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## The Hittite periphrastic perfect

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In Hittite, the meaning associated with the Proto-Indo-European perfect, i.e. to indicate a state resulting from a change-of-state event, was covered by compound verb forms consisting of the *-ant-* participle plus the finite forms of the verbs *ḫar(k)*- “have” and *eš-* “be”. The origin and the function of this construction have been a matter of debate. In this chapter, we review the standard description of the Hittite periphrastic perfect, and reassess its status and function based on an analysis of its occurrences in texts ranging from Old to New Hittite. We argue that periphrastic forms involving *ḫar(k)*-/*eš-* and the participle instantiate three different constructions: the stative construction and two distinct auxiliary verb constructions, i.e. the passive and the perfect. We also suggest that the stative construction was probably the most ancient, and that the perfect construction, which functions as an anterior, constitutes a later development.

**Keywords:** Hittite, anterior, passive, resultative, auxiliary verb construction

### 1. Introduction

In this chapter, we discuss the syntax and semantics of the Hittite periphrastic perfect. Based on the evidence, we argue that the periphrastic perfect is a type of auxiliary verb construction, and show that it must be kept distinct from two other constructions, that is, the stative and the passive. While in the stative the finite verbs involved should not be considered auxiliaries, the passive is also a type of auxiliary verb construction. We also argue that the possible formal identity of the three constructions, which has cross-linguistic parallels, must not be taken as a reason for not keeping them distinct.

The constructions discussed in this paper are the *stative* and the *perfect* constructions, both involving the verbs *ḫark-* “have, hold” and *eš-* “be” and the participle, plus the *periphrastic passive* construction, the latter involving only the verb *eš-* “be” and the participle of transitive verbs.

## 1.1 Aims and structure of the chapter

As is well known, the Anatolian verbal system does not display the common Indo-European pattern based on the three aspectual stems present/aorist/perfect. However, in Hittite the function of the IE perfect is partly fulfilled by a periphrastic formation, similar to the periphrastic perfect of modern Romance and Germanic languages. In spite of the sizable number of studies devoted in whole or in part to the Hittite periphrastic perfect, some of its features remain controversial. Accordingly, in this chapter we will review a number of open questions on the periphrastic perfect and the verb forms that compose it, and propose our own view on this type of construction. This chapter is organized as follows. In §2 we discuss some general issues concerning periphrastic perfects as a type of auxiliary verb construction, perfect auxiliaries, and participles, as well as possible connections between perfect semantics and the meaning of specific verbs (actionality, or lexical aspect). In §3, we summarize current research on Hittite constructions involving the verbs *ḫark-* “have, hold” and *eš-* “be” and the participle, and show how scholars partly disagree on the auxiliary status of *ḫark-* and *eš-* in these constructions. In §4 we discuss a number of passages containing the construction, and indicate contextual features that help to distinguish perfect periphrases from other constructions. §5 contains the conclusion. Given the differences between the Anatolian verbal system and the verbal system commonly reconstructed for PIE, we devote the remainder of this introduction to a brief discussion of the relationship between the two.

## 1.2 The Anatolian verbal system in an Indo-European perspective

Melchert (1997: 83) remarks that “Hittite (respectively Anatolian) is famous for the fact that its verbal system is monothematic.” Anatolian languages feature a distinction between the present/future and the preterite, but this distinction is only indicated by different sets of endings, while the stem remains the same throughout the inflectional paradigm. Even traces of non-present stems are limited and debated. Some scholars have suggested that traces of the sigmatic aorist can be detected in some verbal stems, e.g. *ganeš-* “recognize”, from the IE root *\*gnō-* “know”, but even on this form there is no general agreement (cf. HED *s.v.*; Kloekhorst 2008 *s.v.*).

Concerning the PIE perfect, while reduplicated stems occur in Anatolian, they appear not to be directly connected with the reduplicated perfect of the other IE languages (van Brock 1964; Dempsey 2015; for a partly different view see Jasanoff 2018). However, it has long been acknowledged that the endings (and possibly the /o/ grade) of the Hittite *ḫi-* conjugation are etymologically related to the perfect endings of Greek and Indo-Aryan, even though the precise nature of this relation is discussed (see Jasanoff 2003; Kümmel this volume and references therein).

In Hittite, imperfectivity can be expressed by the so-called iterative suffix *-ške/a-* that has been shown to behave, in certain circumstances, as an imperfective marker. This highly productive suffix indicates various types of actionality connected with imperfectivity, such as iterative, habitual, durative, distributive (Dressler 1968; Cambi 2007; Hoffner & Melchert 2008: 317–323; Inglese & Mattioli forthc.). Its connection with imperfectivity is reflected by the fact that it does not normally occur with stative verbs (Hoffner & Melchert 2008: 318). Other suffixes that show similar semantics are *-šš(a)-* and *-annai-* which, however, are not productive and tend to be replaced by *-ške/a-* (Hoffner & Melchert 2008: 322–323). Hoffner and Melchert do not distinguish lexical from grammatical aspect (see § 2.2), hence highlighting the imperfective meaning of *-ške/a-* without discussing its degree of grammaticalization, but, as they remark, “[a]ny basic verbal stem in Hittite may be read as perfective or imperfective, provided that its inherent meaning and the context are appropriate.” (2008: 317). This points towards a low degree of grammaticalization of aspect distinctions in Hittite: aspectual features tend to be located toward the lexical, rather than grammatical pole (for a different view and references see Cambi 2007).

## 2. Periphrastic perfect constructions in a cross-linguistic perspective

In this section, we discuss some properties of periphrastic or compound verb forms. We show which features must characterize a complex formed by two verb forms in order for it to be considered a single, periphrastic form. We then describe possible aspectual and actional features of the perfect cross-linguistically.

### 2.1 Typology of periphrastic constructions

According to Haspelmath (2000: 660), a “periphrastic expression is simply one which expresses a grammatical meaning in a multi-word construction.” In the case of compound verb forms, the multi-word construction is usually described as containing a lexical verb and an auxiliary, as in the definition in Anderson (2006: 7): “the Auxiliary verb construction (AVC) is [...] a mono-clausal structure minimally consisting of a lexical verb element that contributes lexical content to the construction and an auxiliary verb element that contributes some grammatical or functional content to the construction.” In what follows, we use ‘auxiliary verb construction’ (henceforth AVC) and ‘periphrastic construction’ as interchangeable expressions.

As we show in §3, the assumption that the verbs *ḫark-* “have” and *eš-* “be” that occur in the construction discussed here must always be taken as auxiliaries is controversial, and partly unwarranted. In recent years, research on grammaticalization has paid much attention to auxiliaries, including their synchronic behavior and the

diachronic process that favors the change from main to auxiliary verb, with the rise of periphrastic constructions out of earlier constructions that contained two autonomous verbs. Both *ḫark-* “have, hold, keep” and *eš-* “be (there)” are good candidates for auxiliarization, as shown by the occurrence of verbs with similar meaning as auxiliary cross-linguistically. In terms of basic event schemas, as described in Heine (1993: 28), these verbs instantiate the Possession and the Location schema, frequently providing a source for the grammaticalization of auxiliaries. However, in principle not all constructions containing one of these verbs and a participle must necessarily be considered as AVCs. For this reason, before discussing the status of Hittite constructions containing *ḫark-* and *eš-*, we review a number of criteria for assessing auxiliarization (see Heine 1993; Haspelmath 2000; Anderson 2006). Such criteria concern the semantics and syntax of constructions, their status within verbal paradigms of a specific language, and the internal structure of the construction.

