# THE WORD FOR 'FOUR' IN PROTO-INDO-EUROPEAN

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1. The difficulty with the forms for 'four' is not so much the (plural) inflection. One reconstructs *$k^wetuor-es$, *$k^wetur-ns$ etc. (e.g. Brugmann, *Grundr.* II2 ², 12; Szemerényi, *Einf.* 45).

A problem here is presented by the forms with *-uer-*. Notably Ion. *tésseres* must have an old full grade (Schwyzer, *Griech. Gramm.* 1, 589). I see three possibilities: the nom. pl. was *$k^wetuéres$ and the *o*-vocalism is secondary. This seems to me quite possible; see below. Or the *e*-vocalism originated from elsewhere. This seems to me improbable, as I cannot understand how it could have evinced the *o*-grade. The last possibility seems to me the most plausible one, which is that both -o- and -e- are old, thus:

   *$k^wét-uor-es$
   *$k^wt-uér-ns$
   *$k^wt-ur-óm$

That the suffix of the acc. pl. had full grade was demonstrated by Hock (JAOS 94, 1974, 73-95; cf. my *Origins* 134ff.). An interchange nom. -o-, acc. -e- is certain for the singular (JIES 10, 1982, 57 n. 1; *Origins* 151ff. et passim). It is quite possible that it existed in the plural as well. Note that *$k^wetuores$ had three full grades. (It is strange that some scholars object to two full grades, but never to three of them!). It is therefore possible that it replaces older *$k^wet-ur-es$ (which has still two full grades), which got analogical full grade in the suffix, which was automatically -o-, just as I assumed for the type (nom. sg.) *CéC-ōR* (*Origins* l.c.).

Kortlandt assumes that Gr. *písures* has its root vocalism from *e* before a cluster beginning with a stop in pretonic position (FS Hoenigswald).

Thus, there are no problems with the masc. plural inflection. (On the feminine see below.). The real problem is presented by *$k^wetuōr$.

2. The evidence for $*k^wetu\bar{o}r$ may be shortly discussed. Relevant are Germanic (Goth. *fidwor*), Lat. *quattuor,* OCS *četyre,* Skt. *catvā́raḥ, catvā́ri.*

Germanic points undoubtedly to $\bar{o}$, Goth. *fidwor* and the West Germanic forms. We shall discuss the Germanic forms further below.

For *quattuor* it was assumed that it continues $*k^wetuor\text{-}es,$ *-a,* which lost *-ĕs, -a* and thus became indeclinable (Brugmann, *Grundr.* II 2 $^2$, 12; Ernout-Meillet s.v.). Only Leumann (*Lat. Gr.* 1977, 486) leaves the issue open. I think that the traditional solution is quite improbable. First *-a* (in general a short vowel) was not lost (*genera, mare*). The ending *-ĕs* instead of *-ēs*, once existed, of course, but this would be the only instance where we would have a direct trace of it. But (even apart from the fact that there were other case forms) in general the idea that the (adjectival, plural) inflection, in a language like Latin, was lost, is quite improbable. The most probable solution is, then, that it continues $*k^wetu\bar{o}r$. We shall see below why it was that one did not consider this possibility. It is true that Festus gives Osc. *petora*; on the ending see Buck-Prokosch, *Elem.* 86. The ending may have been added secondary. It is mostly accepted that Oscan had *pettiur* (Vetter, Glotta, 23, 188 and 29, 222f), but there is no context and therefore no evidence that the word means 'four'.

Slavic *četyre* has *-yr-* from *-ūr-.* It is supposed that the long *-ū-* originated from a reshuffling of the ablaut *-uōr-/-ur-* (Vaillant, *Gr. comp.* II 2, 628). However, *-yr-* has acute intonation, so this explanation cannot be correct. Kortlandt (Bibl. Or., Rev. of Anreiter (to appear), ad p. 90) therefore posits $*k^wetuHr\text{-},$ which might have originated from fem. $*k^wetursres$ through dissimilation of the first *r* and loss of the *-s-.* Cf. below on Tocharian.

Skt. *catvā́rah* is no certain evidence as it can continue $*k^wetuores.$ The ntr. *catvari* could have $*k^wetu\bar{o}r$ (with secondary *-i,* as usual in Sanskrit).

