

## The accentuation of the PIE word for ‘daughter’

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It is well known that within the Indo-European language family the following four branches have retained the clearest information regarding the Proto-Indo-European accentuation: Greek, Indic, Balto-Slavic and Germanic (through Verner’s Law). Since the languages of each of these branches have undergone specific accentological innovations, it is always important to take these four branches into account when reconstructing the accentuation of a given PIE word. In this article I will focus on the accentuation of the word for ‘daughter’ and show that sometimes information from other branches is needed as well to determine the original situation.

Let us first look at the evidence from the four branches mentioned above.

	Greek	Sanskrit	OLith.	Germ.
Nsg	θυγάτηρ	<i>duhitā</i>	<i>duktē</i>	* <i>doxter</i> <sup>1</sup>
Asg	θυγατέρα	<i>duhitāram</i>	<i>dūkterī</i>	
Gsg	θυγατρός	<i>duhitúh</i>	<i>dukterēs</i>	
Vsg	θύγατερ	<i>dúhitar</i>	<i>dūkter</i>	

Since in Germanic Verner’s Law does not apply to consonant clusters, the PGerm. preform \**doxter-* is inconclusive regarding its original accentuation. The information from the other branches is quite interesting. If we take Pedersen’s Law into account for the Lithuanian accusative (cf. Kortlandt 1975: 8-10; 2009: 1-4), which predicts that attested *dūkterī* reflects older \**duktèrī*, we see that in the accusative the accentuation in all three branches falls on the suffix syllable: θυγατέρα, *duhitāram*, \**duktèrī*. We can therefore reconstruct PIE \**d<sup>h</sup>ugh<sub>2</sub>térm* with a great amount of certainty. The same goes for the genitive form: all three branches show accentuation of the ending, θυγατρός, *duhitúh*, *dukterēs*, which points to PIE \**d<sup>h</sup>ugh<sub>2</sub>trós*. Determining the original accentuation of the nominative form is more difficult, however. Both Skt. *duhitā* and Lith. *duktē* show accentuation of the suffix syllable, whereas Gr. θυγάτηρ shows accentuation of the stem. It is usually thought that since the Sanskrit and Lithuanian forms correspond to each other, these must represent

<sup>1</sup> Goth. *dauhtar*, OHG *tohter*, ON *dóttir*, e.a.

the Proto-Indo-European state of affairs, and that the Greek form therefore must be secondary.

The accentuation of Greek words is subject to a number of rules, one of which is the Limitation Law. This law describes the fact that in any given Greek word the accentuation always falls on one of the last three syllables if the final syllable is short, but on one of the last two syllables if the final syllable is long. Moreover, if in pre-Greek a word had the accent on a syllable further to the front than was allowed by this Law, it was retracted as far as necessary to fit the Law. In the case of *θυγάτηρ*, we see that the final syllable is long, so the accent is only allowed on the last two syllables, in this case on the penultimate. It is therefore possible that originally the accent was placed further to the front of the word, namely on the initial syllable, and that due to the Limitation Law it was retracted to the penultimate. This is supported by the fact that in Homer the accusative form is *θύγατρα* (an epic form created in order to avoid the three short syllables of *θυγατέρα* that do not fit the hexametre), with the accent on the initial syllable. It therefore is generally assumed that Nsg *θυγάτηρ* must reflect a pre-Limitation Law form *\*θύγατηρ*, with the accent on the initial syllable. Nevertheless, the accentuation of this pre-form *\*θύγατηρ* still does not fit the accentuation of Sanskrit *duhitā* and Lith. *duktė*.

In order to solve this problem, Frisk stated in his *Griechisches Etymologisches Wörterbuch* (Frisk 1960-72: 690) that the accentuation of Nsg. *θυγάτηρ* < *\*θύγατηρ* must be analogical after the accentuation of the vocative form *θύγατερ*: the latter form also has the accent on the initial syllable, which matches the accentuation of the Sanskrit Vsg *dúhitar* and Lithuanian *dūkter*. Although often repeated, this solution is rather *ad hoc*. It is well known that vocatives stand rather outside the paradigm, and it is quite unlikely that a vocative form, which is not so common, would have had an influence on the nominative form, which is a very strong case. Moreover, in the paradigm of 'father', for instance, where we find Nsg *πατήρ* besides Vsg *πάτερ*, the vocative form did not have an influence on the nominative form.

