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Aspekty hetitských nominálních *i*-kmenů

Aspects of Hittite nominal *i*-stems

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Indoevropština, anatólština, chetitština, jmenná flexe, jmenná derivace, ablaut, *i*-kmeny, *āi*-kmeny.

Abstract

The present study offers a detailed investigation of two important groups of Hittite nominal *i*-stems, namely the *āi*--stems and the so-called "core" *i*-stems. It is divided into three parts. The first part offers an introduction to the problem of *i*-stems in PIE and in Hittite itself. The second part comprises the selected lemmata and provides their attestations, information on their inflection and origin. It strives to present a current picture of the synchronic evidence for the selected groups, which is necessary taking into account the rapid progress in Hittite studies. Preliminary conclusions are also provided for the historical analysis of the individual items. The third part builds upon the information gathered about the individual lexical items to offer new views on the ablaut patterns and origins of the words. Besides providing an overview and useful summary, my goal is to confront some of the generalizations previously made about *i*-stems and offer new solutions, which could also be of a profit to historical linguists outside of Anatolian studies. The major finding of the thesis is the fact that only a very few *i*- and *āi*-stem nouns and adjectives can be considered directly inherited from Proto-Indo-European.

Abstrakt (česky)

Předkládaná studie nabízí vhled do dvou důležitých skupin chetitských nominálních kmenů – *āi*-kmenů a základních *i*-kmenů. Práce je rozdělena do tří částí. První část nabízí úvod do problému studia praindoevropských a následně chetitských *i*-kmenů. Druhá část obsahuje slovníková hesla včetně jejich nálezoých dokladů, informací o jejich původu a flexi. Tato část si klade za cíl přestavit současný pohled na jednotlivá lemmata, který vzhledem k rychlému vývoji této oblasti vědeckého zájmu nabyt v posledních letech významných změn. U jednotlivých hesel jsou předkládány i předběžné závěry ohledně jejich historické analýzy. Třetí část vychází ze závěrů získaných studiem jednotlivých slov. Poskytuje shrnutí a závěry k otázkám ablautových vzorců a původu slov. Cílem práce bylo z velké části přinést nové pohledy na základní otázky týkající se jak jednotlivých *i*-kmenů, tak celé této kategorie. Klíčovým získaným poznatkem je fakt, že pouze velice málo *i*- a *āi*-kmenů lze odvodit přímo z praindoevropštiny.

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Abbreviations

EDHIL = Kloekhorst, Alwin. 2008. *Etymological dictionary of the Hittite inherited lexicon*. Leiden: Brill.

GrHL = Hoffner, Harry A. / Melchert, Craig H. 2008. *A grammar of the Hittite language*. Winona Lake, Ind: Eisenbrauns.

HW² = Friedrich, Johannes / Kammenhuber, Annelies. 1975-. *Hethitisches Wörterbuch*. Heidelberg: Carl Winter.

KBo = *Keilschrifttexte aus Boghazköy*, Osnabruck / Berlin, 1923-.

KUB = *Keilschrifturkunden aus Boghazköy*, Berlin, 1921-1990.

NH =New Hittite

OS = Old Script

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Introduction

Hittite texts are unusually abundant in *i*-stem nominals, a feature not encountered in other ancient IE languages. They form the second largest class, with over 1000 lexemes (though they remain far behind the *a*-stems, which number in the thousands) and are frequent for both genders and also as adjectives. Of the overall total about 600 of them are common gender, fewer than 200 are neuter, for approximately 150 of them the gender is presently unidentifiable and slightly under 200 are adjectives.

There are two main reasons for the frequency of *i*-stems in Hittite. First of all, there are hundreds of loanwords ending in *-i-*, above all Hurrian but also Hattic and Akkadian. Those of Luvian provenance may have been other than *i*-stems in Luvian (e.g., *t*-stems), could have preserved the Luvian *i*-mutation, or we may even find the *i*-mutation feature only transposed to originally Hittite stems.

Second, there are a considerable number of derivational suffixes in *-i-* (for details, see Hoffner, Melchert GrHL: 54). Some were added to verbal bases (*-ai-* to form common gender action nouns; *-ri-* for common gender and neuter nouns; *-ulli-* for neuter instrumental and result nouns; *-uzzi-* neuter and common gender instrumental nouns), some to nominal bases (*-alli-*; *-ašši-* to form denominal adjectives), some to adjectives (*-ašti-* to form common gender nouns), some to adverbs (*-zzi(ya)-* to build adjectives). Note also *-ili-*, which forms adjectives from various bases.¹

A simple comparison of the number of PIE *i*-stems and Hittite *i*-stems implies that the number of loanwords and inner-Hittite formations is several times higher than the inherited material. Even if "inherited" is taken to comprise both *i*-stems which inherited only the root (and which have changed their stem class sometime in post-PIE) and *i*-stems where the stem too can be traced to PIE, such nouns will number in the tens, not hundreds.

