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On Frederik Kortlandt's Distributional Trilaryngealist Model

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ABSTRACT: Revisionist trilaryngealism, consisting of the hypotheses CC·C, *h_1 h_2 h_3, and at least two different vowels PIE *e *o (and optionally PIE *a), has split the laryngeal theory into several mutually incompatible models. The models of EICHNER (1973, 1978, 1980, 1988) and MELCHERT (1987)/RIX (et al. 2001) are characterized by symmetrical, but opposed reconstructions for Hitt. a- (*h_3e- vs. *h_1o-) and Hitt. ḫa- (*h_2e/o- vs. *$h_{2/3}$e/o-). In KORTLANDT's (2003–4) model the preservation of *h_2 and *h_3 is conditioned by the distributions of *e/o. Both laryngeals are allegedly retained before *e, but lost before *o in Old Anatolian. In addition, it is theoretically possible to define a variant of KORTLANDT's model in which the distributions are reversed. The present paper focuses on KORTLANDT's model in both its original and reversed form and demonstrates the internal inconsistency of this model, due to which it has to be discarded as a serious option for PIE reconstruction. This leaves us only the models of EICHNER and MELCHERT/RIX to compete with SZEMERÉNYI's (1967, 1970, 1996) monolaryngealism for the solution of the PIE laryngeal/vowel problem.

1. The key historical developments of the laryngeal theory[1]

1.1 The original laryngeal theory of Hermann MØLLER (1879, 1880, 1906, 1911), i.e. the hypothesis that PIE had three laryngeal consonants (*h_1 h_2 h_3), a single vowel *e, and a root structure CC·C shared with Proto-Semitic, has gone through significant transformations during its subsequent history.

1.2 The first changes to MØLLER's theory were suggested when the Hittite language had been identified as Indo-European and the comparison between it and other languages of the family made it possible to evaluate MØLLER's proposals. Contrary to the commonplace narrative, Hittite — and later also the rest of the Old Anatolian languages — confirmed the laryngeal theory only in part.[2] As correctly pointed out by KURYŁOWICZ (1927), Hitt. ḫ indeed stands in positions in which MØLLER's theory postulates *A (i.e. *h_2), but there is no trace of his *E (*h_1) or even *O (*h_3) in the Old Anatolian data, as both SZEMERÉNYI (1970) and EICHNER (1973) correctly noted.

1.3 Instead of abandoning the postulates *h_1 and *h_3 which were not backed up by the data, the pioneers and their followers have ever since presented various proposals concerning laryngeal loss in Old Anatolian. All proposals are based on an identical understanding of chronology: First, the laryngeals colour adjacent vowels if a colouring effect is required. Then the laryngeals that are later lost are neutralized, i.e. they turn into *h_1 according to the pattern $H_xV \rightarrow H_1V_x \rightarrow V_x$. The remaining laryngeals, i.e. *h_2 as well as *h_3 in models assuming its preservation, result in PAnat. *H.[3]

[1] For the terminology used and previous discussion on the laryngeal theory, see PYYSALO 2016 and PYYSALO & JANHUNEN 2018.

[2] Cf. the statement of NYMAN (1982: 39): "Saussure's abstract representations were later in part confirmed by the Hittite findings."

[3] See, e.g., KLOEKHORST (2006: 86): "He [Kortlandt] argues that initial *h_3 (just as *h_2) is neutralized before *o (i.e. becomes *h_1o), whereas it is retained before *e, and subsequently yields Hitt. h-."

1.4 From the bird's-eye view the rules defining the development of the laryngeals are distributed into four chronological phases $\mathbf{t_1}$–$\mathbf{t_4}$ (where 't' stands for a synchronic point on the time axis) as shown in the table below:

$\mathbf{t_1}$		$\mathbf{t_2}$		$\mathbf{t_3}$		$\mathbf{t_4}$	
h_1e-	→	h_1e-	→	e-	→	Hitt. e-	(KURYŁOWICZ)
h_1o-	→	h_1o-	→	o-	→	Hitt. a-	(KURYŁOWICZ)
h_3e-	→	h_1o-	→	o-	→	Hitt. a-	(EICHNER)
h_2o-	→	h_1o-	→	o-	→	Hitt. a-	(KORTLANDT)
h_3o-	→	h_1o-	→	o-	→	Hitt. a-	(KORTLANDT)

1.5 The second most important adjustment of MØLLER's theory was the subsequent failure of the monovocalism hypothesis, which by the early 1960s resulted in a typologically unacceptable array of six laryngeals in PUHVEL 1965, a model which despite the enormous stock of postulated proto-phonemes could not explain the basic ablaut PIE *e/o.

