# Rúmilian Numerals 

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Technical note: For the sake of readability and smoothness of presentation, Rúmilian characters are not displayed as printed at the source, but symbolically through the "Sarati Eldamar" font family created by Måns Björkman, which must be downloaded and installed in order to properly view the XHTML version of this article. This article further employs SVG to render the various tables presented in the figures below. If the article does not display correctly in your browser, please refer to the PDF version of this article at the link in the sidebar.

## Introduction

Arden R. Smith presented in Parma Eldalamberon no. 13 "The Alphabet of Rúmil", a compilation - later extended with an addendum in Parma Eldalamberon no. 15 - of all texts available for publication with samples of the Rúmilian script, the first known script invented by J.R.R. Tolkien. These texts are an extraordinary source for enhancing our knowledge about Tolkien's conception of writing systems. We can explore the richness of that script, investigate its principles, and even compare them with those of other systems invented by Tolkien.

Among many other things, there is one issue in particular that may catch the attention of the scholar: the presence of various tables of Rúmilian numerals ("figures", as labelled by Tolkien), which give us the key to know how numbers were written in this script, and eventually may lead us to some additional insight about the Eldarin conception of numbers. (These tables, all of them written in the span of one year - from January of 1921 to January of 1922 - belong to the stage in which that script had already been adopted into the legendarium, as we can see by the labels "Gondolic Script" or "Rúmil’s Alphabet" in the documents having them.)

These tables are what will be explored here. One of the most remarkable things about them is that the vast majority of Rúmilian numeral signs are also found in the accompanying tables of Rúmilian consonant letters. Their study may therefore be started with the identification of the consonants which are assigned to numerals in each table. Then a comparison of the tables, and a general discussion on their contents will conclude the analysis.

## Symbols and conventions

Most of the following analysis and discussion will be based on the material published in Parma Eldalamberon no. 13. This source will be therefore implied for references when only the pagination is given, and the editorial conventions there used will be followed for the most part.

The following conventions for the representation of Rúmilian characters and their phonemic values should be noted:

- Curly brackets \{ \} represent deletions in the manuscripts. All square brackets [ ] appearing in the samples are Tolkien's.
- A question mark between brackets \{ ? \} represents a symbol that has been deleted in a way that is no longer identifiable, as given in the published texts.
- $\dot{\boldsymbol{c}}$ and $\dot{\boldsymbol{g}}$ are palatal or palatalized stops (voiceless and voiced, respectively), alternatively represented as $\boldsymbol{t y}, \boldsymbol{d y}$.
- $\boldsymbol{l} \boldsymbol{h}$ is a voiceless $\boldsymbol{l}$ (approximant or fricative, as in Welsh).
- $\check{m}$ is a voiceless $\boldsymbol{m}$, also represented as $\boldsymbol{m h}$.
- $\boldsymbol{y}$ stands for its normal value of voiced velar nasal, not voiced palatal nasal, as Tolkien used it in some texts related with the Alphabet of Rúmil (but not in those concerning this article; cf. p. 13).
- $\check{y}$ stands for voiceless velar nasal, the voiceless counterpart of $\boldsymbol{y}$ (q.v.).
- Phonemic glosses of Rúmilian characters followed by an asterisk * represent signs with no certain phonemic value in the accompanying tables of consonants, and the character before the asterisk corresponds to some similar Rúmilian character.


## Samples of Rúmilian numerals

Next the published tables of Rúmilian numerals are given and commented on one by one. Two versions of each table are shown: one with Rúmilian characters and another with their phonemic values as found in the accompanying tables of consonants. The tables are identified by the labels assigned in the source to the texts in which they occur, and are arranged in close approximation to their layout as published.

## R8b - left half (p. 40)

Figure 1. Rúmilian numerals on the left half of R8b. Left: Rúmilian characters. Right: phonemic values.