In Sanskrit, mobile stress was largely given up: original mobile paradigms often received columnal stress (Lubotsky 1988: 1f.), which means that the accent always falls on the same syllable within a paradigm. This is also the case in the paradigm of 'daughter': the accent always falls on the third syllable. It is therefore not *a priori* impossible that this columnal stress is the result of an innovation within Sanskrit. In the case of Lithuanian *duktė*, Kortlandt states in his review of the second International Workshop on Balto-Slavic Accentology held in Copenhagen that "[t]he rise of final stress in Lith. *duktė* [...] is independently motivated by the elimination of radical stress in the hysterodynamic paradigm and generalization of final stress in the non-neuter nom.sg. form" (Kortlandt 2009: 3), which implies that he regards the

accentuation of Lith. *duktė́* and Skt. *duhitā́* as secondary when compared to Greek θυγάτηρ < \*θύγατηρ.

As we see, in the case of the divergent accentuation of on the one hand Gr. θυγάτηρ < \*θύγατηρ and of Lith. *duktė́* and Skt. *duhitā́* on the other, there is no consensus on the question which accentuation is the original and which must have arisen secondarily. It may therefore be instructive to look at the other kinship terms, in order to see how the different types of accentuation of the different languages correspond to each other and, if they are divergent, which one is more original.

‘father’

Nsg	πατήρ	<i>pitá</i>	--	<i>*fader</i> <sup>-2</sup>
Asg	πατέρα	<i>pitáram</i>		
Gsg	πατρός	<i>pitúh</i>		

The case of ‘father’ is quite clear-cut. All evidence univocally points to a hysterodynamic accentuation *\*ph<sub>2</sub>-tēr*, *\*ph<sub>2</sub>-tér-m*, *\*ph<sub>2</sub>-tr-ós*.

‘brother’

Nsg	φράτηρ	<i>bhrátā</i>	--	<i>*brōþer</i> <sup>-3</sup>
Asg	--	<i>bhrátaram</i>		
Gsg	φράτερος	<i>bhrátuh</i>		

The case of ‘brother’ is clear as well. All evidence points to a root stressed paradigm: *\*b<sup>h</sup>réh<sub>2</sub>-tr*, *\*b<sup>h</sup>réh<sub>2</sub>-tr-m*, *\*b<sup>h</sup>réh<sub>2</sub>-tr-s*.

‘mother’

Nsg	μήτηρ	<i>mātā</i>	<i>mótè</i>	<i>*mōdér</i> <sup>-4</sup>
Asg	μητέρα	<i>mātáram</i>	<i>móteri</i>	
Gsg	μητρός	<i>mātúh</i>	<i>móteres</i>	

The case of ‘mother’ is more complicated. We see that the Greek and Sanskrit accusative and genitive correspond to each other: μητέρα besides *mātáram* and μητρός besides *mātúh*. In the nominative, however, Gr. μήτηρ shows accentuation of the root syllable whereas Skt. *mātā́* shows accentuation of the suffix syllable. The Germanic evidence, *\*mōdér*-, seems to support the Sanskrit situation. In Lithuanian, *mótè* shows AP 1, having an acute stress on the initial syllable throughout the paradigm. It is often thought that this accentuation must be due to Hirt’s Law, viz. *\*maītḗ(r)* > *\*máitḗ(r)* > *mótè*, which would

<sup>2</sup> Goth. *fadar*, OHG *fater*, ON *fadir*.

<sup>3</sup> Goth. *brōþar*, OHG *bruoder*, ON *brōðir*.