Let us start with the by now classic definition of Heine (1993: 70), that “[a]n auxiliary is a linguistic item covering some range of uses along the Verb-to-TAM chain.” This definition must be broadened to include other verbal categories. Even a cursory look at the IE languages shows that AVCs are not so limited, as they also often extend to the encoding of verbal voice, while in several non-IE languages AVCs also encode negative polarity and version (Anderson 2006: 33–35). This being said, Heine’s approach has important implications, as it supports a dynamic view of AVCs based on different degrees of grammaticalization, rather than proposing a sharp distinction between what must be considered an auxiliary and what must not. As we will see, this approach is helpful for the understanding of different types of *ḫark-* and *eš-* constructions in Hittite.

A distinctive feature of AVCs is event, or conceptual, integration: in a prototypical AVC, the two verb forms involved refer to the same event, and imply co-referentiality of participants and co-temporality. As a reflex of event integration, components of AVCs tend to be contiguous. They occur in a fixed linear order and cannot be interrupted, with the exception of language specific syntactic rules, e.g. adverb placement. This follows an iconic principle by which higher event integration equals higher syntactic cohesion. As a consequence of auxiliarization, the finite auxiliary brings no lexical semantic contribution to the meaning of the construction, and can be generalized to environments which would be semantically incompatible with the original meaning of the auxiliary as a full lexical verb (Bybee et al. 1994: 289).

An important issue often discussed in connection with AVCs is the identification of the head. Indeed, there is often a mismatch in AVCs between the item that carries lexical/semantic information and the item that shares the morphosyntactic behavior of finite verbs. This mismatch is reflected in different definitions of heads in compound verb forms, which ultimately depend on the properties that one views as most important for headhood. Heads are defined as the part of a phrase that

determines its category (Luraghi & Parodi 2008: 125), that is, the profile determinant of a phrase (Langacker 2008: 235–236), and this is clearly a problem with AVCs, which consist of two verb forms. As noted by Anderson (2006: 21–27) different properties of heads are not all instantiated by the same member in AVCs. In particular, one must distinguish between morphosyntactic, phrasal, and semantic properties of heads: all these properties co-occur in non-periphrastic finite verb forms. From the morphosyntactic point of view, heads are the locus of inflection; in addition, especially within verb phrases, heads may have a specific position inside the constituent. This is what Anderson understands as the phrasal properties of heads, and accounts for the fact that, as he notes, lexical verbs tend to have the same position with respect to the auxiliary as complements have with respect to the finite verb. From the semantic point of view, a head carries the lexical meaning, including valency and information about the semantic roles of the arguments.

Even though these properties may be variously distributed between the two items of an AVC, in IE languages AVCs tend to follow the AUX-headed pattern (Anderson 2006: Chapter 2), that is, the auxiliary is the phrasal and inflectional head, while the lexical verb is the semantic head. This is the pattern known from the perfect in Germanic and Romance languages, and also applies to Hittite AVCs (§ 3.4).

## 2.2 Aspect and actionality

Before discussing the aspectual features of the perfect, a note on terminology is in order, as scholars use the term ‘perfect’ in different ways. Traditionally, especially in descriptions of IE languages, the term perfect refers to a form, rather than to a meaning: the Greek perfect is a specific verb form, which is said, depending on the individual verb, on the diachronic stage of the language, or on the context, to have stative or resultative meaning (Luraghi et al. 2005: 59–61). Contrary to this tradition, Nedjalkov (2001) identifies the perfect as a specific meaning, distinct from stative and resultative, and corresponding to the meaning of the English present perfect, that is, anterior. Bybee et al. (1994) acknowledge the terminological problem, and write: “Some terminological confusion arises due to the existence of terms perfect and perfective. To alleviate this problem, we have decided to use the term ‘anterior’ rather than ‘perfect’ for what in English is called Perfect.” (1994: 55). In this chapter, we follow this latter approach, and use the term ‘perfect’ for the Hittite periphrastic form, and not for a specific meaning, while distinguishing among stative, resultative, and anterior as possible meanings of *ḫark-* and *eš-* constructions.

Grammatical aspect must be kept distinct from lexical aspect, or actionality. The latter refers to properties of the inherent lexical semantics of verbal lexemes or verb phrases. Following the fourfold distinction worked out by Vendler (1957), verbs can be divided into four classes based on their actional properties: ‘states’,

‘activities’, ‘achievements’, and ‘accomplishments’ (Bertinetto 1986; Botne 2003; Croft 2012). Grammatical aspect is a grammatical category of verbs, and features a basic distinction between perfective and imperfective.

In the traditional reconstruction of PIE, mainly based on Greek and Sanskrit, the aspectual opposition between perfective and imperfective is instantiated by the aorist and present stems (cf. LIV<sup>2</sup>). How the perfect fits into this framework is controversial. As we have remarked above, the perfect can have stative meaning, thus coming closer to actionality than to verbal aspect. More precisely, the perfect is traditionally reconstructed as having a resultative meaning. According to Nedjalkov (2001: 928) a resultative form or construction “expresses a state implying a previous event (action or process) it has resulted from”. Notably, following this definition, a resultative can only be made from telic verbs (terminative verbs in Nedjalkov’s terminology, cf. 2001: 935). Nedjalkov further distinguished among three different types of resultative, depending on the participant which is affected by the change of state. In P-resultatives, the subject corresponds to the direct object of the corresponding non-resultative form. This construction is similar to the passive construction. Similarly, Bybee et al. (1994: 54) define resultatives as signaling “that a state exists as a result of a past action. [...] Resultatives are compatible with the adverb ‘still’ and are used only with telic verbs, that is, verbs which describe events which have inherent endpoints.”

An example of a P-resultative is the Ancient Greek aspirated perfect form *pépoitha* (persuade.PRF.1SG) “I trust, I am persuaded”, from *peíthō* “persuade (transitive)”: the perfect form indicates a state of the patient, ensuing from a change of state that affects it. With A-resultatives, instead, the subject remains the same as with the corresponding non-resultative form. This is the case of the Ancient Greek kappatic perfect *pépeika* (persuade.PRF.1SG) “I have persuaded (somebody)” also from *peíthō*. This and several other verbs in Ancient Greek have both an aspirated and a kappatic perfect. When the two have different meanings, it is always the case that the former indicates P-resultative, while the latter indicates A-resultative (cf. Crellin, this volume). As the kappatic perfect is thought to have arisen later than the aspirated perfect, this semantic difference is taken as a piece of evidence for reconstructing P-resultative as the original meaning of the IE perfect (Luraghi et al. 2005). The third type of resultative construction according to Nedjalkov is S-resultative, that is, the resultative form of intransitive verbs, as in Ancient Greek *téthnēken* (die.PRF.3SG) “s/he is dead” from *thnēiskō* “die”.

Resultative must be kept distinct from anterior, which is a function acquired by the periphrastic perfect of several modern IE languages. Following the definition in Bybee et al. (1994: 61), an anterior is a “past action with current relevance.” Its basic feature lies in “being relational: an anterior signals that the situation occurs prior to reference time and is relevant to the situation at reference time. Anteriors are [...] often accompanied by the relational adverbs ‘already’ and ‘just’” (1994: 54). For

them, the prototypical anterior is the English present perfect. The English anterior is distinct from the stative construction, which can also have a resultative reading, as shown in *He is dead* (STAT) vs. *He has died* (ANT). Botne (2003: 243) remarks that in English “one must use the adjective *dead* [...] to refer to the stative postliminary phase of death. The perfect form *has died* [...] refers not to a coda phase of the event, i.e., to the state of death, but rather to a retrogressive perspective of the whole event.” In other languages, the same construction can have both a stative and a past tense interpretation, as in Italian. Consider Examples (1) and (2).