Some remarks about the proposed phonemic values of the characters must be given, before proceeding to commentary about this rather complex table:

In the table of phonemic values, $l^{*}$ marks variants of Rúmilian letters for liquid consonants, which are regularly represented by a closed single bow ( $p$ ) plus distinctive strokes. The first one (rejected for 4) differs from the $\boldsymbol{r}$ character (normally $\boldsymbol{p}$ ) only in the direction of the crossing diagonal stroke (obscured in the manuscript by the deletion line), and is not found elsewhere. The second one (standing for 10 ) is the empty bow, rarely seen throughout the corpus. It occurs in the sample R6 (p.30), which probably predates this one
(cf. pp. 8-9), and perhaps in R25, which is much later (cf. p. 88); in both cases it could represent a variant for $l$.

The character identified as $\boldsymbol{p}^{*}$ (the replacement sign for 4) differs from $\mathcal{L}$ ( $\boldsymbol{p}$ throughout the corpus) in the position of the horizontal bar. In the manuscript, however, it also has a deleted hook on top, which might have something to do with the hook of $\beta$ standing to its right.

The $v$ at both sides of 6 represents different signs: (on its left), being the Rumilian $v$ normally seen throughout the corpus, and (to its right), which is a variant of $v$ here in R8 and in R17 (pp. 68, 70), though in many other later or contemporary texts in fact is a variant form of $\overline{0}$.

The character (to the left of 7), phonemically identified as $v^{*}$, is not found in that exact form elsewhere. A very similar character , with the bottom bar curved, is found in R11 (p. 48) as a variant form of (together with the character commented on above); in fact both signs are perhaps intended to be equal, if that curved form were accidental (the other three variants have a straight bottom bar).

The string " of $\mathrm{m}_{\mathrm{m}}$ o" to the right side of the table is clearly an example representing '1921', the year in which the text was written (it should have been near January of that year, cf. p. 39). The first and last numerals are marked with dots at both sides of the vertical line, to which compare the annotation in R10 (p.46, see below): "only the first and last of a series of uninterrupted numerals need be dotted".

The layout of deleted and corrected forms shows that these changes were made during composition, before completing the table. In fact the deletion of characters for 4-7 at the leftmost column and their replacement to their right, should have been made before writing the corresponding values in Hindu-Arabic numerals, and probably just after those characters were written, for the rejected forms for numerals 4-6 were then used for numerals 10-12 (though the 10 -sign does not have the diagonal crossing stroke of the rejected 4 -sign), and the rejected character for 7 was reintroduced as the replacement character for 5 .

The rightmost version of the characters for 4-6 is clearly an addition, after the numeric values were written. It is not clear whether they are intended to replace the previous forms or they are alternative.

Most numeral characters also have phonemic values in the accompanying table of consonants. However, if those values are relevant in their assignment to numerals, it is not evident. Corresponding phonemes do not seem to be characteristic of the numeral names or related words in European nor in Elvish languages (for a more detailed discussion on this matter, see below). The arrangement of phonemic characters within the table of consonants does not coincide with the numeral series either.

However, relations between those phonemic values, or perhaps bare graphical similarities, do seem to be important for the organization of the series. It is difficult to ascertain whether it is one thing or the other (or perhaps a mixture of they both), due to the highly subphonographical nature of Rúmilian letters (some phonetic characteristics are graphically marked, and thus similar phonemes are similarly represented too). Anyway, whichever be the basis of the model, small groups of similar sequential numerals may be established, except for the zero-sign, which stands alone:
$\{1,2,3\}$ have Rúmilian dentals assigned, forms based on a single open hook ( $\mid$, assigned to 1 ), plus some extra strokes.
$\{4,5\}$ are in all versions couplets of characters, with an even more obvious graphical similarity. The 5 -sign always has a known phonemic value ( $\boldsymbol{r}$ in the deleted, $\boldsymbol{b}$ in the replacement, and $\boldsymbol{y}$ in the additional version). The phonemic value of the 4 -sign is unknown in the deleted and replacement versions (if it exists at all), but in the case of the additional version it is known to be $\boldsymbol{n}$, with a likewise obvious relation with the $\boldsymbol{\eta}$ assigned to 5 .
$\{6,7\}$ are Rúmilian $\boldsymbol{m}$ and $\boldsymbol{b}$, respectively, in the deleted version, with obvious phonetic as well as graphical relations. And they are different variants of Rúmilian $v$ in the replacement and additional versions. (The 7 -sign is not actually given in the additional version, the replacement form probably being allowed to stand in its place.)