<sup>4</sup> OS *mōdar*, OHG *muoter*, ON *mōðir*.

mean that the Lithuanian paradigm matches the accentuation of Sanskrit. Although this is in principle possible for the nominative form, Hirt's Law cannot have operated in the genitive form: a preform *\*maǵterés* would not have given attested *móteres* as Hirt's Law does not skip a syllable. We therefore have to assume that the static root accentuation as visible in Lithuanian is original. This would mean that for Proto-Indo-European we now have to reconstruct *\*méh<sub>2</sub>tr*, *\*méh<sub>2</sub>trm*, *\*méh<sub>2</sub>trs*. This reconstruction is supported by the consistent full grade *\*meh<sub>2</sub>-* found in all languages and by the fact that in Sanskrit the genitive ending is *-uḥ*, which reflects *\*-r-s*.<sup>3</sup> This would mean that in Sanskrit and Germanic the accentuation on the second syllable is taken over from the paradigm of the word for 'father', which is of course a trivial analogy.

It is important to note that in this case, where the accentuation of the Greek Nsg. form deviates from that of the Sanskrit Nsg. form, the Greek accentuation, μήτηρ, is original vis-à-vis the Sanskrit accentuation, *mātā́*, in the sense that it has retained the PIE accentuation, *\*méh<sub>2</sub>tr*.

If we apply this knowledge to the state of affairs in the paradigm of 'daughter', where the accentuation of the Greek Nsg. form θυγάτηρ < \*θύγατηρ deviates as well from that of the Sanskrit Nsg. *duhitā́*, we may also have to assume that the Greek accentuation is original. If this is the case, we would be forced to reconstruct the following PIE paradigm:

Nsg. *\*d<sup>h</sup>úgh<sub>2</sub>tēr*  
 Asg. *\*d<sup>h</sup>ugh<sub>2</sub>térm*  
 Gsg. *\*d<sup>h</sup>ugh<sub>2</sub>trós*

This is not fully satisfactory either: it is unpleasant to have to assume that the accentuation lay on the semivowel *\*u*, whereas we find a full vowel, *\*ē*, in the unaccented syllable.

### Evidence from Anatolian

Although this may seem unexpected to an accentologist, I think that the question which accentuation is original in the word for 'daughter' can be answered by using evidence from the Anatolian languages. Let us first present the facts.

In Hittite, the word for 'daughter' is always written logographically with the sumerograms DUMU.MUNUS, which means that we do not know the phonetics of the underlying Hittite word. On the basis of the Asg form DUMU.MUNUS-*la-an* (KBo 20.101 rev.<sup>3</sup> 3), we must assume that it ended

<sup>3</sup> It is likely that the ending *-uḥ* spread from the paradigms of *mātā́* and *bhrātā́* to the other kinship terms, *pitā́* and *duhitā́*.

in *-la-*, however, which makes it rather unlikely that the Hittite word for ‘daughter’ goes back to PIE *\*d<sup>h</sup>ugh<sub>2</sub>tr-*.

In Hieroglyphic Luwian, the word for ‘daughter’ is found twice spelled phonetically, namely as Asg <sup>FILIA</sup>*tú-wa/i-tara/i-na* (TELL AHMAR §24) and <sup>FILIA</sup>*tú-wa/i-ta[ra/i-na]* (TELL AHMAR §29) (cf. Hawkins 1978), which phonologically stand for /tuatra/i-/. This word must be a close cognate to Lycian *kbatra-* (attested several times), which already in 1893 was identified as ‘daughter’.<sup>6</sup> As Bugge showed not long thereafter,<sup>7</sup> *kbatra-*, which phonologically must stand for /c̥patra-/,<sup>8</sup> must go back to pre-Lycian *\*tuatra-*, just as Lyc. *kbi-* ‘two’ goes back to *\*tui-* < PIE *\*dui-*. It is commonly accepted that HLuw. *tuatra/i-* and Lyc. *kbatra-* are cognate with the other IE words for ‘daughter’.

Some scholars regard the Hittite word <sup>MUNUS</sup>*duttarijata/i-*, which denotes a female functionary, as belonging to the words for ‘daughter’ as well. It is indeed true that, in Hittite, names of female functionaries are sometimes derived from kinship nouns (e.g. *šiuanzanna-*, a female functionary, lit. ‘divine mother’<sup>9</sup>), which would make a derivation of this word from ‘daughter’ possible, but it must be said that in this case a literal meaning ‘daughter’ is far from proven.<sup>10</sup> Since this word shows an alternation in the stem final vowel, *-a-* and *-i-*, which is a typical feature of Luwian nouns, it is commonly assumed that this word is a borrowing from Luwian. I will come back to this word later on in the discussion.