- (1) È morto da due giorni.  
 be.3SG dead.SG.M from two days  
 “He’s been dead for two days.”
- (2) È morto stamattina.  
 be.3SG dead.SG.M this\_morning  
 “He died this morning.”

In (1) the expression *è morto* indicates a state: here, the verb ‘be’ functions as copula and the participle is the subject complement. Since the latter is a past participle it indicates a state. In (2) the same expression is a form of the perfect of the verb *morire* “die”. Note that this is not an anterior in Italian, but a perfective past tense with generic past reference or a hodiernal past depending on the diatopic variety.

The difference between (1) and (2) implies that participles can have a double reading and a double function. This is not surprising, in the light of the complex categorial status of participles: as is well known, participles are both verbal and nominal forms, and as such they can profile both temporal processes (verbal function), as in (2), and atemporal properties (adjectival function), as in (1). In this connection, one can distinguish between an actual occurrence, or eventive, reading, in which the construction predicates an action and refers to an actual occurrence of a given event located at a specific point in time, and a property reading, in which the construction predicates a property and does not refer to the realization of an individual event (Doiz-Bienzobas 2002). It is in the actual occurrence reading that we have an AVC, as in (2), while the construction in (1) has a property reading and, as noted above, does not contain an auxiliary.

### 3. Current research and open issues

In this section, we survey existing scholarship on the various types of *ħark-* and *eš-* construction. We discuss the syntax and semantics of the constructions, including the semantics of the participle, the relationship with the periphrastic passive, word order, and the behavior of clitics. In conclusion, we address the question whether both *ħark-* and *eš-* can be considered auxiliaries in perfect periphrases.





- (4) *nu=mu ištamaššan kuit ḫarker*  
 CONN=1SG.ACC hear.PTCP.NOM/ACC because have.PST.3PL  
 “Because they had heard about me.” (KBo 5.8 i 23–25, NH/NS)
- (5) *nu=ššan mān ḫalkiēš aranteš*  
 CONN=PTCL when crop.NOM.PL arrive.PTCP.NOM.PL  
 “When the crops have ripened [harvest them].” (HKM 25 15–16, MH/MS)
- (6) *nu=kan antuḫšātar kuit INA URU<sup>DIDL.HLA</sup>=ŠUNU*  
 CONN=PTCL population(N).NOM REL.NOM.N in city(PL)=3PL.POSS  
*EGIR-pa pān ēšta*  
 back go.PTCP.NOM.N be.PST.3SG  
 “[They imprisoned] the population that had gone back into their cities.”  
 (KBo 5.6 i 19–20, NH/NS)

In Examples (3)–(6), the complexes with *ḫark-* and *eš-* are AVCs: they contain an inflected form of the auxiliary verbs that conveys grammatical meaning and a participle that conveys the lexical meaning of the periphrases (see further §4).

The stative construction expresses the maintenance of a state, either in the present or in the past. Examples are (7) and (8) with *ḫark-* and (9) and (10) with *eš-*.

- (7) *nu KUR-e paḫḫašnuwan ḫarker*  
 CONN land.ACC.PL protect.PTCP.NOM/ACC have.PST.3PL  
 “They kept the land protected.” (KUB 14.16 i 24, NH/NS)
- (8) *nu=mu DINGIR<sup>LUM</sup> ištamanan lagan*  
 CONN=1SG.DAT god ear.ACC bend.PTCP.NOM/ACC  
*ḫark*  
 have.IMP.2SG  
 “O god, keep your ear inclined to me.” (KUB 24.1 i 16–17, NH/NS)
- (9) *<sup>d</sup>Tešimi=wa=kan āššiyanti genuwa šanniziuš*  
 T.DAT=QUOT=PTCL be.dear.PTCP.DAT knee.ACC.PL sweet.ACC.PL  
*tešḫuš šupparianza ēšta*  
 dream.ACC.PL sleep.PTCP.NOM be.PST.2SG  
 “On the lap of (your) beloved Tesimi you were dreaming [*lit.* sleeping] pleasant dreams.” (KUB 36.89 rev. 56–57 NH/NS)
- (10) *LÚ.MEŠSANGA LÚ.MEŠGUDU<sub>12</sub> MUNUS.MEŠAMA-ia ANA*  
 priest(PL) anointed.priest(PL) mother.deity.priestess(PL) to  
*DINGIR<sup>MES</sup> naḫḫanteš ašandu*  
 god(PL) be.fearful.PTCP.NOM.PL be.IMP.3PL  
 “The priests, the anointed ones, and mother deity priestesses shall be reverent toward the gods.” (KUB 13.1 + iii 32, MH/MS)

In Examples (7)–(10) we also find finite forms of the verbs *ħark-* and *eš-* with a participle, but the two finite verbs do not function as auxiliaries. Note that reference works usually speak of a single stative construction (see Hoffner & Melchert 2008: 311–312); however, the examples above make clear that, strictly speaking, one should regard the construction in (7) and (8) as stative-resultative, as the participles indicate states that result from a change of state, while this is not the case for (9) and (10), which are purely stative. As we will see in §3.2, the difference depends on telicity: participles of atelic verbs are not resultative, and indicate permanent states, not resulting from a change of state. In the course of this paper, we use the term stative construction both for stative-resultative and for stative ‘proper’, in keeping with common practice, and differentiate between the two only if relevant. Examples (7)–(10) show a different distribution of *ħark-* and *eš-* with respect to telicity: note however that atelic participles can also occur with *ħark-* (see Examples (22) and (30)). As we suggest in §3.5, the choice between *ħark-* and *eš-* in the stative construction depends on the lexical meaning of the two verbs.

The meaning of stative constructions with *ħark-* is compositional: the verb keeps its lexical meaning ‘have, hold, keep’, contrary to the AVC in which the lexical meaning is only conveyed by the participle, and the participle of transitive verbs is P-oriented, contrary to its meaning in AVCs (see §3.2). Note that the stative construction involves different types of verb that indicate events with an internal temporal structure, including accomplishments and activities, and highlights the ongoing unfolding of the event, based on the lexical meaning of *ħark-*. We follow Cotticelli Kurras (2015: 55, 59), and refer to this construction as instantiating the continue phase.<sup>3</sup>

The verb *eš-* in stative constructions functions as a copula as in other nominal sentences. In Example (9), the participle indicates a state, and does not have a resultative meaning: the complex *šupparianza ēšta* does not have the meaning ‘have slept’, but means ‘were sleeping’, and the verb *eš-* does not function as an auxiliary. The meaning is compositional, as it results from the sum of the meaning of the participle, ‘sleeping’ (on the semantics of the participle see § 3.2), and the meaning of the copula, ‘were’, and does not convey the anterior meaning of the periphrastic perfect. Even though *ħark-* and *eš-* do not function as auxiliaries, as one can see from their semantics and from the use of subject clitics that we discuss in § 3.5, stative constructions show the same formal characteristics of AVCs in terms of word order and headhood (§ 3.4), as well as of reference. Indeed, the two

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3. Cotticelli Kurras refers to Engerer (2014), who discusses possible division of events into phases. In this respect, verbal semantics can profile the ingressive phase (*He started writing a letter*), the egressive phase (*He finished writing a letter*), and the continue phase (*He continued writing letters*).

verbs show a high degree of conceptual integration, as they refer to the same event and to the same participants: on a cline of ongoing grammaticalization, they can be considered somewhat more advanced than full verbs (§ 4.3).