1.6 In order to avoid the pitfalls of laryngeal multiplication the existence of several PIE vowels had to be admitted by the early 1970s. In essence, therefore, modern 'revisionist' trilaryngealism accepts MØLLER's hypotheses, including the idea of a root structure of the type CC·C and the presence of three laryngeals (*h_1 *h_2 *h_3), butt postulates two or, more often, three additional PIE vowels: *e *o (*a).

1.7 A fundamental problem of revisionist trilaryngealism is that instead of yielding a cohesive theory it has resulted in a number of separate, mutually incompatible models, proposed e.g. by EICHNER (1973, 1978, 1980, 1988), MELCHERT (1987), RIX (et al. 2001), and KORTLANDT (2003–4). This incohesion of the revisionist paradigm is itself a sign of inherent weakness. Thus, for instance, for Hitt. a- = Gr. ȯ- alone three distinct explanations can been proposed:

*h_3o- *h_3a- *h_3e-	(EICHNER)
*h_1o-	(MELCHERT/RIX)
*h_3o- *h_2o-	(KORTLANDT)

To these it is theoretically possible to add a variant of KORTLANDT's model in which the distributions are reversed:

*h_3e- *h_2e-	(KORTLAND Reversed)

Similar ambiguities plague almost every correspondence set. The lack of unanimity among the revisionists is indeed diagnostic: since it is impossible that all the proposed models are correct, it appears likely that they are all wrong.

1.8 In the present paper the complex situation in Indo-European linguistics, caused by the parallel existence of competing models, will be simplified by eliminating the distributional model of KORTLANDT, as well as its reversed version, by demonstrating their inherent inconsistency.

2. Kortlandt's distributional model – and Kortlandt Reversed

2.1. KORTLANDT's model shares the standard assumptions CC·C and *h_1 h_2 h_3 and reconstructs only two vowels PIE *e ≠ *o. Since no PIE *a is reconstructed, the model can only explain the 'a-colouring' by means of *h_2, which necessitates a distributional

explanation for the absence of the 'a-colouring laryngeal' in certain positions in Old Anatolian. The model, originally presented in KORTLANDT 2003–4 and subsequently supported and developed to a degree by Alwin KLOEKHORST (2006, 2007), consists of the distributional pairs of the two laryngeals *h_2 *h_3 and the two vowels *e *o as outlined below.[4]

2.2 Pre-PIE *h_3o- → *h_1o- → Hitt. a- = Gr. ὀ-. The idea of this sound law chain is that first *h_3o- is neutralized into *h_1o-, then the laryngeal is lost before *o, yielding Hitt. a-, Gr. ὀ- etc. (as in Hitt. ārk-^{i} 'to mount sexually': ὄρχις 'testicle', KLOEKHORST 2006: 89). As can be readily seen this offers an explanation for the 'o-vocalism' and the absence of an initial laryngeal in Hittite.

2.3 Pre-PIE *h_3e → *h_3o- → *Ho- → Hitt. ḫa- = Gr. ὀ-. This sound law chain consists of the colouring rule *h_3e- → *h_3o-, followed by *h_3o- → *Ho-, which yields Hitt. ḫa- = Gr. ὀ- (as in Hitt. ḫaštai- 'bones' from *$h_3$est(H)-oi-: Gr. ὀστέον 'bone', KLOEKHORST 2006: 92).

2.4 Pre-PIE *h_2o→ *h_1o- → Hitt. a- = Gr. ὀ-. This sound law is the counterpart of §2.2 for the distributional loss of the 'a-colouring laryngeal' *h_2, an example of which, according to KLOEKHORST (2006: 83), appears in Hitt. ānš-^{i} 'to wipe' from *$h_2$omh_1-s-.

2.5 Pre-PIE *h_2e→ *h_2a- → *Ha- → Hitt. ḫa- = Gr. ἀ- is identical with the standard development in all versions of the laryngeal theory and needs not be discussed in this connection.