Starke (1987: 251) also regards the Hittite noun <sup>TUL</sup>*Duuattarina-*, which is the name of a well, as derived from ‘daughter’ (he translates “Töchterchen”), but this cannot be ascertained at all. I will therefore leave this form out of the discussion.

Let us first focus on the words for which a meaning ‘daughter’ is directly established, HLuw. *tuatra/i-* and Lyc. *kbatra-*. It is commonly accepted within Anatolian linguistics that in the Luwic sub-branch to which Hieroglyphic Luwian and Lycian belong, Proto-Anatolian lenis velars, which go back to PIE *\*g<sup>(h)</sup>* and *\*g<sup>(h)</sup>*, have been lost (through *\*-i-* before *\*e*). Consider for instance PIE *\*g<sup>hesr</sup>* > PAnat. *\*gesr* > Luw. *išra/i-*, Lyc. *izre/i-* ‘hand’ (cf. Hitt. *keššar* ‘hand’), PIE *\*d<sup>h</sup>g<sup>h</sup>-em-* > PAnat. *dġ-em-* > Luw. *tijamm(i)-* ‘earth’ (cf. Hitt. *tēkan* ‘earth’ < *\*d<sup>h</sup>eġ-(ō)m*), or PAnat. *\*negno-* > Luw. *nāna/i-* ‘brother’, Lyc. *nēne/i-* ‘brother’ (cf. Hitt. *negna-* ‘brother’). With this in mind, the words for ‘daughter’ are

<sup>6</sup> Imbert 1893: 89.

<sup>7</sup> Bugge 1901: 25.

<sup>8</sup> Kloekhorst 2008a.

<sup>9</sup> Cf. Kloekhorst 2008b: 765 for this meaning.

<sup>10</sup> Pace Melchert 1993: 238, who confidently translates this word as “daughter (or simil.)”.

usually thought to have developed thus: PIE *\*d<sup>h</sup>ugh<sub>2</sub>tr-* > PAnat. *\*dugatr-* > PLuw. *\*duatr-* > HLuw. *tuatra/i-*, Lyc. *kbatra-*.<sup>11</sup> So, the *-a-* found in HLuw. *tuatra/i-* and Lyc. *kbatra-* should go back to a vocalized *\*h<sub>2</sub>*.

This line of development is problematic, however, in view of Melchert 1994: 70, who states that “[t]here is no solid evidence for “vocalization” of *\*h<sub>2</sub>*/ anywhere in Anatolian”. This means that the first step as mentioned above, namely that PIE *\*d<sup>h</sup>ugh<sub>2</sub>tr-* yields PAnat. *\*dugatr-* with vocalization of *\*h<sub>2</sub>*, cannot be correct. This was also seen by Melchert himself, who therefore proposes an alternative solution. In his view, PIE *\*d<sup>h</sup>ugh<sub>2</sub>tr-* first yielded PAnat. *\*dugtr-* (loss of interconsonantal *\*h<sub>2</sub>*),<sup>12</sup> in which then an anaptyctic vowel emerged: *\*dug<sub>3</sub>tr-*. This anaptyctic vowel developed into a real *-a-*, *\*dugatr-*, after which the loss of *\*g* in Luwic caused it to yield PLuw. *\*duatr-*, the necessary preform for HLuw. *tuatra/i-* and Lyc. *kbatra-*. Although ingenious, Melchert’s scenario seems hardly plausible to me. Why would a cluster *\*Vgtr-* receive an anaptyctic vowel? And if this cluster would have needed anaptyxis, why do we not find a much more understandable outcome *\*Vgt<sub>3</sub>r-*? If we compare for instance the Hittite verb *galaktarae-* ‘to make drowsy’, which much reflect PAnat. *\*glo<sup>h</sup>troje/o-*, we see that the cluster *\*Vgtr-* did not receive an anaptyctic vowel between the *\*-g-* and the *\*-t-*. I therefore do not think that Melchert’s solution for the *-a-* in HLuw. *tuatra/i-* and Lyc. *kbatra-* can be upheld. It may be better to look at these words from a bottom-up point of view.