### 3.2 Semantics of the Hittite participle

Hittite has a single participle, which is built with the suffix *-ant-*, cognate to the suffix *\*-e/ont-* of participles in several other IE languages (Kloekhorst 2008: 184). All verbs can have *-ant-* participles, irrespective of their inflectional class (Frotscher 2013: 153). The meaning of the *-ant-* participle depends on transitivity, and for intransitive verbs also on actionality (cf. Luraghi 1997: 29; Hoffner & Melchert 2008: 339; Frotscher 2013; Dardano 2014).

According to Neu (1968: 120), who discusses *-ant-* participles of *media tantum*, the participle of stative verbs remains stative, while the participle of change-of-state verbs is resultative, and indicates a state resulting from a change of state (Frotscher 2013: 202–222). Neu mentions as examples of stative verbs, among others, *tarra-* “be able” PTCP *tarranza* “being able”, *ar-* “stand” PTCP *aranza* “standing”, *iya-* “walk, march” PTCP *iyanza* “walking”. The last two verbs can be regarded as denoting activities, rather than states. Indeed, if one widens the observation to all verbs besides the *media tantum*, one can see that, among intransitive verbs, most atelic verbs, including states and activities, have participles that indicate an ongoing state or activity rather than a result, as in the case of *ḫuwai-* “run” PTCP *ḫuwanza* “running”, *ḫuiš-* “live, survive” PTCP *ḫueššanza* “living, alive”.

Participles of intransitive telic verbs are S-resultative, as in *irmaliya-* “become ill” PTCP *irmaliyanza* “fallen ill”, or *akk-* “die” PTCP *akkanza* “died/dead”. With transitive verbs, participles are P-resultative even with stative verbs, as with *ḫā-* “trust” *ḫānza* “trusted” (not ‘trusting’), in spite of a few exceptions. For example, the participle of *šākk-* “know, recognize”, *šākkanza*, mostly means “known”, but in a couple of passages it is used as an attribute of the Sumerogram ZI ‘mind’ and it does not have resultative semantics, meaning “intentionally, knowingly” [*lit.* “with a knowing mind”] (Frotscher 2013: 226–229; Dardano 2014). The participles of verbs of consumption *ad-* “eat” and *aku-* “drink” can pattern with atelic predicates and mean ‘eating’ or ‘drinking’, in addition, especially the participle *adant-* can be P-resultative “eaten”, or A-resultative “who has eaten” (see Neu 1968: 117; Frotscher 2013: 224–226). The participle *adan* also occurs in the *ḫark-* periphrastic perfect, in which it is A-oriented (examples in Frotscher 2013; for an opposite view, see Dardano 2014: 241–243).

Notably, with *ḫark-*, the participle of transitive verbs is P-oriented in the stative construction, as in (7) and (8). In these occurrences, we find two participles of

active verbs, *lagan* from *lak-* “turn” and *pahḫašnuwan* from *pahḫašnu-* “protect”, both P-oriented. In the periphrastic perfect, however, the participle and the auxiliary verb together build a compound verb form with a single orientation. Such compound forms are A-oriented. For example, in (4) the meaning of the periphrasis *ištamaššan ḫarker* is not the sum of the lexical meaning of *ḫark-* and *ištamašš-* (“hold (it) heard”, with the P-oriented participle). Rather, the construction as a whole indicates an event that has taken place prior to another event in the past, and that has been accomplished by the subject. It is therefore A-oriented as a result of the full integration of the two verbs. This shift from P- to A-orientation is crucial in explaining why the construction may further develop an anterior function (§4).

### 3.3 The periphrastic passive construction

Generalizing over the above description of the meaning of Hittite participles, one can detect a relationship with voice: participles of transitive verbs, which with a few exceptions are P-oriented, are passive. When they occur with the verb *eš-*, they give rise to a periphrastic passive construction, which is frequently used instead of the morphological mediopassive, and can also take an overt agent expression (Hoffner & Melchert 2008: 304; Frotscher 2013: 288–290), as in (11).

- (11)  $GI\check{S}TUKUL^{HI.A}$ -*iš=wa=ttā*      *šunit*    *piyanteš*  
 weapon.NOM.PL=QUOT=2SG.DAT    god.INS    give.PTCP.NOM.PL  
 “The weapons are given to you by the Gods.”      (KBo 22.6+ i 25 OH<sup>2</sup>/NS)

Similar to the periphrastic perfect, the periphrastic passive is also an AVC. The two should be kept distinct: while *eš-* occurs in the periphrastic perfect with intransitive verbs (more specifically, unaccusative, see §3.5), in the periphrastic passive it occurs with transitive verbs. Moreover, the passive construction refers to a present event, and does not necessarily entail an anterior reading. Alternation between *ḫark-* and *eš-* with the same verb may indicate voice opposition (Cotticelli Kurras 1991: 122–135). Such alternations neatly show how the *ḫark-* construction eventually acquired A-orientation, i.e. active voice semantics, whereas the construction with *eš-* preserves P-orientation of the participle. Compare Example (11) and (12).

- (12) *našma=ši*    *ABU=YA*       $dUTU\check{S}I$ =*ya*    *kuit*  
 or=3SG.DAT    father=1SG.POSS    my.sun=CONJ    REL.ACC.N  
*piyan*                      *ḫaruweni*  
 give.PTCP.NOM/ACC    have.PRS.1PL  
 “What we, my father and (I) my Majesty, have given him [...]”  
 (Bronzetafel iii 73–74, NH/NS)

It is often difficult to determine whether the construction has a passive eventive reading or a stative reading, like German *die Tür wird geöffnet* [PRS.PASS] “the door is being opened” vs. *die Tür ist geöffnet* [PRS.RES] [lit. “the door is opened” meaning “the door is open”] (Hoffner & Melchert 2008: 304; also Cennamo 2006: 315–316; Zúñiga & Kittilä 2019: 98–99). As is often the case when one must distinguish between a stative construction and a passive periphrasis, one must look at the context for disambiguation. Let us compare Example (11) with (13) and (14).

- (13) ANA LUGAL KUR <sup>URU.d</sup>U-*tašša=at piyan*  
 to king land T.=3SG.NOM.N give.PTCP.NOM.N  
 “It is assigned to the king of Tarhuntassa.” (Bronzetafel ii 7, NH/NS)
- (14) *n=at arḫa ḫarranteš ešer*  
 CONN=3PL.NOM away damage.PTCP.NOM.PL be.PST.3PL  
 “They (sc. the birds that you sent to me) were spoiled.” (AT 125.12, NH/NS)

In (13), the context strongly favors a stative reading, despite the formal equivalence with (11). In (14), too, it is the context that supports a stative construction, as also remarked in Hoffner & Melchert (2008: 304). Notably, Italian displays the same ambiguity between stative and passive readings of periphrastic constructions with *essere* “to be”, as shown in (15).