2.6 As noted above, it would be theoretically possible to construct also a reversed version of this model, conveniently called 'KORTLANDT Reversed'. In the reversed version the distribution of the laryngeals *h_2 and *h_3 would be the opposite to what was originally postulated by KORTLANDT, that is, the two laryngeals would be preserved in Hittite before *o, but lost before *e.[5]

3. The inconsistency of Kortlandt's model and its reverse

3.1 The inherent inconsistency of KORTLANDT's model becomes apparent when its rules for *h_3 (K_1, K_2) are arranged on a chronological axis, i.e., in terms of the four-phase succession of developments **t**$_1$– **t**$_4$:

t$_1$		**t**$_2$		**t**$_3$		**t**$_4$	
*h_3e-	→	*h_3o-	→	*Ho-	→	Hitt. ḫa- = Gr. ὀ-	(K_1)
*h_3o-	→	*h_3o-	→	*h_1o-	→	Hitt. a- = Gr. ὀ-	(K_2)

3.2 If we assume that the developments took place in this order, the sound law chain K_1 first turns *h_3e- (**t**$_1$) into *h_3o- (**t**$_2$), which then yields *Ho- (**t**$_3$), finally leading to Hitt. ḫa- = Gr. ὀ- (**t**$_4$). However, when *h_3e- changes into *h_3o-, it becomes identical with the same item in the synchronic phase **t**$_2$ in the sound law chain K_2, where it is

[4] Historically KORTLANDT's model can be traced back to his article in 1984, in which he discusses a similar distribution for Armenian.

[5] Thus, for instance, for CLu. ḫau̯i- either *$h_2$ou̯i- or *$h_3$ou̯i- would be reconstructed in KORTLANDT Reversed.

neutralized into *h_1o- → Hitt. a- = Gr. ȯ-. In other words, *h_3o- yields two different outcomes: *Ho- (Hitt. ḫa-) and *h_1o- (Hitt. a-).

3.3. Technically, this problem could be avoided by assuming a slightly different ordering of the developments in a 'revised KORTLANDT':

t_1		**t_2**		**t_3**		**t_4**	
*h_3e-	→	*h_3o-	→	*Ho-	→	Hitt. ḫa- = Gr. ȯ-	(K_1)
*h_3o-	→	*h_1o-	→	*h_1o-	→	Hitt. a- = Gr. ȯ-	(K_2)

This ordering would imply that the sequence *h_3o-, which was lost after phase **t_1**, was recreated at phase **t_2**. In other words, the distinction between the sequences *h_3e- and *h_3o-, which at phase **t_1** was located in the vowels, would have been relocated to the laryngeal at phase **t_2**. This is a highly unlikely scenario. Even a basic understanding of the comparative method would require us to postulate at least two different laryngeals for the two original forms *h_3e- vs. *h_3o- = *h_1o-, making phase **t_1** superfluous. This is, in fact, the solution offered by the monolaryngealist model, in which *h_1 = Ø (zero).

3.4 The second distributional model, KORTLANDT Reversed (KR), is equally inconsistent, as revealed by its sound law chains (KR_1, KR_2) expanded into the four chronological phases **t_1**– **t_4**:

t_1		**t_2**		**t_3**		**t_4**	
*h_3e-	→	*h_3o-	→	*h_1o-	→	Hitt. a- = Gr. o-	(KR_1)
*h_3o-	→	*h_3o-	→	*Ho-	→	Hitt. ḫa- = Gr. o-	(KR_2)

3.4 Again, chain KR_1 yields *h_3e- → h_3o- (t_2), allegedly leading to Hitt. a- = Gr. ȯ-. Simultaneously, however, chain KR_2 implies that *h_3o- (**t_2**) leads to *Ho- = Hitt. ḫa- = Gr. ȯ-, which is incompatible with the outcome of chain KR_1. This problem could only be avoided by assuming that the sequence *h_3o-, lost after phase **t_1**, is recreated at phase **t_2**, which leads to a dead-end.

4. Summary, results and conclusions

4.1 The present paper has demonstrated that the trilaryngealist framework, though often propagated as the only "correct" road to PIE reconstruction, is actually split into several mutually incompatible models, between which no choice can be made on the basis of the data. Each model has to be examined separately, and to start with, the present paper has focused on the model proposed by KORTLANDT, as well as its theoretically possible reversed version.

4.2 It has been shown that KORTLANDT's model is inherently inconsistent and cannot explain the correspondences involving Hitt. ḫ vs. Hitt. Ø. Due to this inconsistency and explanatory inadequacy, we have to discard this model.

4.3 After the elimination of KORTLANDT's model from the discussion we are left with only two other models of revisionist trilaryngealism to compete with SZEMERÉNYI's (1967, 1970, 1996) monolaryngealism (and its recent revisions) for the ultimate solution of the Proto-Indo-European laryngeal/vowel problem. The two remaining models are those proposed by EICHNER and MELCHERT/RIX, which will be discussed

in a separate paper. In this connection, the generally abandoned orthodox model of PUHVEL (1965), with six laryngeals, will also have to be taken up once again.

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