### Bottom-up reconstruction

Let us first look at the vocalism of the stem. In Luwian, the vowel *a* can go back to PLuw. *\*e*, *\*o* as well as *\*a*. Thereby, HLuw. *tuatra/i-* can go back to PLuw. *\*duetr-*, *\*duotr-* or *\*duatr-*. In Lycian, the vowel *a* can in principle only go back to PLuw. *\*a*, whereas Lycian *e* reflects either PLuw. *\*e* or *\*o*. Yet, Lycian has undergone a large-scale umlaut process,<sup>13</sup> including a development due to which an original *\*e* becomes *a* when the following syllable contains an *a*: *\*e<sub>1</sub>a > a<sub>1</sub>a*. This means that, on the one hand, Lyc. *kbatra-* < *\*tuatra-* can go back to PLuw. *\*duatr-*, and that, on the other, Lyc. *kbatra-* < *\*tuatra-* can be the umlauted outcome of *\*tuetra-*, which can go back to PLuw. *\*duetr-* or *\*duotr-*.

Thus, HLuw. *tuatra/i-* and Lyc. *kbatra-* point to a PLuw. form *\*duVtr-*, where the quality of *\*V* cannot be determined. We do know, however, that *\*V* cannot be the result of anaptyxis.

<sup>11</sup> Cf. most recently Kimball 1999: 388.

<sup>12</sup> See Kloekhorst 2008: 81 for loss of interconsonantal laryngeals.

<sup>13</sup> Cf. Melchert 1992; 1994: 296f. and Rasmussen 1992.

Now it is time to return to the Hittite word <sup>MUNUS</sup> *duttarijata/i-*, a female functionary, of which we have seen that it must be a Luwian loanword and of which some scholars state that it literally means ‘daughter’ vel sim. Phonologically, the form must be analysed as /tutriada/i-/. If this word indeed goes back to ‘daughter’, it would show a stem *tutr-* < PLuw. *\*dutr-*, which then would be a second Luwian stem besides the stem *\*duVtr-* that underlies HLuw. *tuatra/i-* and Lyc. *kbatra-*. Two things are important here. If the stem *tutr-* < PLuw. *\*dutr-* indeed means ‘daughter’ and goes back to PANat. *\*dugtr-* < PIE *\*d<sup>h</sup>ugh<sub>2</sub>tr-*, then this stem is definite proof for the fact that in the cluster *\*Vgtr-* no anaptyxis took place. Secondly, the stems *\*dutr-* and *\*duVtr-* cannot both go back to PANat. *\*dugtr-* < *\*d<sup>h</sup>ugh<sub>2</sub>tr-*.

In my view, the solution to this state of affairs can only be the following. The fact that in PLuw. we find a stem *\*duVtr-* besides *\*dutr-* can only be explained if we assume that they are ablaut variants of each other. I therefore claim that although the stem *\*dutr-* reflects the zero grade stem PANat. *\*dugtr-* < PIE *\*d<sup>h</sup>ugh<sub>2</sub>tr-* as attested in the other Indo-European languages, the stem *\*duVtr-*, which probably was *\*duetr-*, must reflect a hitherto unknown full grade stem PANat. *\*duegtr-* < PIE *\*d<sup>h</sup>uegh<sub>2</sub>tr-*.<sup>14</sup> Since we now have disposition of this full grade stem *\*d<sup>h</sup>uegh<sub>2</sub>tr-*, in my view it becomes immediately clear that the original paradigm of ‘daughter’ must have been hysterodynamic according to the *bandi*-type as described by Beekes (1995: 175): *\*CéC-R*, *\*CC-éR-m*, *\*CC-R-ós*.

