

An Analysis of Semitic Uvular-Pharyngeal Correspondences: Inter-Dialectal Borrowing in Akkadian

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1 Introduction

- In the attested late dialects of Akkadian, pharyngeal consonants were lost or at least not represented orthographically, so inherited /ħ/ in cognates from other Semitic languages generally corresponds to \emptyset [5, 7]
- Pharyngeals were still preserved in early Akkadian, as is apparent both from the spelling and from their raising effect on neighboring vowels [3, 5, 7]
- A reflex of voiceless uvular *χ was preserved even in late dialects, and corresponds with /χ/ outcomes in many other branches of Semitic [5, 7]
- However, there is a set of words in which Akkadian dialects have a dorsal fricative corresponding to /ħ/ in other Semitic languages [2, 4, 11]

2 The Data

In some Akkadian words /x/ corresponds to /ħ/ in other Semitic languages, instead of the usual correspondences: Akkadian /x/ with /χ/ elsewhere and Akkadian \emptyset with /ħ/ elsewhere.

Table 1: Proto-Semitic Guttural Consonant Developments

Proto-Semitic	Arabic	Assyrian & Babylonian
*χ	χ	x
*ħ	ħ	\emptyset
*ħ?	ħ	x ← correspondence of interest

- The spelling of words with the uvular-pharyngeal correspondence is consistent within Akkadian; most such words are always spelled with the dorsal fricative
- Some of the examples of words suggested to reflect this correspondence include:
 - Bab. *ħabābu* ‘croon’ = Arabic حب /ħubb/ ‘love’
 - Bab. *nabāhu* ‘bark’ = Arabic نجح /nabaħ/ ‘bark’
- In contrast, other words have irregular spelling, with <ħ> signs alternating with a lack of marking, e.g. ú-na-ħi-id vs. ú-na-i-id ‘he informed’ [8]
 - This pattern may reflect a different history than the words with consistent spellings, as well as potentially representing a different synchronic sound
 - However, sometimes it can be unclear if synonyms of similar form should be treated as variant spellings of the same word or consistent spellings of different words

- Some of the correspondences are phonetically irregular in ways other than the uvular-pharyngeal correspondence; these are here omitted from consideration
e.g. *ṣāḥu/ṣiāḥu* ‘laugh’ = Arabic ضحك /d^ʕaḥik/ ‘laugh’, Ugaritic *dḥq*

3 Possible Explanations

Words with this correspondence may not all have the same explanation, as has been noted by Edzard (2015). Previous analyses are summarized here:

3.1 Sound Change

Tropper (1995) proposed that the different correspondence sets were the result of a conditioned phonetic change

- Many words with the uvular-pharyngeal correspondence are roots which also include sonorants or sibilants or are ‘weak’ (i.e. include [–consonantal] radicals)
- However, some of them do not (e.g. *qidḥu* ‘inflammation’ < *qdḥ)
- Other words with such environments lost the pharyngeal (e.g. *edēšu* ‘be new’ < *ḥdθ)
- There is also no consistent characterizable pattern in the phonetic environments where the pharyngeals were lost
- Thus any explanation based on sound change seems to require substantial irregularity in the occurrence of that change

3.2 An Additional Reconstructed Sound

It has alternatively been proposed by Huehnergard (2003) that the χ :ḥ correspondence reflects a third phoneme in Proto-Semitic, distinct from * χ and *ḥ [4]

- Three different Proto-Semitic sounds for each of the three correspondence sets ($\underset{h}{\underset{h}{\chi}}$: $\underset{h}{\underset{h}{\chi}}$, \emptyset : $\underset{h}{\underset{h}{\chi}}$) would account for the three correspondence sets and the lack of distinct environment for each one
- However, there is no strong candidate distinct for a sound not already reconstructed for Proto-Semitic which could develop into both /ḥ/ and elsewhere into /x/

3.3 Different Time Periods

Another explanation, reported by Edzard (2015), proposed to account for at least some of the forms with the < $\underset{h}{\underset{h}{\chi}}$ > spellings reflecting an older stage when a reflex of the voiceless pharyngeal was still preserved

- This explanation in particular was aimed at variant spellings of the same word, one which reflects the typical Akkadian outcome with no written reflex of the pharyngeal and one with an < $\underset{h}{\underset{h}{\chi}}$ > spelling
- This explanation could be appealing for words which are spelled with < $\underset{h}{\underset{h}{\chi}}$ > in older texts and without it in later texts
- However, the forms with < $\underset{h}{\underset{h}{\chi}}$ > signs are not restricted to older texts; if anything, they are actually more frequent in later texts [2]

3.4 Borrowings from Other Semitic Languages

Some words with this correspondence are likely borrowings from other branches of Semitic, particularly when the semantic correspondence is close and there are other phonetic correspondences which would be irregular between cognates [2, 4]