Alternatively, $\{4,5,6,7\}$ could be jointly interpreted in all versions as a quartet of graphically similar signs which are progressively complex in form, their phonemic values being a secondary feature. Under this interpretation, the deleted version of the 4 -sign would be slightly problematic, since it is as complex as the following $p$, but in the other versions the
pattern would be sistematically followed. Actually in the replacement version a relation could be found between the phonemic values, too, as $\mathbf{b}$ and $\boldsymbol{v}$ belong both to the labial series.
$\{8,9\}$, with Rúmilian velars assigned, are clearly related both phonetically and graphically.
$\{10,11,12\}$ could be interpreted as a group of graphically related signs, just as the deleted version of $\{4,5,6,7\}$, but without its last element. In this case, however, the pattern of progressive graphical complexity would be strictly followed, since the 10 -sign (p) is the simplest of the triplet. The deletion of the 12 -sign could have been an attempt to replace it by another sign which gave phonetic unity to the triplet, too, but Rúmilian $\boldsymbol{m}$ was finally allowed to stand to its left.

## R9 - left half (p. 42)

Figure 2. Rúmilian numerals on the left half of R9. Left: Rúmilian characters. Right: phonemic values.


This table was composed some months after the previous one, in October of 1921.
To the left of the table is a note: "figure sign", followed by two short strokes. This must be related to the usage of dots for marking numerals, as seen in the previous sample.

In this sample all signs have known phonemic values, attested in the accompanying chart of consonants.

The only complete coincidences with the list in R8 commented on above are o as ' 1 ', and 2 as ' 5 ' (in the replacement version of R8). There are some other characters which also coincide in phonemic value with those of the previous sample, but not in form: $\boldsymbol{b}, \boldsymbol{\jmath}, \boldsymbol{k}, \boldsymbol{g}, \boldsymbol{g}$ (this one assigned to a different numeral), and perhaps $\boldsymbol{p}$ (if that was the implied phonemic value of $\boldsymbol{p}^{*}$ in that sample). On the other hand, the Rúmilian $\boldsymbol{q}$ here assigned to 10 coincides in form ( $\mathfrak{n}$ ) with the Rúmilian $\boldsymbol{g}$ previously used for 9 . These changes concur with an important transformation in the arrangement of Rúmilian consonant letters, which was partially performed during the composition of the chart of consonants.

The following groups may be defined, according to graphical similarities in the form of characters, or phonetic similarities in their phonemic values: $\{1,2,3\}$ (dental), $\{4,5\}$ (labial), $\{6,7\}$ (nasal) and $\{8,9\}$ (velar). 10 is left alone, and the square brackets enclosing it seem to indicate that it was an extension of the "original" series from 1 to 9 . On the other hand, the graphical similarity within $\{1,2,3\}$ becomes somewhat diluted with the changes commented on above, so if the criterion was purely graphical, it might be that we in fact had $\{1\}$ separated from $\{2,3\}$ (which keep the formal similarity to each other).

Apart from that issue, the arrangement of this list differs from that of R8 in that zero and the triplet $\{10,11,12\}$ do not occur here, though an isolated "extra" 10 does occur, as previously told. Moreover, the couplets $\{4,5\}$ and $\{6,7\}$ are clearly distinct here. These couplets have, nevertheless, some traits in common with the characters used in R8 for the different versions of 4 and 5: those were a variation of $k$ (phonemically $\boldsymbol{p}$ ) and the same $\not 2$ (b) in the replacement version (like 4 and 5 in this sample), and nasal signs in the additional version (like 6 and 7 in this sample).