Toch. B *śtwer,* A *śtwar* continue $*k^wetuores.$ B fem. *śtwāra* is derived from $*k^wetu\bar{o}r\text{-}\bar{a}s$ by Krause-Thomas, *Elemb.* 1.159. Van Windekens, *Le Tokh.* I 489 assumes a neuter $*k^wetu\bar{o}r\text{-}a/\partial_1.$ Though it is possible that the sg. collective $*k^wetu\bar{o}r$ (see below; this form may have been fiminine) gave the feminine form, this interpretation is impossible as PIE $*\bar{o}$ did not result in Toch. $*\bar{a}.$ Kortlandt thinks that it continues the same form

*$k^wetuHr$*- which underlies the Slavic forms.

A form *$k^wetuōres$*, of course, is morphologically impossible in PIE.

3. The form *$k^wetuor$* is generally explained as the neuter plural (since J. Schmidt, *Pluralb.* 191; Szemerényi, *Einf.* 205). This explanation is improbable, if not impossible.

First, it is doubtful whether adjectives had a neuter plural in -*ōC* from *C*-stems, rather an -*eC-h₂*.

Secondly, in the one language group where this type of neuter plural existed, in Indo-Iranian, we have beside Skt. *catvā́raḥ*, ntr. *catvā́ri* in Avestan *caϑβārō*, ntr. *catura*. One would have expected that an old *$k^wetuōr$* > *$caϑβārə$* would have been preserved here. It rather seems that a neuter from was coined in both languages, and that Sanskrit, on the basis of *cat-vār-aḥ* constructed *cat-vār-i*. This form, then, must not continue an old neuter plural in -*ōr*.

Thirdly, in Germanic Goth. *fidwor* cannot represent a neuter *$k^wetuōr$*, as then the final syllable would have been shortened (cf. *swistar*). The normal neuter ending in Gothic is -*a* < *-ā́*, which we don't find either. Thus we would have to assume a form *$k^wetuōr-h₂$* > *$k^wepuōra$* > *fidwor*. But an ending -*ōr-h₂* cannot be of PIE date (as Avestan does not have -*ā́ri*, -*āni*). And if it was a Germanic construction, I don't see why it did not get (at least later) the normal ending *-ā́* > -*a*. Thus it is impossible that in Germanic the form with -*ōr* goes back to a neuter plural.

Now the remarkable thing is that (with the exception of Skt. *catvā́ri*, which was discussed above), where we find -*uōr*, i.e. in Germanic and in Latin, this form is *the* dominant form (*fidwor, quattuor*) The suggestion (e.g. Szemerény, *Einf.* 205) that the *o* was taken in all the instances from the neuter — where its existence is very doubtful — is, of course, most improbable.

The conclusion is that it is very doubtful that *$k^wetuōr$* was a neuter plural, and that it is most improbable that the neuter plural gave its *ō* to the other forms, as we would have to assume in the case where we find -*uōr*-.

Thus *$k^wetuōr$* must have had another origin.

4. Several languages have collectives from numerals with -*er*- or -*or*-. Slavic has neuter substantives (*četvero, -oro* 'group of four' etc.) and adjectives (*četverъ, -orъ* etc.). Baltic has plural nouns used with nouns of singular meaning (*ketveri*), Old Irish has neuters (*cethrar, cóicer* etc.). Oscan has *púmperia,*

Umbrian *pumpeřia* (with *ř* a mistake according to Ernout, *Dial. ombr.* 62); not quite clear are Lat. *decuria, centuria.* (1) I do not know whether the Tocharian *distributives* (B *śwerār* 'quaterni' etc.) belong here (Szemerényi, *Numerals* 97; Krause-Thomas, *Elemb.* 161, give only a few forms and addd "usw.", which is not so easy in Tocharian). I do not know from what preform these forms in -*ār* must be derived. Further one cites (e.g. Ernout-Meillet 114a) OIc. *hundari,* OHG *huntari* '(Fr.) centaine', both of which I cannot find elsewhere. Finally Sanskrit has *catvarám* 'quadrangle', which contained \*-*erom*.