¹As summarized by Melchert (2021: 1-27), with regard to the origin of the suffixes we may consider the development of PIE **-ti->-zi-*, **-ro->-ri-*, **-u-ti->-uzzi-*, **-ti->-zi-* and *-zzi-*, and *-ulli-/utri* <**-u-t/d^hli-/*-u-t/d^hri*, renewed from **-u-t/d^hlo-/u-t/d^hro-*. (*-i-* in *-ulli-*, *-utri* is due to influence of *-uzzi-* (Melchert 2021: 18)).

The inherited forms will be of greatest interest in this thesis, the fact that enlarges the scope of the work beyond the limits of Anatolian studies and makes it of interest to other scholars in Indo-European and Ancient Near Eastern linguistics.

Goal of the thesis

Hittite *i*-stems have so far not received a thorough treatment. The original plan for my dissertation was to provide a general overview and preliminary grouping of all (or most) attested *i*-stems, nouns and adjectives. After having gathered the corresponding material, such a task has shown itself to be unmanageable. Within the scope of a dissertation, the overview would have to be too general and superficial. After consulting with Prof. Melchert and Prof. Kim, it seemed more sensible to focus on a specific group, namely the putatively inherited forms, research into which can provide interesting information to scholars from other fields, especially of Indo-European comparative linguistics.

One part of the thesis is thus focused on the “core” *i*-stem nouns and adjectives. The status of nominal *i*-stems in PIE is only partly established, and opinions differ as to their derivation, distribution, exact membership and even the existence of *i*-stem adjectives. Therefore, Hittite attestations can throw light upon the broader picture. The other part of my thesis focuses on a specific subgroup of the *i*-stems, namely the *āi*-stems. This group is also understudied: although it has received a careful treatment in Rössle’s 2002 monograph, in such a fast-developing field as comparative linguistics it is surely time for an update.

The research into individual lexemes has brought forth interesting facts and consequences for understanding the development of IE languages in general. First, it is highly satisfactory to deliver work that brings about meaningful conclusions; second, working alongside giants of comparative linguistics has enhanced my own personal scientific qualities, and I am only most thankful for the time I could spend in this useful cooperation.

Methods

Hittite (and possibly also some other ancient languages) is specific in that there is no dictionary available that would cover all letters of the alphabet and all available material. For example, the *Etymological Dictionary of the Hittite Inherited Lexicon* (Kloekhorst, EDHIL 2008) only contains words which the author considers inherited or likely inherited, altogether about 800 lexemes. Another dictionary, HW², which provides detailed treatment of every lemma with contexts and additional information, only runs from A to (middle of) K.

To create a reliable list of a certain subtype of nominal stems, one must use one's own knowledge and make most of the available dictionaries and texts that she happens to read. As has been mentioned, the *i*-stems number over a thousand. Only a relative few of them are likely to be inherited, but attempt must be made to extract them from the abundance of Hurrian loanwords. As to the *āi*-stems, there is the advantage of Rössle's list, which still required minor updates.

To discuss individual lexemes, of great importance is dating of attestations, which enables us to clarify the phonetic or/and morphological development. Also, the quality of the attestations matters for a language rendered in cuneiform script. Every attestation thus needs to be verified, if possible. The impossibility lies in the fact that some forms are quoted in secondary literature but not published as autographs. However, for most forms published in transliteration there is available at least an autograph or even a photograph.

The dating of the tablets may also be problematic. No comprehensive list of datings is available. The dates provided by the *Konkordanz* (https://www.hethport.uni-wuerzburg.de/hetkonk/hetkonk_abfrageF.php) indicate the time when the table was inscribed (that is, Old Script, Middle Script or New Script), not to the time of the original creation of the text. Of great importance, then, are datings which provide both pieces of information, the origin as well as the time of writing. One then labels the individual attestations as e.g., OH/NS (meaning an Old Hittite text attested in a New script copy).

Gathering and verifying the data is the starting point for further analysis. Some lexemes are insufficiently attested and the information about their morphology is not satisfactory for drawing results; this fact has to be properly acknowledged. What needs to be discussed in case the attestations are of good quality is its development within the written history of Hittite and its relationship to other cognate words within the Anatolian language family or in other IE branches. If cognates are found, based both on sound laws and on semantics of the lexemes, one can consider reconstructing the underlying, unattested form that must have been present in the proto-language, Proto-Indo-European.