## R9 - right half (p. 43)

Figure 3. Rúmilian numerals on the right half of R9. Left: Rúmilian characters. Right:

## phonemic values.



This table appears to have been composed very near in time to the previous one, with a difference of days at most (cf. p. 47).

It seems to comprise some abandoned attempts to rewrite the list of Rúmilian numerals. In the two central columns the vertical linking line is extended below the written numerals, thus leaving room for the following ones, though a new column was started before introducing them.

It is not clear which numeric values were intended for deleted $\sqrt{5}$ and $/ 5$. These signs are graphically the same with values $\boldsymbol{b}$ and $\boldsymbol{\delta}$ in R8, previously assigned to 2 and 3, respectively (see above, and also R11b below). So they could represent 2 and 3 again, in an attempted continuation of the rightmost column, in which only the 1-sign stands. But they could also be intended to follow 1 and 2 (unglossed, but evident) to their left, and in this case they would be 3 and 4.

The zero sign (now $p$ ) occurs separately to the left of the table. A new item, unique to this sample, is $\mathfrak{\sim}$ ( $\boldsymbol{d}$ throughout the corpus), first assigned to 4 and then to 2 . This shift may be an attempt to develop a more regular pattern for the phonemic values of the table of numerals, in which the Rúmilian signs of unvoiced oral consonants were consistently followed by their voiced counterparts, as $\boldsymbol{p} / \boldsymbol{\jmath}$ in every sample, $\boldsymbol{p} / \boldsymbol{b}$ and $\boldsymbol{k} / \boldsymbol{g}$ in most of them, and $\dot{\boldsymbol{c}} / \dot{\boldsymbol{g}}$ in a couple of samples, including this one (though unlike $\boldsymbol{m} / \boldsymbol{m}$ in the next sample, q.v.). However, as the table remained incomplete, this cannot be confirmed.

## R10b (p. 46)

Figure 4. Rúmilian numerals in R10b. Left: Rúmilian characters. Right: phonemic values.

Figures: -


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This table was explicitly dated as December 1921, so it was written not long after those of R9 (see above).

Most characters, with the exception of those for 4,5 and 0 , have a dot next to them, and at the bottom right corner of the table there is a related note: "only the first and last of a series of uninterrupted numerals need be dotted". It is much like the table on the left half of R9 (p. 42). It has a zero-sign, though, and the extended items after 9 (also enclosed between square brackets) comprise $\{10,11,12\}$.

Extended items are graphically similar to each other, too (based on closed bows), though the Rúmilian $\boldsymbol{r}$ assigned to 10 is phonetically dissimilar to Rúmilian $\boldsymbol{m}$ and $\check{\boldsymbol{m}}$ assigned to 11 and 12. Note, on the other hand, that the graphical similarity of $\{10,11,12\}$ may be extended also to the zero-sign.

## R11b - left half (p. 52)

Figure 5. Rúmilian numerals on the left half of R11b. Top: Rúmilian characters. Bottom: phonemic values.

$$
\begin{aligned}
& \text { fig[ure]s }
\end{aligned}
$$

$$
\begin{aligned}
& { }_{0} p_{10}{ }^{\mathrm{p}} \quad 11\{?\} \quad\{?\} \quad \beta_{12} \text { 令 } \\
& \text { fig[ure]s } \\
& 1 \mathrm{t} \text { or } \mathrm{t} \quad 2 \dot{\mathrm{c}} \quad 3 \dot{\mathrm{~g}} \quad 4 \mathrm{p} \quad 5 \mathrm{~b} \quad 6 \mathrm{y} \quad 7 \mathrm{yw} \quad 8 \mathrm{k} \quad 9 \mathrm{~g} \\
& 0 \mathrm{l}^{*} 10 \mathrm{r} \quad 11\{?\} \quad\{?\} \quad \mathrm{m} \quad 12 \mathrm{~m}^{*}
\end{aligned}
$$

This table belongs to a text dated January 1922 (p.48), so it is also near in time to the previous one.