As these collectives are found only with numerals (only in Slavic there was a minimal extension, e.g. Russ. *detvora* 'children'; cf. Otrębski, *Die Sprache* 10, 1964, 125-33), and mostly from 'four' to 'ten' (Irish has also *oínar, triar*; Toch. *somār* 'singuli', *wyār* 'bini'), and as there are other, old forms for 'two' and 'three' (Skt. *dvaya-, traya-*), and as 'four' had a stem in -*r*, these nouns were clearly derived from \**kʷetuer-* (Brugmann, *Abh. K. sächs. Ges. Wiss.* 25, 5, 1907; Szemerényi, *Numerals* 95ff.).

Meillet rejected this idea (MSL 17, 1911/12, 293F) stressing that the formation, a collective in -*r*, had to be of PIE date. Indeed, the fact that several languages have these parallel formations derived from the word for 'four', must be due to a common source. If Italic \**kʷenkʷeriā* beside the forms pointing to \**kʷetuero-* show that we have to start from a form in -*r*, there must have been a form in -*r* from the word for 'four' which had a collective meaning.

5. The answer to both questions, those of section 3 (what is the original function of \**kʷetuōr*) and 4 (a collective from the word for 'four' ending in -*r*) is that \**kʷetuōr* was what it most looks like, a nominative singular. If 'four' had singular as well as plural forms, it is evident that the plural was used, as an adjective, when the items counted did not form a (special) unity, but that the singular, a noun, was used in the case of a group of four things belonging together. Since J. Schmidt's *Pluralbildungen* we know that nouns of this type, in -*ōR*, could have a collective meaning. (And that these nouns came to

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(1)    The problem is the difference between the -*e*- of OU. \**pomperiā* and the -*u*- of Latin. *decuria,* tekuries (though this word may be a loan from Latin, Ernout, *Dial. ombr.* 63). Szemerényi, *Numerals* 98f, assumes that \**dekweriā* — formed after \**kʷetweria*, was syncopated to *decuria*, but that in \**kʷenkʷeria* there was no syncope because of \**kʷenkʷe*. This means in my conception, that the -*e*- was restored.

function as neuter plurals. So those who thought that it was a neuter plural were not far off. *If* the form served as neuter plural, the essential thing is that this was not its only or primary function. (2)

Kortlandt told me he had arrived at the same conclusion. A hint in this direction I found in Leumann, *Lat. Gr.* 1977 [2] 486: "auch vielleicht indeklinabel endungslos *-r*". Only Burrow, *Skt. Lg.* 135, 258, posited "a neuter noun *\*cátvar*, or its IE prototype" for *catvarám*. I do not know whether he thought of *\*kʷetur̥* or *\*kʷetuer*. If there was a neuter form beside *\*kʷetuōr*, it must have been *\*kʷetur* (with /-ur/ phonologically) in my conception; *Origins* 10ff. This form no doubt underlies Av. *catura*.

Note that the two considerations (of sections 3 and 4) are independent of each other.

I think that the form could be declined in the normal way, so that we had:

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|---|---|---|
| *\*kʷet-uōr* | *\*kʷét-uor-es* | fem. *\*kʷet-ur-sr-es*? |
| *\*kʷt-uér-m* | *\*kʷit-uér-ns* | |
| *\*kʷt-ur-ós* | *\*kʷt-ur-óm* | |
| etc. | etc. | |

The collectives with *-er-o-* were derived from the accusative stem. The word confirms the presence of *o-* and *e-*forms (also outside the locative) in one paradigm (see section 1.). It is possible that the nom. pl. *\*kʷetuores* had its *-o-* from the nom. sg., i.e post-PIE. The *o-*vocalism also spread to the other forms, giving acc. *\*kʷet-uor-m* etc.

The whole paradigm as such lived on into the separate languages. Some languages gave up the singular, others kept only the singular. Thus I think that Lat. *quattuor* simply continues the singular form. It is clear that this origin could not have been considered earlier, and that it had to be derived from the plural. In Germanic the singular form got plural endings, which gave *\*kʷetuōres*. The same may have happened in Sanskrit, but *catvārah* may continue the plural form.

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