Nsg. *\*d<sup>h</sup>uégh<sub>2</sub>-tr*  
 Asg. *\*d<sup>h</sup>ugh<sub>2</sub>-tér-m*  
 Gsg. *\*d<sup>h</sup>ugh<sub>2</sub>-tr-ós*

In Anatolian, the nominative form *\*d<sup>h</sup>uegh<sub>2</sub>tr* was enlarged with the *\*-eh<sub>2</sub>-* suffix, yielding HLuw. *tuatra/i-* and Lyc. *kbatra*. On the basis of the stem *\*d<sup>h</sup>ugh<sub>2</sub>tr-* a derivation in *\*-jo-* was formed, which served as the basis for Hitt. *duttarijata/i-*. After the Anatolian branch had split off from Proto-Indo-European, the other Indo-European languages underwent a common innovation, namely the replacement of the nominative stem *\*d<sup>h</sup>uegh<sub>2</sub>t-r-* by the

<sup>14</sup> My colleague Michaël Peyrot informs me that the Tocharian languages may also bear witness to a full-grade stem *\*d<sup>h</sup>uegh<sub>2</sub>t-r-*. In Tocharian A we find *ckācar* ‘daughter’, and in Tocharian B Nsg. *tkācer*, Asg. *tkātār* ‘daughter’. It is usually assumed that initial *c-* of Tocharian A *ckācar* arose from *\*t-* by some sort of distant assimilation (cf. Tocharian B Nsg. *tkācer*). Theoretically, however, it is also possible that *ck-* reflects PIE *\*d<sup>h</sup>ueg-*, showing palatalisation of *\*d<sup>h</sup>* to *c* due to *\*e*. If *\*d<sup>h</sup>ueg-* yielded *\*cuk-* by sound law, *u* may have been levelled out against *ä* in the allomorph *\*tāk-* < *\*d<sup>h</sup>ug-*. The Proto-Tocharian paradigm would then have been Nsg. *\*cākacer* << *\*cukacer* < *\*d<sup>h</sup>uegh<sub>2</sub>tēr*, Asg. *\*tākātār* < *\*d<sup>h</sup>ugh<sub>2</sub>trm*.

accusative stem *\*d<sup>h</sup>ugh<sub>2</sub>-ter-*. Originally, the accentuation of the nominative *\*d<sup>h</sup>uégh<sub>2</sub>tr* was retained in this new form, however:

Nsg. *\*d<sup>h</sup>úgh<sub>2</sub>-tēr*  
 Asg. *\*d<sup>h</sup>ugh<sub>2</sub>-tér-m*  
 Gsg. *\*d<sup>h</sup>ugh<sub>2</sub>-tr-ós*

This is the situation underlying the Greek paradigm θυγάτηρ < \*θύγατηρ, θυγατέρα, θυγατρός. In the other Indo-European languages also the accentuation of the accusative was later on transferred to the nominative form, yielding:

Nsg. *\*d<sup>h</sup>ugh<sub>2</sub>-tēr*  
 Asg. *\*d<sup>h</sup>ugh<sub>2</sub>-tér-m*  
 Gsg. *\*d<sup>h</sup>ugh<sub>2</sub>-tr-ós*

This is, of course, the situation underlying Skt. *duhitā́*, *duhitáram*, *duhitúh* and Lithuanian *duktė́*, *dùkterj*, *dukerè̀s*.

### Conclusion

Summing up, we can conclude the following. Since the accentuation of Gr. NSg θυγάτηρ < \*θύγατηρ can be explained as an archaism reflecting the accentuation of the original PIE Nsg form *\*d<sup>h</sup>uégh<sub>2</sub>tr*,<sup>15</sup> which must be reconstructed on the basis of HLuw. *tuatra/i-* and Lyc. *kbatra-*, the accentuation of Lith. *duktė́* and Skt. *duhitā́*, which commonly are regarded as more original forms, must in fact have arisen secondarily.

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<sup>15</sup> The fact that ‘daughter’ originally showed a paradigm *\*CéC-r*, *\*CC-ér-m*, *\*CC-r-ós*, makes it likely that this was the case for ‘father’ as well. This means that we then should reconstruct an original Nsg form *\*péh<sub>2</sub>-tr*, which later on, on the basis of Asg *\*ph<sub>2</sub>-tér-m* was replaced by *\*ph<sub>2</sub>-tēr*. The reason that in this case Greek does not show an accentuation *\*\*πάτηρ* may lie in the fact that at the time that the stem *\*péh<sub>2</sub>-tr-* was replaced by the accusative stem *ph<sub>2</sub>-ter-*, the consonant *\*h<sub>2</sub>* was not able to bear the accent (whereas in the case of ‘daughter’ the vowel *\*u* was).



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