Most characters, with the exception of those for 3 and 10, are again dotted, though the placement of the dots is not in all cases the same as in R10 (p.46). The 1-sign shows an alternative form, with two short vertical strokes to its left, similar to the "figure sign" noted in R9 (left half, p. 42). Therefore it is probable that this alternative method of marking numerals may be extended to all, and not only to 1 .

This table is quite close to that in R10, but there are important differences. $\{10,11,12\}$ are not enclosed between brackets, but they may be still considered an extension, as they occur in a separate line, after the zero-sign. This zero-sign is again graphically similar to the "extended" triplet, but it is not the same as in R10. As written ( $p$ ) it is exactly like one of the variant forms of Rúmilian l(normally p) in R7 (p.34); but without the dot (which is due to its numeral meaning, as told above, and not probably inherent to the sign), it is the singular "empty" $p$ used for 10 on the left half of R8 (see above).

Other differences are the signs for 2 and 3, which are graphically the same as in R8, but here correspond to Rúmilian $\dot{\boldsymbol{c}}$ and $\dot{\boldsymbol{g}}$, instead of $\boldsymbol{b}$ and $\boldsymbol{\sigma}$ as happens everywhere else (with the exception of the right half of R 9 , where perhaps the same assignation to 2 and 3 is intended, q.v.). This could have been made to enhance the graphical unity of $\{1,2,3\}$, or on the other hand to enhance the phonetic separation between $\{1\}$ and $\{2,3\}$ (see above, in R9 - left half).

Finally it may be noted that the 12 -sign adopts here a new form: $\beta$, which has no defined value in the accompanying table. It stood for $\check{y}$ in the table of R8 (p. 40), and probably in R1b (p. 19, cf. p. 21). That assignment, however, was based on the identification of $\boldsymbol{y}$ with the character $\beta$, and this is apparently in disagreement with the accompanying table of consonants on p.49, where $\boldsymbol{y}$ is represented with the character $\notin$, and $\check{y}$ accordingly with $\nexists l$ ( $p$. 49). ${ }^{1}$

This $\beta$ also looks like the character marked in R10 as the abbreviated form of the article the in the English mode (p. 45). This could imply that this character had the phonemic value $\delta$ in this latter case, since everywhere else the English article the is represented by some

Rúmilian character assigned to $ð$ (with or without vocalic diacritic):

- 5 in R1a (p. 18) and - upside down - in R2 (p. 22).
- $\Rightarrow$ in R9 (p. 43), the first word of the phrase at the bottom of R16 (p. 64), and the first word of "The Walrus and the Carpenter" (left half of R22, p. 82).
- . ${ }_{K}$ in the top phrases of R16 (p. 64), R20 - for Middle English pe (p. 78), R21 (p. 80), generally in R22 (pp. 82, 84), and RV1a, RV1b (PE15:86, 88).

However, in the table of consonants of R10 $\begin{gathered}\text { is assigned to (p. 44), so it is likely that the }\end{gathered}$ character for English the that looks like on p. 45 were actually intended to be with a straight bottom bar, as in the latter examples.

Therefore, the 12 -sign in this table of numerals probably does not correspond to either $\check{y}$ or $\boldsymbol{\jmath}$. A possible phonemic value is perhaps a variation of $\boldsymbol{m}$ like the 12 -sign in R10. (But not the same value $\check{m}$, which has a different character assigned in the accompanying table).

## Discussion

## Type of numeral system

From the example '1921' in R8 (p. 40) we know that high numbers could be written following a decimal positional system like ours. The decimal basis of Rúmilian numerals is also evident in the other samples, with the exception of the apparently incomplete draft on the right half of R9 (p. 43): in them we see that the basic series of numerals ends at 9 , and those from 10 on are listed separately, as an extension.