- (15) a. *La porta era aperta.*  
 The door(F).SG be.IPRF.3SG open.PST.PTCP.SG.F  
 “The door was open.” (stative)
- b. *Il corteo era aperto dalle delegazioni sindacali.*  
 the parade(M).SG be.IPRF.3SG open.PST.PTCP.SG.M by.ART.PL  
 delegation.PL union.PL  
 “The parade was opened by the trade union delegates.” (passive)

This polysemy type is consistent with the widespread tendency of stative/resultative markers to be further grammaticalized into passive markers (cf. Haspelmath 1990), the link between the two functions being provided by their focus on the resulting state of the P argument of a transitive change-of-state verb. In fact, as Bybee et al. (1994: 54) note “[t]he resultative is often similar to the passive in that it usually makes the patient the subject of the clause but differs in that a resultative may apply to an intransitive verb, as in *He is gone*, without a change of subject.”

3.4 Formal aspects of *ħark*- and *eš*- constructions

In spite of semantic differences, and of the different statuses of the verbs *ħark*- and *eš*-, the stative construction and the periphrastic perfect share the same morphosyntactic behavior (Boley 1984, 1992; Luraghi 1998). In particular, in both constructions when the verb *eš*- occurs the participle agrees with the subject, as shown in Examples (5) and (14) with third person plural common gender subjects and participles inflected in the nominative plural common gender. With *ħark*- the participle is always inflected in the nominative-accusative singular neuter, and never shows agreement with the core arguments: compare (4), with a first person direct object, a third person plural subject and the participle *ištamaššan* in the nominative-accusative neuter singular, and (7) with a neuter plural object and a third person plural subject, in which likewise the participle *paħħašnuwan* is a nominative-accusative neuter singular.

From the point of view of word order, both in the stative construction and in the periphrastic perfect, the combination of *ħark*- and *eš*- plus participle cannot be interrupted by items that normally occupy the preverbal position, such as negation, including the negative indefinite pronoun, as in (16) to (18), or place words, as in (19). (See §3.5 on the negation with copular sentences).

- (16) *memiyann=a=kan* EGIR-*anda arħa* UL *ištamaššan*  
 thing.ACC=CONN=PTCL afterwards away NEG hear.PTCP.NOM/ACC  
*ħarmi*  
 have.PRS.1SG  
 “And I have not heard afterwards about the matter.”  
 (KUB 31.121 iii 16–17, NH/NS)
- (17) [...] UL *arān* *ēsta*  
 NEG rise.PTCP.NOM.N be.PST.3SG  
 “[...] had not risen.”  
 (KUB 14.16 i 21, NH/NS)
- (18) *n=at* *anzel* *iwar* EGIR-*pa* UL *kuiški*  
 CONN=3PL.ACC.N 1PL.GEN like back NEG INDF.NOM  
*newaħħa[n* *ħart]a*  
 renew.PTCP.NOM/ACC have.PST.3SG  
 “And no one has renewed them like us.”  
 (KUB 17.21 + i 17, MH/MS)
- (19) *n=at* EGIR-*pa* ANA <sup>SAL</sup>*Zi=pat w[ah]ān*  
 CONN=3SG.NOM.N back to Z.=FOC turn.PTCP.NOM.N  
*eštu*  
 be.IMP.3SG  
 “Let it be turned back on Z.”  
 (KBo 15.10 ii 28 MH/MS)





requires subject clitics even without the participle. For this reason, the occurrence of third person clitics is not a reliable diagnostic to assess whether the head of the construction is *eš-* or the participle of an unaccusative verb.

However, when *eš-* occurs with unergative verbs, as in Example (21), no subject clitic occurs, consistent with the tendency for unergative verbs not to require subject clitics.

- (21) GAM-*an kaninanza*                      *ēšdu*  
 under      crouch.PTCP.NOM    be.IMP.3SG  
 “Let him be crouched down.”                      (VBoT 120 ii 17–18, MH/NS)

Interestingly, Example (21) features an occurrence of the stative construction, rather than the periphrastic perfect, in which *eš-* does not function as an auxiliary, and the degree of grammaticalization of the construction is lower than in AVCs. This explains why the use of the clitic subject is not determined by *eš-* but by the participle.

A similar pattern is shown by the *ḥark-* construction in (22). Since the verb *ḥark-* is transitive, it does not require a clitic subject pronoun, so that the occurrence of the clitic =*aš* in (22) must be triggered by the participle of the verb *naḥḥ-* “be fearful”, which is known to be syntactically unaccusative (Garrett 1996: 95).

- (22) *nu=war=aš=za*                      *naḥḥān*                      *ḥardu*  
 CONN=QUOT=3SG.NOM=REFL    be.fearful.PTCP.NOM/ACC    have.IMP.3SG  
 “He shall behave respectfully [*lit.* keep being respectful].”  
 (KUB 36.118 8, MH/MS)

More generally, the distribution of clitic subject pronouns with intransitive verbs in stative *ḥark-* constructions seems to be determined by the participle rather than by the finite verb (see Frotscher 2013: 294–295 for examples).

To sum up, evidence from clitic subjects suggests that, at least in stative constructions, it is the participle, and not the finite verb, that triggers the use of the clitic pronouns, providing further evidence that the participle constitutes the lexical head of the construction.

### 3.5 Relationship between *ḥark-* and *eš-* constructions

In the preceding sections, we have referred to *ḥark-* and *eš-* constructions implying that they function in basically the same way, and that both can either instantiate AVCs or a stative construction. However, there is some disagreement on this point, partly on account of the fact that *eš-* constructions are much less studied than *ḥark-* constructions. Indeed, a number of authors focus on the latter and only mention the former as equivalent in function, with no further discussion of specific

occurrences (cf. Boley 1984, 1992 and references therein; Dardano 2005; Hoffner & Melchert 2008). In this section, we review some of the evidence discussed by different scholars concerning the coordination of *ḫark-* and *eš-* constructions, the use of the clitic particle =*za*, which obligatorily occurs in nominal sentences with 1st and 2nd person subjects, and the placement of the negation.

Garrett (1996) suggests that Hittite displays a single periphrastic perfect. The alternation between *ḫark-* and *eš-* should be interpreted as auxiliary selection: transitive and unergative verbs select *ḫark-* as their perfect auxiliary, while unaccusative verbs select *eš-* (cf. Boley 2001), in a way similar to Romance and Germanic languages; see further Luraghi (1998) and Dardano (2005). As a piece of evidence for this assumption, Garrett (1996: 104) and Dardano (2005: fn. 35) remark that constructions with the two verbs can be coordinated, as in (23).

- (23) *išḫēniu(š)=šmaš=kan*      UMB[IN<sup>MEŠ</sup>=y]a *dān*  
 hair(N).NOM=3PL.DAT=PTCL nail(PL)=CONJ take.PTCP.NOM.N  
*ēšdu*      *parkuwa=ya*      TÚG<sup>HI.A</sup>      *waššan*  
 be.IMP.3SG clean.ACC.PL.N=CONJ cloth(N.PL) wear.PTCP.NOM/ACC  
*ḫarkandu*  
 have.IMP.3PL

“Let their hair and nails have been cut, and let (them) have put on clean clothes.”  
 (translation by Garrett 1996: 104. KUB 13.4 i 16 MH/NS)

