably be retained as *-la* or *-lo*, and the root diphthong (cf. Hofstra 1985, quoted above) would be rendered by *-iu-*, *-öy-*, or *-eu-*. We arrive at a BF adapted reconstruct of either one of the forms **piukVlo*, **pöykVlo*, or **peukVlo*, depending on the time depth of the loan process. As seen, the latter reconstruct actually covers all the essential features of the actual BF attested word *peukalo*.

On the basis of this prospective etymology, I thus propose that this old BF word originally arose as a metaphor meaning "little bow" or "the bender" in an IE dialect which was in close contact with BF-speakers shortly after Sámi had separated from early Proto-BF. This specialized lexical item was adopted as a so-called "superfluous loan word" (Larsson 1981: 19–20, 26–27), which ousted the native term **pälkä* in due course. The earlier existence in Proto-BF of **pälkä* is proven by the Sámi evidence. When it comes to assigning the donor of the loan to a particular IE dialect, Germanic (or Pre-Germanic) comes

into mind in the first place, as the “bow” metaphor is already attested in designating ‘elbow’. Moreover, German *Beuge* meant ‘innere Seite des gebeugten Armes, Beines’, cf. *Rumpfbeuge*, *Kniebeuge*. One notices that in *elbow*, *Ellenbogen*, *armbåge*, and *Beuge*, there is no diminutive suffix. It is not such a great step to take if we assume that in parallel to the non-diminutive “big bow”, i.e. the elbow, the early Germanic speakers used to talk about their “little bow” too, which, on the strength of the Fi. *peukalo*, I would now assign as the thumb.

The non-attestation of this word, with the precise meaning ‘thumb’, in the modern Gmc. languages is understandable in view of the considerable time depth that we have to assume for the existence of this word, as indicated by the BF rendering *-eu-* of its root vocalism. Otherwise, the full repertoire of lexical and morphological items needed to entertain this etymology is there. Thus, the extant Sw. verbs are (SAOB V: B 4854–, 4548–50) *böja* ‘to bend, to curve, to incline’ ~ OSw. *böghia* ~ Icel. *beygja* ~ OSax. *bōgian* ~ OHG *bougan* (Modern German *beugen*) ~ OE *biezan* < Gmc. **bauzian*, which is a causative form related to Sw. *buga* ‘to incline, to bow’ etc. < Gmc. **buz-*. Examples of nouns are OHG *boug*, OE *bēag*, both meaning ‘ring’. Especially important are Nordic attestations which allow us to reconstruct the one-time presence, also in Nordic, of a strong verb no longer extant as such (SAOB V: B 4693): The Sw. adj. *bågen* ‘bent, curved’ ~ OSw. *bughin* ~ *boghin*, is an adjective corresponding to the Icel. *boginn*, past participle form of a strong verb, and moreover there are the OSw. imperfect *bōgh* as well as the Icel. plural imperfect *bugum*. The reconstructable Nordic strong verb is matched by the actually extant verbs Gothic *biugan*, OE *būgan*, OHG *biogan* ~ German *biegen*. Moreover, the type of noun we are reconstructing really does exist in some of the modern Gmc. languages, now denoting various more or less technical items. Examples are Sw. *bugla* ~ *böglä*; *bygel* ‘bow’, from OSw *bøghill* ~ *byghill* etc. (SAOB V: B 4550–1, 4635–6, 4686–93). We are now in a position to make predictions as to the quality of *V* in our Gmc. reconstruct **beugVlō*. The *i*-vocalism in the second syllable of the OSw. forms *bøghill* etc. is to be evaluated in the same way as, e.g. in the OHG *a*-stem *enkil*, masc. ‘talus, Fussgelenk’ which alternates with the *ō*-stem OHG *ankala*, fem. ‘idem’ (EWA: 260). It can be seen that the Fi. *peukalo* agrees with the

vocalism, both in the second syllable and in the ending, of the predicted feminine reconstruct **beugalō* but would disagree on both points with its reconstructed masc. counterpart **beugila-* (which is compatible with the later attested forms OSw *bøghill* ~ *byghill* etc.).

Actually, the Gmc. ‘ankle’ < **ankalō-* etc. is a rather exact semantic parallel to my proposed **beugalō* etc. since it too is a derivative of a root **ank-* meaning ‘to bend’. This Gmc. word has secure parallels outside Gmc. such as the Latin *angulus* ‘angle, corner’, *ungulus* ‘fingerring’, and most importantly, Sanskrit *aṅgūli-* ‘finger, toes’.

In view of the attested masc. noun OSw *bøghill* etc. (compatible with a reconstructed **beugila-*) it is reasonable to assume that a fem. counterpart **beugalō* once existed. This latter form matches Fi. *peukalo* phonetically and also semantically as demonstrated above. Note that the *l*-formant in these Gmc. words, when it comes to body parts, was not only applied to the ‘ankle’ but also to the ‘thumb’ itself, e.g. Old English *þýmel*, OSw. *þumlinger*, *þumulfinger* ~ *þomalfinger*, Modern Sw. (dialectal) *tumling*, Modern Danish *tommelfinger* (SEO II: 1242).

Conclusion

There was a Finno-Permic word **pälkä* for ‘thumb’ which was also present in the early Proto-Balto-Finnic/Sámi dialectal amalgam (Rédei 1988: 363), but later, after the split into Sámi and BF, the inherited word for thumb disappeared from BF where it was replaced by a loan word *peukalo* which happened to have a rather similar consonantal frame as the native word. However, the phonetic features of this word (the root vocalism *-eu-*, untypical of Proto-BF; and the IE diminutive/instrumental ending *-lo*) make an IE source probable. A loan word “little bow” or “bender” can be accounted for with IE elements, providing not another root etymology but rather a good match of the whole word, phonetically, morphologically, and semantically, with the proposed prototype. Several other words for parts of the body (e.g. *kaavis*, *kave*, *raato*, *ruho*, *runko*, *runnakko*, *ruumis*, *vainaja*, *hahta*, *hartia*, *hius*, *kallo*, *kuve*, *kynä*, *laikko*, *lantio*, *lovi*, *maha*, *napa*, *otsa*, *parmas*, *pinta*, *pursto*, *raaja*, *raivo*) have already been described as Gmc. loan

words (Hofstra 1985: 297), so the semantic field is compatible with my assumption. The structure of the BF word allows us to date it back to well before the formation of Proto-Nordic, thus to a Proto- or even Pre-Germanic layer.

Note

- ¹ All Fi. meanings here and below quoted from Lönnrot 1958.

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