How multiples of 10 were written may be discussed. The attestation of a zero-sign in every sample, with the exception of the left half of R9 (p. 42), indicates that it was most probably used just as it is in our zero-based system; and in fact the omission of this singular sign on the left half of R9 does not necessarily imply that it did not exist. However, in this case we are left to wonder what use the additional 10 -sign would have. It could imply an alternative system, in which multiples of 10 were written in a different way. Still in a decimal positional system, it would be possible to use the 10 -sign to represent its multiples; for instance, ' 20 ' could be written as one-ten (instead of two-zero), meaning 'one decade plus ten' (instead of 'two decades'). The difference with our zero-based system is that each decade would be counted from one to ten, instead of from zero to nine; something that is not difficult to conceive at all (cf. a discussion on this matter in Bill Welden's article "Overcounting", in VT21:11-13). Nevertheless, this usage of the 10 -sign remains only a conjecture.

On the other hand, though the basis on tens of this system is obvious, we find that most samples also have numeral signs up to 12 . This is consistent with the Eldarin preference for a duodecimal system, developed in the Common Eldarin period (LR:1107, VT42:24, VT47:16), and may be compared with the numeral tengwar system presented in Quettar \#13 and \#14 by Christopher Tolkien (republished in Quettar Special Publication \#1). As these extended series include a 12 -sign, the previously mentioned issue of "overcounting" regarding the 10 -sign in R9 might also be applied to this case.

## Groups of numerals

For all samples, with the exception of the apparently incomplete draft, we may divide the series from 2 to 9 into four couples of numerals, so that the characters within each pair are clearly related: $\{2,3\},\{4,5\},\{6,7\}$ and $\{8,9\}$. The characters of the first pair of numerals could be related to the character for 1 too, and in that case such a pair would be extended to the triplet $\{1,2,3\}$; moreover, in the first sample we could conceive $\{4,5,6,7\}$ as unified in one single group. Additionally, when the duodecimal series is complete, there is also the group $\{10$, 11, 12\}. This distribution of numerals in groups of one to four items is interesting, different from the distribution of tengwar numerals from 1 to 9 , regularly devised as triplets (again fitting the Eldarin preferred duodecimal system, see above). This shows a contrast between a system designed on strictly arithmetical grounds (that of tengwar), and another that must be based on other, less mathematical concepts.

It is reasonable that the first numerals were related to the following ones, and at the same time distinguished from them, since the concept of 'one' had in Elvish languages, as it has in English, the sense of 'the first' of a series, but also the sense of 'standing out', or single, alone things. This may be seen, for instance, in the more or less contemporary Early Qenya Grammar (EQG), where the list of numerals has distinct terms for the number one: er (also glossed 'a single' and 'only, alone') and $\boldsymbol{\operatorname { m i n }}$ ('the first' and 'one in a series'); see PE14:49, $82 .{ }^{2}$ The first triplet or the couplet completing it would be easily explained by arithmetical reasons in a duodecimal series, but also by the importance that groups of three should have had to Elves since their awakening (cf. the legend about the Awakening of the Quendi, that was preserved among the Three Kindreds of the Eldar, XI:380). The following couplet, which extends the series up to 5, could be due to the Elvish concept of five as a natural numeral group, as the five fingers of a hand (the basis of the decimal system; cf. the concept of maqua in VT47:9, and the origin of the Eldarin word for 'five' in VT42:24, 26 and VT47:10).

The following couplets up to nine (just before completing the decade) could have been likewise derived from concepts of "natural groups", as namely the Seven Stars of Varda and the Nine Valar, ${ }^{3}$ or perhaps they were just a repetition of the model marked by the previous groups. The last additional triplet might have been defined in a later stage just for completing the dozen on which the duodecimal system is based, though it is not the only possibility (see below).

## Graphic and phonemic patterns

As commented on above, it is not easy to ascertain whether the groups of numerals are defined according to just graphical similarities, or the relations between the phonemic values of characters play some part. The fact that the triplet $\{10,11,12\}$ never was phonemically unified goes against the phonemic pattern, but the possibility must not be dismissed for this.

As a supposed addition to the system, $\{10,11,12\}$ could have been designed following a different, merely graphical pattern, while the basic series were not. In fact this triplet has another peculiarity in the samples of R10 and R11: in those tables the signs for $\{10,11,12\}$ and 0 are clearly related, which could imply that they were jointly conceived, perhaps after the basic series from 1 to 9 , as a set of numerals used for "advanced" counting, in a duodecimal system or over ten in general.