Example (23) does indeed feature coordinated *eš-* and a *ḫark-* constructions, but it is not without problems. In fact, the form *dān ēšdu* is a passive, and given the common use of the participle plus *eš-* construction in the place of the inflectional medio-passive, another possible, and likely better translation is “let their hair and nails be cut”. As for the construction *waššan ḫarkandu*, it can hardly be interpreted as a perfect, since in NH the construction *waššan ḫark-* has stative meaning, and has been lexicalized as a substitute for earlier finite forms of stative transitive *wešš-* “wear” (cf. Boley 1984: 60–62; Melchert forthcoming; see Frotscher 2013: 247–248 for a different explanation). Indeed, it is not clear whether perfect periphrases occur at all with the imperative, as we discuss in §4.1. In any case, this example at least shows that both *eš-* and *ḫark-* plus participle can occur in the imperative. As we have shown above, they can both also occur in the preterite and denote the pluperfect, that is, completion of an action prior to another action in the past, as in (4) and (14) (Cotticelli Kurras 2015).<sup>5</sup>

5. Another possible occurrence of coordination is mentioned by Frotscher (2013: 224). The sentence contains a participle of an intransitive verb *akkanza* in the first clause and one of a consumption verb *adan* which ends before a fracture. Editors restore *adan[za]*, thus implying an omitted *eš-* (see Reichmuth 2011: 116; Dardano 2014; Cotticelli Kurras 2015). Notably, this

A different stance is taken by Cotticelli Kurras (1991, 1992) and Frotscher (2013), who argue that *eš-* constructions with the participle do not constitute the equivalent of *ħark-* constructions for unaccusative intransitive verbs, but should be viewed as nominal copular sentences, where the verb is not an auxiliary. Indeed, *eš-* constructions with a participle, including those that are considered perfect periphrases, show the same morphosyntactic behavior as nominal sentences. In the first place, in both constructions *eš-* is omitted in the present indicative, whereas it regularly occurs with the preterite and with the imperative (Cotticelli Kurras 1991, 1992; Luraghi 1998; Hoffner & Melchert 2008); compare Example (5) with omission in the present tense with (14), which features a preterite, and (10) with an imperative. In the second place, the participle shows agreement with the subject, in the same way as adjectival predicates (Hoffner & Melchert 2008: 238), as shown in Example (24), which also shows the attributive use of the participle *ħandanza* “trusted”.

- (24) *ħandanza=kan antuħšaš tuk=pat aššuš*  
 trust.PTCP.NOM=PTCL man.NOM 2SG.DAT=FOC dear.NOM  
 “The righteous man is dear to you.” (KUB 31.127 i 8–9)

Furthermore, the reflexive particle *=za* occurs with 1st or 2nd person subjects both in copular sentences and with periphrastic constructions with *eš-* (Hoffner & Melchert 2008: 362–364), even with participles of verbs that would not normally require the particle, as in (25):

- (25) *nu=za ħaliy[aš] uddanī mekki paħħašsanuwanteš*  
 CONN=REFL watch.GEN matter.DAT much be.vigilant.PTCP.NOM.PL  
*ēšten*  
 be.IMP.2PL  
 “Be very vigilant concerning the matter of the night watch!”  
 (KUB 13.4 ii 73–74, NH/NS)

In Example (25) the participle is from a verb, *paħħanu-* “protect, be watchful”, which does not normally take the particle *=za*; rather, its occurrence is connected

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would be the only occurrence of a participle of the verb *ed-* with a direct object without *ħark-*. Frotscher suggest restoring a form of *ħark-*, as shown below.

- nu antuwahħaš kuiš agganza GU<sub>4</sub><sup>H1.A</sup> UDU<sup>H1.A</sup> kuiš arħa*  
 CONN man.NOM REL.NOM die.PTCP.NOM cattle(PL) sheep(PL) REL.NOM away  
*adān [ħarzi]*  
 eat.PTCP.NOM/ACC have.PRS.3SG  
 “The man who has died, and has eaten cattle and sheep.”  
 (KUB 23.72+ rev. 14, MH/MS)

with the verb *eš-*. Notably, in *ḥark-* plus participle constructions =*za* occurs when it is required by the latter, as in Example (20), in which the particle =*za* gives a self-beneficiary meaning to the construction, and is semantically required by the verb *dā-* “take”.

As insightful as the above observations may be, they can hardly be taken as evidence for the fact that *eš-* plus participle constructions are never periphrastic perfects and that *eš-* is never used as an auxiliary. In fact, cross-linguistic evidence shows that AVCs built with the verb ‘be’ may follow the morphosyntax of copular sentences, as in the Italian perfect in Examples (26a, b).

- (26) a. *Maria è andata al cinema.*  
 Maria(F) be.3SG go.PTCP.SG.F to.DEF.SG cinema  
 “Maria went to the movies.”  
 b. *Maria è bella.*  
 Maria(F) be.3SG beautiful.SG.F  
 “Maria is beautiful.”

In (26a) the verb ‘be’ is an auxiliary, and is part of the compound verb form *è andata* “went”, which is the perfect of the verb *andare* “go”. The participle *andata* agrees in number and gender with the subject *Maria*, in much the same way as does the subject complement *bella* “beautiful” in (26b), in which the verb ‘be’ functions as copula. Similarly, in Hittite copular sentences with *eš-* the nominal predicate shows agreement with the subject, as does the participle, as comparison between (5) and (24) shows.

Finally, it is worth mentioning that there is limited syntactic evidence that copular sentences with *eš-* plus a nominal predicate might be treated differently from constructions of *eš-* with the participle. As we have observed for Example (17), the preverbal negation cannot interrupt the sequence of the participle and the verb *eš-*, showing that these syntactically behave as a single unit. By contrast, in nominal sentences the negation is inserted between the adjectival predicate and the verb, as in Example (27).<sup>6</sup>

- (27) *namma=ta=kkan damāis DINGIR<sup>LUM</sup> nakkis salliss=a*  
 again=2SG.DAT=PTCL other.NOM deity honored.NOM big.NOM=CONJ  
*UL ēzi*  
 NEG be.PRS.3SG  
 “No other deity is more honored and greater than you.”

(KUB 24.3 i 34, MH/NS)

6. On account of the extremely low frequency of the negation with an expressed copula, which is restricted to the preterite and the imperative, it is admittedly difficult to draw compelling quantitative conclusions about these patterns.

Agreement of the participle with the subject in *eš-* constructions is consistent with the origin of the participle as a verbal adjective (Neu 1968; Brosman 2010; Cotticelli Kurras 2015). It contrasts with what we find in *ħark-* constructions, in which the participle does not agree either with the subject or with the object. Rather, it is always inflected in the default form of nominative-accusative neuter singular. There is no general consensus about the origin of this state of affairs. According to most scholars (Benveniste 1962; Houwink ten Cate 1973; Boley 1984, 2001; Dardano 2005; Frotscher 2013), the participle in *ħark-* constructions has an adverbial origin. This also explains its occurrence with intransitive verbs, as in (28), which, according to proponents of this theory, could not be explained by its origin as an object complement (see below for counterarguments).

- (28) *nu* <sup>LŪ</sup>SAGI.A *kuiš* *ħašši* *tapuša paršan*  
 CONN cup\_bearer REL.NOM brazier.DAT next\_to crouch.PTCP.NOM/ACC  
*ħarzi*  
 have.PRS.3SG  
 “Which cup-bearer is crouching next to the brazier, [stands up.]”  
 (KUB 25.1 iv 11, OH/NS)<sup>7</sup>

This use is paralleled by occurrences of the full-verb *ħark-* used intransitively with adverbs (Benveniste 1962; Boley 1984, 2001), as in (29).