- Words borrowed from West Semitic can sometimes be identified by the absence of vowel coloring (/a/ > /e/) caused by adjacent pharyngeals in Akkadian
e.g. *ḥabālu* ‘bind’, Cf. Syr. *ḥabla* ‘rope’ < **ḥbl*
- Borrowing from elsewhere in Semitic may provide a way to explain words which contain other irregularities in phonetic correspondence in addition to the uvular-pharyngeal correspondence
- In borrowings, the voiceless pharyngeal fricative is most often adapted as /h/, but can also be adapted as other voiceless guttural fricatives or be eliminated in languages which lack /h/, as has been demonstrated in experimental elicitations [10]
e.g. Arabic *ḥajwān* → Indonesian *hewan* ‘animals’ [6]
- While such borrowings from other Semitic languages may account for some of the examples of this correspondence, there are other examples where it is not possible
 - Some of the examples reflect phonological developments that occurred within Akkadian, e.g. /a/ > /e/ next to pharyngeals
 - The presence of clear loanwords in which this raising did not occur indicates that either raising was no longer an active phonological process or the pharyngeals in borrowings did not preserve their place of articulation, or both

4 A New Proposed Explanation

I propose that the uvular-pharyngeal correspondence in most of these words reflects inter-dialectal borrowing within Akkadian, expanding on Huehnergard’s (2003) suggestion that this is a possible explanation for some of the forms with this correspondence

- It is clear from spelling and phonological effects that pharyngeals were still retained in early Akkadian
- I suggest that at least one dialect retained the pharyngeals for much longer than the main attested dialects
- While there is no direct evidence for the dialect from which these words might have been borrowed, the distribution of attestations of lexical items with this correspondence can suggest where it was likely located
 - Words with this correspondence are significantly more common in Babylonian texts than in Assyrian texts ($p < 0.0001$); the difference remains significant even when omitting forms only attested in jungbabylonische texts, in which such forms are particularly common ($p = 0.00033$).¹

¹Based on regional attestation of lexical items as reported in Black, George, and Postgate 2000, i.e. type frequencies, not token frequencies.

- This difference in frequency cannot be attributed to a greater frequency of Babylonian texts: in a control group of words without this correspondence, there was no significant difference between the number of lexical items attested in Assyrian texts vs. Babylonian texts ($p = 0.44$)
 - This is in favor of a borrowing explanation, as words which entered the language via borrowing are more likely to have a limited geographic distribution
 - Furthermore, this suggests that if a dialect existed that preserved the pharyngeals, it was closer to the south, near the regions of Babylonian texts
- These forms are not temporally restricted, however: there is no significant difference between the frequency of lexical items with this correspondence in Old texts vs. New texts ($p = 0.41$)
 - Some words with the uvular-pharyngeal correspondence reflect sound changes internal to Akkadian, such as vowel raising ($a > e$) in pharyngeal environments
e.g. *ḥepēru* ‘dig’
 - Vowel raising was a phonological change in early Akkadian, when pharyngeals were still present, with effects continuing into the later dialects: [3, 5]
e.g. $*ḥaba:lu > ḥebe:lu > ebe:lu$
 - The pharyngeals in the Sargonic period were still indicated with distinct É signs
e.g. *na-é/ḥa-si* ‘life’ [3]
 - Subsequently pharyngeals were lost; in the absence of the conditioning environment, there is no evidence that the process remained active, particularly as it is phonetically unnatural: it is more common for gutturals to cause vowel lowering or retraction [9]
 - The consistent spellings of most of these lexical items, either with ḥ signs or with no consonant in positions where a pharyngeal is reconstructed, indicate that this correspondence really is a phonological phenomenon and not a purely orthographic one
 - However, because the writing system was largely regularized based on dialects where pharyngeals were lost, the representation of pharyngeals might have been inconsistent even in dialects which preserved them, if such dialects existed
 - Thus it is possible that written texts exist from dialects which preserved pharyngeals, but the lack of standardized spelling of pharyngeals obscured their presence
 - Borrowings of words from those dialects could be marked by little difference from normally inherited words except in the outcome of pharyngeals
 - Adaptation of the voiceless pharyngeal /ḥ/ to other voiceless guttural fricatives such as /χ/ or /x/ is common in borrowings into languages without pharyngeals or laryngeal /h/ [10]
 - Dialects in contact can borrow words from each other and sometimes also have broader impact on each other; because the donor and recipient of inter-dialectal loanwords are very similar, borrowings can be particularly widespread

5 Conclusions

- I aim here to offer a possible explanation for irregular phonological correspondences in Akkadian, taking into account the distribution of these forms
- Inter-dialectal borrowing provides several explanatory benefits:
 - Explains Akkadian characteristics of these words (e.g. vowel coloring)
 - Follows an attested pattern of phonological adaptation of pharyngeals as uvulars
 - Consistent with the regional differences in attestation
- While the regional distribution and the comparison with pharyngeal adaptations as uvulars is also consistent with borrowings from other Semitic languages, inter-dialectal borrowing is of particular value to explain the subset of the examples which reflect Akkadian innovations which must have occurred prior to pharyngeal loss

References

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