Sticking to phonemic principles, alternatively it could be that these extended series were not in fact completed by an isolated zero and a triplet $\{10,11,12\}$, but by a couplet related to the decimal system and overcounting ( $\{0,10\}$, represented by variants of Rúmilian liquids), and another which comprises the remaining numerals needed to complete the duodecimal system ( $\{11,12\}$, represented by Rúmilian nasals). This would be more clear in the layout of R11b.

Finally, we are left with the question of whether the phonemic values themselves (and not only their relations) of Rúmilian characters used for numerals have something to do with the numerals they represent. It was told above about the first sample that the letters of the numeral characters do not seem to be characteristic of European or Elvish words related to the corresponding numbers; and this applies to the other samples, with the exception of the Rúmilian $\boldsymbol{m}(\beta)$ assigned to ' 11 ' in the two last samples, as the Qenya word for this number was minqe (QL:61, PE14:49, 82). On the other hand, the singular assignment of Rúmilian $\boldsymbol{q}$ to 10 on the left half of R9 (p. 42) might be just an arbitrary reassignment of the sign $m$ previously given to 9 (see above); but in that sample where 10 fills the numeral series, it could be related to Q. qanta- 'fill complete' (QL:78), just as in a later conception the Eldarin term for 10 became kwaya, kwayam, related to the base KWA 'full, complete, all, every' (VT42:24, cp. VT47:17), and thus the Q . word for ' 10 ' came to be quean or quain (VT48:6, see note 2 ).

If these two tentative relations between letters and numeral concepts or names were not fortuitous, it could be that at least some characters were assigned to numbers due to phonemic criteria, the rest of the numbers receiving characters similar to their preceding ones, though they had no such phonemic relation. For instance, under this hypothesis, Rúmilian $\boldsymbol{m}$ would have been assigned to ' 12 ' in the last two analyzed samples because the $\boldsymbol{m}$ of Q. minqe (' 11 ') went before it, although the corresponding Q . name for ' 12 ' (yunqe, cf. PE14:49, 82) did not have that sound at all.

It is hard to find further relations between numeric and phonemic values of Rúmilian
characters that might be contrasted against linguistic information about numerals. A highly tentative one, but perhaps worthy of comment, is the relation between $\boldsymbol{t}$ and the first numeral, which is the only unchanged character through all samples, both in phonemic value and in form ( $\mathfrak{\rho}$ ). The $\boldsymbol{t}$ never was characteristic of words for 'one', in the languages that Tolkien would have probably considered to relate to the Rúmilian script; however, in QL we can find the root TAP 'count', whence Q. tasta- 'reckon' and tanta 'number', and it could be conceived that the first element of a numeral series received a letter generally related to the concept of numerals.

The fact that $\boldsymbol{k}$ and $\boldsymbol{g}$ were constantly assigned to 8 and 9 , respectively, could also be of interest, especially considering that this assignment survived a conceptual change of the relation between Rúmilian characters and their phonemic values ( $\boldsymbol{k}$ changed from $\mathcal{\sim}$ to $\mid \mathfrak{p}$, and $g$ from ( $n$ to $\mid \beta$ ) The $k$ of Proto-Indo-European oktō ('eight') could be related, though this would contrast with the previously proposed relations with Qenya terms (Q.for 'eight' was tolto, cf. PE14:49, 82). ${ }^{4}$