- (29) *menahħanda ħark-* “to keep in front, to consider”  
*arahzanda ħark-* “to keep surrounded, to protect”  
*arħa ħark-* “to keep away”  
*peran ħark-* “to keep in front”  
*ħanza ħark-* “to keep with benevolence”

This view is not without problems (see Luraghi 1998; Dardano 2005). In fact, it introduces a circular argument, as ‘adverbial’ participles are found only with *ħark-* constructions. Otherwise, adverbs are built on participles with the *-ili* suffix, e.g. *karuššiyant-* “being silent” > *karuššiyant-ili* “silently”, with the possible exception of *ħandan* “truly” from *ħandai-* “order” (see further Frotscher 2013: 283), while the forms in (29) are not synchronically NOM-ACC neuter singular, but plain adverbs, so that they formally differ from ‘adverbial’ participles. (Note that even if one considers

7. It needs to be remarked that the stative construction with this verb can also feature *eš-*. An occurrence is mentioned in Boley (1992: 40), in which the participle *paršananteš* “crouched. NOM.PL” seems to have the same meaning as *paršan ħarzi* in (28). In view of the fact that these are stative constructions, and not AVCs, the variation between *ħark-* and *eš-* is unproblematic, as both can occur with all types of intransitive verbs in this type of construction. Tentatively, we suggest that the difference is between a state ‘be crouched’ with *eš-* and a continue-phase reading ‘keep on being crouched’ with *ħark-*; see §4.1.

their diachronic origin, only the adverb *peran* can possibly be reconstructed as a nominative-accusative neuter form of a noun.)

Another possible origin of the Hittite *ḫark-* construction connects it to grammaticalization processes known from the development of auxiliaries in other languages. Following this reconstruction, the participle originated as an adjective, and originally had the function of object complement with transitive verbs. At this initial stage, it must have shown agreement with the object. Later on, as the outcome of increasing grammaticalization, the participle lost agreement, and the construction was extended to unergative intransitive verbs (Luraghi 1998). Extension to environments which could not fit the original meaning of the auxiliary as a full lexical verb is typical of auxiliarization, as remarked in Bybee et al. (1994: 289; see §2.1). A similar development is attested in the Romance languages, which show different patterns of agreement and non-agreement between the participle and the object (Loporcaro 1998). Note that there is no evidence for original agreement between the participle and the direct object (Dardano 2005 discusses a single controversial example). Also, while in the case of the rise of auxiliaries the grammaticalization process described above has numerous cross-linguistic parallels, lack of agreement also in the stative construction with *ḫark-* is harder to explain, as in this case the participle seems in fact to function as an object complement, and object complements normally agree with the object with other verbs (Luraghi 1997: 9; Hoffner & Melchert 2008: 247).

#### 4. AVC or stative construction?

In this section, we discuss a number of passages in which the *ḫark-* and *eš-* plus participle constructions occur in different tenses and moods, and show what type of evidence can help distinguish between the periphrastic perfect, the stative construction, and the passive. After analyzing the examples, we address the issue of the possible inner Hittite chronology of the constructions. We discuss first occurrences of *ḫark-* and *eš-* plus participle constructions with the imperative (§4.1), as their interpretation is more straightforward, and turn to occurrences in the indicative in §4.2.

##### 4.1 Imperative

The imperative is not easily compatible with perfect semantics. This concerns both the resultative and the anterior meanings of the perfect: orders are not normally given in the past or relative to some result, and their occurrence is exceptional.

This is reflected in the rarity of perfect imperatives in Ancient Greek, and in their peculiar semantics. As observed by Schwyzler & Debrunner (1950: 340–341), the perfect imperative has stative meaning, and is essentially equivalent to the present imperative, as in *mè deídite* “don’t be afraid!” (Hom. *Il.* 20.366) or with various verbs of speech and communication, as *eirésthō* “let it be said” (Herodotus *passim*; see Harry 1905). In New Testament Greek, the perfect imperative is extremely infrequent with two occurrences out of four from the verb *oída* “know” which is basically a present (Boyer 1987: 41). In Hittite, as we will see, it is the stative construction or the passive that occur with imperatives, rather than true periphrastic perfects.

With *ḥark-* and the participle of transitive verbs, the participle is P-oriented, and the construction indicates maintenance of an ongoing activity resulting from a change of state, as in Example (8). In (8), the participle *lagan* “turned” indicates a state of the direct object *īstamanan* “ear”, and *ḥark-* profiles maintenance of the subject’s activity of keeping a certain posture (i.e. keep their ears turned). Similarly, with intransitive atelic verbs, the participle is S-oriented, and indicates active maintenance of a state, as in (22) and (30).

- (30) *nu=wa karuššiyān ḥarak*  
 CONN=QUOT be.silent.PTCP.NOM/ACC have.IMP.2SG  
 “Keep (being) silent!” (KUB 14.4 iv 11, NH/NS)

In (22) and (30) the participles *naḥḥān* and *karuššiyān* indicate states. Notably, these verbs are syntactically unaccusative, and would normally take *eš-* as an auxiliary if they could have a periphrastic perfect. As we noted above, in (22) the participle *naḥḥān* also triggers the occurrence of the third person subject clitic =*aš*, consistent with the fact that it is unaccusative. Note that this verb can also occur in the stative construction with *eš-*, as shown in Example (10).

Examples (8), (30) and (22) are occurrences of the stative construction, rather than perfect periphrases: the verb *ḥark-* retains its lexical meaning, and does not function as an auxiliary. This is shown by the fact that the participle of transitive verbs is P-oriented, rather than A-oriented as in AVCs, as we have argued in §3.2. Notably, the only possible occurrence of an A-oriented participle with *ḥark-* and the imperative is *waššan ḥarkandu* in (23), which, however, can be differently interpreted (see §3.5).

With *eš-* and the participle of intransitive atelic verbs, the S-oriented participle profiles a state and *eš-* indicates the persistence of this state. The meaning of the *eš-* and the *ḥark-* constructions with such verbs is similar, as shown by comparison of (10) and (22). Likewise, with intransitive telic verbs, the participle is S-oriented and indicates the resulting state of the change-of-state verb. The verb *eš-* indicates persistence of this state, as in (21).





- (32) *nu* <sup>d</sup>UTU-*uš mahḥan še[r katta]* *nepišza ḥuyanza* *n=ašta*  
 CONN sun.NOM when above down sky.ABL run.PTCP.NOM CONN=PTCP  
*utniy[aš ḥumandaš]* *lalukišnuwan* *ḥarzi*  
 land.DAT.PL all.DAT.PL illuminate.PTCP.NOM/ACC have.PRS.3SG  
 “And as the Sun is running down from up in the sky and keeps the entire land  
 illuminated [so let the Mothergoddess give light to the queen in her soul.]”  
 (KBo 34.77 obv. 3–5, OH<sup>2</sup>/NS)
- (33) *natta=šmaš* <sup>LÜ.MEŠ</sup>DUGUD-*aš TUPPI ḥazzian* *ḥarzi*  
 NEG=2PL.DAT dignitary.DAT.PL tablet pierce.PTCP.NOM/ACC have.PRS.3SG  
 “[As my father keeps writing to you], has he not written the tablet to you dig-  
 nitaries [saying: Look, go into the country...]?” (KBo 22.1 i 23, OH/OS)

In (32), the participle *lalukišnuwan* refers to a habitual behavior of the god. In addition, the coordinated clause that precedes it contains the participle *ḥuyanza* “running”, which is atelic and hence indicates an ongoing activity. Thus, it is safe to consider the complex *lalukišnuwan ḥarzi* as a stative construction that indicates maintenance of the state of the object (“keeps the land illuminated”), rather than as an anterior (“has illuminated the land”; cf. Boley 1984: 28). In (33), attention is given to the fact that the tablet has been written and the king has already admonished the dignitaries, while the actual possession of the tablet remains in the background. This makes an anterior reading more likely, i.e. past action with current relevance for the speech time, even though the stative/resultative reading is not completely ruled out (cf. Boley 1984: 33). As this passage comes from an Old Hittite original text, it might be a hint of an incipient development of the anterior meaning, and thus constitute a bridging context between stative-resultative and anterior (see further 4.3).