No attempt is made here to cover all attestations of the respective words found on Hittite tablets. Where possible, I have attempted to list the oldest attestations, as

they are of the greatest value for comparison with other languages. What is important is to provide as many forms as possible. In cuneiform script, there are usually several ways of rendering one form (e.g., for a specific nominal case and number). Some variants may have a distinctive value regarding phonology and so point to certain kinds of change or development over time.

The thesis is divided into three main parts. Part One provides a short overview of information on the *i*-stems as presently understood for PIE and some language branches. Since the *i*-stems that could be considered ancient are rather scarce, they have generally remained a marginal topic for Indo-Europeanists (in contrast, much has been written about the Caland *i*-stems, which are derivatives of PIE roots). Part Two provides a lemmatized corpus of Hittite core *i*-stems and *āi*-stems, divided according to their gender into commune and neuter (with a small group of words of unknown gender) and a third group, the adjectives. Part Three summarizes the findings from the research into individual words and provides conclusions both for inner-Hittite and PIE developments.

1. *i*-stems in the Indo-European language family and in Hittite

Evidence from individual branches of the Indo-European language family suggests that *i*-stem nominal formations can be confidently reconstructed for the proto-language. However, examples of reconstructible deradical *i*-stem nominals are scarce (for PIE, see Olsen forthcoming chapter 4). In her provisional overview, Wodtko (2008) reconstructs *i*-stem nouns or adjectives for a number of PIE roots. While both root nouns and nouns with other suffixes remain prominent (namely, the thematic suffix *-o/ó-*), the class of *i*-stems is well established. However, in her account the reconstruction of the suffix is mostly based only on one language branch; occasionally, an *i*-stem is shared by two or three branches. The only to the rule is the word for 'sheep'. To summarize, the comparative evidence demonstrates the productivity, if restricted, of the **-i*-suffix in IE.

PIE deradical *i*-suffixed nouns show an alternation of zero, full and long grade. With respect to nominal gender, *i*-stem neuters are very scarcely attested.

As for the accent/ablaut types of the PIE *i*-stems, Grestenberger (2009: 4) summarizes the types as *o/e*-acrostatic and cautiously also *ē/e*-acrostatic, proterokinetic **-ti*-abstracts, hystero-kinetic and amphikinetic *i*-stem substantives

with the addition of Caland abstracts. The status of the PIE *i*-stem adjectives and the fundamental question of their existence are discussed in Part Three. Of interest here is the PIE alternation of thematic nominal formations and *i*-suffixed nouns, whereby thematic adjectives changed into *i*-abstracts (Schindler 1980); see also Nussbaum (1999) for the Latin development of adjectives in **-o-* > abstracts in **-i-* > adjectives in **-i-d^ho-*. More recently, Grestenberger (2016: 157) shows that abstract *i*-nouns of Vedic are typically part of the Caland system and that the expected path of internal derivation, whereby the acrostatic type would develop a proterokinetic form, is not present.

Inflection of Hittite i-stems

Unlike in the prevailing *a*-stem class, the declension of Hittite *i*-stems differs for nouns and adjectives. The stems of the nouns usually do not change, whereas the adjectives tend to have zero grade of the suffixal vowel in the nom., acc. and instr. sg., occasionally also in the dat./loc.sg. (thus, *-i-*) and full grade in other parts of their paradigm (that is, *-a(y)-*). Although the dat./loc.sg. ending is usually *-i*, this is occasionally replaced in post-OS texts by *-iya*, identical to the allative ending of the *i*-stems.

The āi-stem subclass

The *āi*-stems form a distinctive subgroup of *i*-stem nominals. While fewer than 80 *āi*-stem lexemes are known, they number among the more frequently used nouns in the language, including lexemes such as 'song', 'sin', 'curse' etc. For some of them, the source is unknown (mainly, the neuters), whereas others have verbal or nominal derivational bases. The *āi*-stem nouns show ablaut of the stem, with the pattern *-āi-* for strong vs. *-i-* for weak cases. As might be expected, not only do we find paradigm levelling with spread of *-āi-* to previously zero-grade cases, but there is also a mutual influence on and from the *i*-stems.