## Notes

1. The assignment $\not \subset=\boldsymbol{y}$ seems to have been valid during a period starting before October of 1921 (it occurs in the table of R9 so dated, on p. 42), and ending after 1924 (it still occurs in tables written on the so-called "Oxford paper" which should have been written as early as that year: R12-R14 and R17-R18, cf. p. 9). This usage is also seen in other tables, and in some examples most likely of this period: the words eveniy, ðiyz and prcektisiy ('euening', 'things' and 'practising' - the first one in Middle English) in R20 (p. 78, second, third and fifth lines), as well as nayoldapon, laeygij, ryty and plš (Gn. 'na-Ngoldathon', 'lang[u]age' 'writing' and 'English') in R21 (p. 80, first, fourth and sixth lines; all transcribed in p. 81, though there the last word is wrongly spelt as ' yls '). But yet another different conception, $\beta=\boldsymbol{y}$, occurring in examples earlier than 1921, as myny (*'meaning' or *'mining') in R5 (p. 28) and the usage in the Diary in 1919 according to R7 (p. 34), was restored in examples on that post-1924 "Oxford Paper": henriwtiriy (*'Henry Witring?') in R19 (p. 74), or wokiy, enipiy and kiydom ('walking', 'anything' and 'kingdom') in R22 (first lines in pp. 82, 83). If all this is correct, it may be of interest as an additional source of information about the dating of RV1 (PE15:86, 88). Since that document was probably written after October 1921, the usage of $\beta$ for $\boldsymbol{y}$ in $\boldsymbol{y} \boldsymbol{y}$ ('young') at the top line of RV1a, as well as in fiyrz and loy ('fingers' and 'long') in RV1b, means that it should have been written no earlier than 1924. This agrees with the account of Douglas A. Anderson, who dated it about 1923-24 (PE15:85).
2. For earlier references cp. the Qenya roots ERE- ${ }^{(1)}$ ('remain alone') and MĪ (unglossed, but whence Q. mir 'one') in QL:36, 61; and the Gnomish terms er ('one', next to ereth 'solitude, oneness, loneliness') and min ('one single') in GL:32, 57. But this notion of different Elvish words and senses of 'one' was not at all restricted to the earliest stages: in the Appendix on Eldarin numerals to The Rivers and Beacon-hills of Gondor, written at the end of the 1960s, Tolkien still commented on the Common Eldarin stems ER 'single' and MIN 'one, first of a series' just as in EQG more than forty years before (VT42:24). In fact it is interesting to note that the list of Qenya numerals from one to twelve in EQG is remarkably similar to that in Eldarinwe Leperi and Notessi (ELN), also from the the late sixties:

EQG (PE14:49, 82) gives the following cardinals: 1 er, min. 2 satta or satto (with the specific sense of 'both'), yúyo. 3 nelde. 4 kanta. 5 lemin. 6 enqe, enekse. 7 otso. 8 tolto. 9 hue. 10 kai (partitive kainen after other numerals), kea (adjectival form). 11 minqe. 12 yunqe.

ELN (VT48:6) gives for Quenya: 1 er, min. 2 atta. 3 nelde. 4 kanta. 5 lemen. 6 enque. 7 otso. 8 toldo. 9 nerte. 10 quean, quain. 11 minque. 12 yunque.

Leaving aside the distinct spelling of $q(u)$, both lists differ in the numerals for $2,5,8,9$ and 10 , in some cases very slightly. Texts contemporary or related to ELN, moreover, reveal that in this stage Tolkien also pondered alternative or complementary ideas about Eldarin numerals which would make them even closer to the conception shown in EQG. See VT42:24, VT47:31-32, VT48:10, VT48:12-13, VT48:19, VT48:21.
3. The number of the principal Valar (the Aratar in The Silmarillion) fluctuated throughout the evolution of the legendarium, but they were nine according to the conception of mid-twenties, about the time these tables were written. Cf. III:133, IV:11.
4. Still it could be thought that PIE oḱtō came from some Eldarin word with $k$ related to 'eight', due to the genetic relationship between Elvish and Mannish languages that Tolkien intended to make internally consistent in the fictional history, at least in its earlier stages (cf. V:179, VT17:13). But such a possibility might be upheld only if either a suitable Eldarin word or root were found, or the relation between numeric and phonemic values of Rúmilian characters were clearly demonstrated (which is here discussed, but not at all demonstrated).

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See also the general Tengwestie Bibliography.

## Change Log

- 2008-11-08 14:27:47: Formatting changes only: converted text to Gentium/Basic, deprecated all Gentium tags, converted combining diacritics to modifiers where possible


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