In Sturtevant's *Comparative Grammar* (1933), the *āi*-stems were not yet described as a separate category: some were listed among the *a*-stems and most of the others among *i*-stems of lengthened grade (Sturtevant 1933: 180). Four years after, the same author listed the *āi*-stems in a separate chapter (Sturtevant 1937: 57–62). The *āi*-stems were later briefly treated by Friedrich (1960) and by Kronasser (1966: 204). Weitenberg (1979) presents a discussion of the Hittite diphthongs stems, including the *āi*-stems. Beside dictionaries that treat the *āi*-stem lexemes in detail,

the so far most comprehensive work is the monograph of Rössle (2002). Grammatical information is shared in GrHL (54, 87, 92 – 94, 174). Personal names and names of deities (both not discussed here) are treated in Jie 1994: 64, 75.

The *āi*-stem nouns of both genders are not scarce. A striking fact is the virtual lack of *āi*-stem adjectives (also in comparison with the *i*-stem adjective class). As summarized below, the *āi*-stems are of different origins and only a small number of them have a plausible IE etymology.

2. Part 2: Lexical list

The lexical list presents a lemmatized corpus of core *i*-stems and *āi*-stems. The entries are structured as follows. For each word, a table with exemplified attestations is first given. The attestations are by no means meant to be exhaustive, but an attempt has been made to include all attested token forms. The columns in the tables are sorted according to case and number. If an attested form cannot be assigned to a specific case, it is referred to as "other". If more specific information is available for the form, it is given in a footnote. There is no separate column for collectives.²

The stem formation and inflection paragraphs provide a summary of basic information and any unusual features. The discussion part is concerned with the attestations, translation, and other issues of interest, followed by an etymological survey. If there are cognates in other IE languages, they are summarized at the end of the discussion column.

Finally, the bottom line gives information about references for the lemma, mainly dictionaries of the Hittite language, but also other resources when appropriate.

² Old Hittite common gender nouns may have a collective plural alongside the count plural, but the number of assured examples is limited (GrHL: 240). However, they may mistakenly be taken for cases of gender alternation (GrHL: 242, §16.3).

3. Conclusions and summaries of the core *i*-stem and *āi*-stem set

Core *i*-stems

The important issue of accent/ablaut patterns can be studied on the basis of words, their inflectional forms and their derivatives. The study of Hittite phonology, given that it is a language recorded exclusively in cuneiform script, is a challenging field. Of interest with regard to the accent is the problem of so-called "plene spelling": while Hittite words are typically rendered by syllabic (beside logographic) cuneiform signs, there also appear single vowels, for example *ar-k-i-i-e-eš* besides *ar-ki-uš*. While a connection to accent is agreed, this plene spelling does not directly reflect accent.

In general, very few nouns and adjectives descriptively made up of root + *-i-* are inherited or even derived from PIE material.

Common gender

Some of the investigated lexemes were excluded on the basis of insufficient information as to their *i*-stem status. Another two were compounds which require specific treatment. The remaining twenty, however, by no means form a homogenous group. Firstly, the origin of some of them is unknown, and foreign origin can be neither confirmed nor excluded. Secondly, there are seven lexemes with an attested PIE root, but with the *i*-stem found exclusively in Anatolian. The only lexeme for which the *i*-stem can be confirmed as inherited from PIE on the basis of its attestation in other branches is *arki-* 'testicle' < PIE **h₁órǵʰi-* / **h₁(e)rǵʰi*.

*Neuter gender*³

Neuter *i*-stems are almost unattested in PIE, and the same picture is found in Hittite. Two lexemes were excluded from the list, the first on the basis of lack of etymological connections, another as a compound with *ai*-stem noun *luttāi-/lutti-* 'window' as second member. *lišši-* and *terippi-* are certainly not inherited either.

³ For neuter *i*-stems, see Melchert (2021).

'Proterokinetic' and other primary-appearing adjectives

Although *i*-stem core adjectives form a relatively small group, a PIE etymology is certain for many of them, and some are among the more frequently occurring adjectives in the language. The crucial question is whether they can also be considered adjectives already in the proto-language.

The famous stem *mēkki-* has an assured PIE ancestor **meǵh₂-*, though certainly not an original *i*-stem as its source. *teri-* is the only adjective of this group that can certainly be projected back to PIE, not only with regard to its root but also to its adjectival status.

The two property adjectives, *kappi-* 'small' (< **kmb(h)-i-* 'small') and *kaši-*, likely belong to the Caland group. There are another handful of likely candidates for inherited *i*-stem adjectives.

Three explanations have been given for this type of *i*-stem adjectives: abstraction from abstracts as first compound members; the appositional theory of Grestenberger (2016: 3), who discusses second members of compound with the suffix *-i-* replacing an *a*-stem or with a nonexistent simplex; and Rieken's (2005: 53-58) proposal that *i*-stem abstracts replaced *o*-stem abstracts, e.g., **sólh₂-o-m* 'the big (one)' > **solh₂-i-* / **solh₂-oy-* 'big' (adj.). These hypotheses have one axiom in common: that the only "true" *i*-stems in PIE were abstracts or result nouns.

What is considered "arguable" here by Nussbaum (2014a: 304) is that the only primary adjectives in PIE were underivable *o*-stems like **h₁rówd^h-o-* 'red'. With regard to the derivational processes affecting *o*-stem adjectives, secondary denominal suffixes frequently form in parallel both exocentric derivative nouns (abstracts/result nouns, almost entirely feminine in Core IE; *ibid.* 304, 306) and endocentric adjectival substantivizations 'the X one' which, when preserved as such, are usually masculine in Core IE. I suggest that the intermediate step of substantivization assumed by Nussbaum may not have necessarily taken place. The endocentric adjectives may have remained adjectives, though marked for definiteness, before they eventually lost their definiteness function in most cases.

Under this scenario, one must still account for the ablauting suffix *-i/-ay-* of Hittite *i*-stem adjectives. Per Nussbaum's derivational path (for more examples, see Nussbaum 2014a: 304) the accent-ablaut pattern would be that of "modified

acrostatic" inflection, with **o* ~ **∅* root ablaut. Under these circumstances, it is necessary to explain the suffix ablaut by analogy to the *u*-stem adjectives.

To conclude, I prefer not to exclude *a priori* the existence of *i*-stem adjectives inherited from PIE, for there is no reason not to believe such a development for some of the adjectives in the set mentioned here together with *teri-*. What this implies is that Hittite may be closer to the PIE state of affairs in showing direct reflexes of ablauting *i*-stem adjectives, whether they are truly primary or secondary via Nussbaum's account.

āi-stems

Synchronically, Rössle (2002: 318) presents the fact that the *āi*-stems (that is, words with plene writing of suffix vowels, *xa-a-i*, *xa-i-i-ya*, *xa-i-ya*, *xa-a-ya* etc.) show an accented stem. As he observes, there is no root ablaut, and the accentuation and length of the diphthong is shown by the *scriptio plena*. It can be confirmed that both the ablauting and the non-ablauting stems have stable accentuation of the stem.

According to the Erlangen model of accent and ablaut, the PIE (animate) **oi*-stems (predecessors of some of the Hittite *āi*-stems) have been assumed to follow the amphikinetic paradigm with root-ending stress alternation, schematically strong R(*é*)-S(*oi*)- and weak R(*∅*)-S(*i*)-E(*é*). However, examples of well-attested lexemes show stress on the stem rather than on the root, that is, strong R(*∅*)-S(*ó**i*)- and weak R(*∅*)-S(*i*)-E(*é*). Although plene vowels are not found in endings, the final position of the stress is confirmed by the fact that the suffix is surely unaccented, as it lacks the syllable nucleus (*-*y*-) and the stress cannot be on the root as it cannot precede the derivational suffix. To conclude, the current evidence suggests that Hittite inherited at best only a small core of such nouns, which in turn suggests that the PIE set was quite small.

Common gender

Many of these words are poorly attested; for that reason (alongside other issues, such as lack of cognate candidates or uncertain meaning) their predecessors cannot at present be reliably established.

Most common gender action/result nouns that stand beside a synchronically attested verb and have no *oi*-stem cognates elsewhere can and should be taken as a

productive class of Hittite creations. Seven listed *āi*-stems have a convincing IE root etymology.

Neuter gender

That virtually all of the neuter *āi*-stems are also Hittite creations is hardly in doubt. Most are names of cult objects or plants and so unlikely to be based on IE material.

Four of the neuter *āi*-stems have a convincing IE etymology: *ḫaštāi*- (< PIE **h₂óst(h₂)-* / **h₂ést(h₂)-*), *šakuttāi*- (< PIE **sóǵ^wt(h₂)-i-*), *šankuwāi*- (< PIE **sh₃ŋǵ^{wh}-*), ^(UZU)*ši/ešāi*- (< PIE **seh₁(i)-* 'long'). The one neuter that could possibly be inherited from PIE as an *oi*-stem is *luttāi*- 'window'.

adjectives

The only *āi*-stem adjective, *warāi-/wari*- '?', is of unknown formation and origin.

Final words

As has been shown, a number of *āi*-stems (though mainly those of common gender) and some of the "core" *i*-stems are of PIE origin with regard to their root. However, projecting back most or even many of the attested Hittite reflexes to PIE is unjustified. Only a very few *i*-stem nouns and adjectives can be considered of primary origin.

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