Temporal adverbs or clauses can also support either of the possible meanings, as shown in (16) and (34).

- (34) *nu=wa=za* *karū* 30 <sup>É<sup>TUM</sup></sup> *ašešan*  
 CONN=QUOT=REFL already 30 house(ACC) settle.PTCP.NOM/ACC  
*ḥarzi*  
 have.PRS.3SG  
 “[Pihinakki is occupying the town of Lipisira] and he has already settled 30  
 houses.” (HMK 10 rev. 6, MH/MS)

In (34), only an anterior reading is available. The construction refers to the completion of an action in the past which is highly relevant for the current time of speech, as evidenced by the occurrence of the adverb *karū*.<sup>8</sup> Similarly, in (16) the adverb EGIR-*anda* sets a limit in time for the relevance of the state of affairs.

8. The adverb *karū* “formerly, already” is often paired with an anterior reading of *ḥark-* and *eš-* constructions (Boley 1984: 71; Cambi 2005; Bertinetto & Cambi 2006; Cambi 2007: 152;

With preterite forms of *ḥark-* we can find the past stative construction or a pluperfect. Again, it is the context that allows us to distinguish between the two, as shown in (35) and (36).

- (35) *n=an=kan*                      *INA UD.7.KAM anda waḥnuwan*  
 CONN=3SG.ACC=PTCL for 7.day            in    besiege.PTCP.NOM/ACC  
*ḥarta*  
 have.PST.3SG  
 “He kept it under siege for seven days [and on the eighth day he fought a battle against it].” (KBo 5.6 iii 28, NH/NS)
- (36) [*z*]ik=za                      <sup>m</sup>*Tatamaruṣ* DUMU.MUNUS NIN=YA  
 2SG.NOM=REFL T.NOM            daughter                      sister=1SG.POSS  
 DAM-*anni dān*                      [*ḥa*]rta  
 marriage.DAT take.PTCP.NOM/ACC have.PST.3SG  
 “You, Tattamaru, had taken the daughter of my sister in marriage. [But fate dealt you a grievous blow: she died on you!]” (KUB 23.85 rev. 5, NH/NS)

In (35), the occurrence of the temporal adverbial phrase *INA UD.7.KAM* ‘for seven days’ suggests that focus is given to the maintenance of the activity in the past. In (36), the temporal structure of the text suggests that the periphrasis should be interpreted as an anterior with past reference, as it focuses on the completion of an event (the telic event of getting married) before the current time of reference, before other events took place.

In a way similar to instances in the present, preterite instances of *ḥark-* plus participle can have property or an actual occurrence readings. In the former case, we have a stative construction in the past, as in (7). As we have remarked above, in such instances *ḥark-* must not be taken as an auxiliary, but as a full verb, and it indicates continue-phase. By contrast, in (37) an actual occurrence reading is supported by the context.

- (37) *nu=mu*                      KUR <sup>URU</sup>*Tipiya* *kuit*                      *kūruriyaḥḥan*  
 CONN=1SG.DAT land T.                      because become.hostile.PTCP.NOM/ACC  
*ḥarta*  
 have.PST.3SG  
 “And since the land of Tupiya had become hostile to me [and was not delivering troops to me, I attacked Kathaidduwa.]” (KBo 3.4 i 49, NH/NS)

With the change-of-state verb *kūruriyaḥḥ-* “to become hostile”, occurring in a background clause, the construction with *ḥark-* indicates an event that has occurred

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Hoffner & Melchert 2008: 306). This reflects a more general compatibility of anteriors with adverbs meaning ‘already’, as pointed out by Bybee et al. (1994: 45).

prior to another event in the past, rather than profiling an ongoing activity in the past. The discourse context indicates that the verbal complex must be taken as an AVC with pluperfect meaning. Notably, this discourse pattern, with an anterior in the background and a present tense in the foreground is compatible with the behavior of anteriors elsewhere (Givón 1982; Bybee et al. 1994: 62). As we noted in 3.1, the preterite can also express anteriority in the past (Hoffner & Melchert 2008: 309), as shown in (38).

- (38) *nu=mu kūs kuyēs URU Gasga<sup>HIA</sup>*  
 CONN=1SG.DAT DEM.NOM.PL REL.NOM.PL K\_town(PL)  
*kūruriyahhir*  
 become.hostile.PST.3PL  
 “These Kaskean towns which had become hostile to me [I moved against them].”  
 (KBo 2.5 ii 4, NH/NS)

#### 4.2.2 With *eš-*

As we remarked in §3.5, the periphrastic perfect with *eš-* “be” is less studied than the *hark-* perfect. This state of affairs is partly owing to the lower frequency of *eš-* as an auxiliary with respect to *hark-*: while the latter occurs with transitive and a subset of intransitive (unergative) verbs, the former is limited to a subset of intransitive verbs (unaccusative), and even with them it is further limited to change of state verbs, as participles of stative verbs do not have a resultative meaning (§3.2), and therefore cannot give rise to an anterior reading. In addition, *eš-* is also the auxiliary of the periphrastic passive (§3.3). Finally, the fact that the participle in *eš-* constructions agrees with the subject has led some to deny the existence of a periphrastic perfect (§3.4). However, comparison among different occurrences of participles of telic unaccusative verbs provides evidence for two constructions with *eš-*, a stative construction and an anterior periphrasis, either in the present (perfect) or in the past (pluperfect), in much the same way as with *hark-*. Let us compare Examples (39) and (40).

- (39) *kinuna=at katta mutān n=at arḥa*  
 now=3SG.NOM.N down neglect.PTCP.NOM.N CONN=3SG.NOM.N away  
*harkan*  
 perish.PTCP.NOM.N  
 “[In this town either the temple of the Stormgod or the temple of some other deity], it is now neglected, and it is ruined.” (KUB 13.2 ii 30, MH/NS)
- (40) *n=aš mān karū pānza*  
 CONN=3SG.NOM if already go.PTCP.NOM  
 “And if he has already/formerly gone.” (HKM 75, 23–24, MH/MS)

In (39), the participle indicates a state resulting from a previous event, but focus is given here to the present state rather than to the past action leading to it, as suggested by the adverb *kinun* “now”. Accordingly, the form has a property reading. By contrast, in (40) the occurrence of the adverb *karū* “already” suggests an anterior interpretation (see fn. 8), whereby focus is given to the completion of the event indicated by the participle, rather than on the resulting state, and the construction has an actual occurrence reading, and hence it functions as periphrastic perfect. (Notably, the preterite with *karū* can also be interpreted as an anterior; see Hoffner & Melchert 2008: 309.)

The preterite of *eš-* with the participle of a telic unaccusative verb can indicate an event that has occurred prior to another event in time, i.e. an anterior (actual occurrence reading). Compare Examples (6) in §3.1 and (41).

- (41) KUR<sup>URU</sup> *Nerik* *ḫūdak=pat* *karūliyaš* ANA LUGAL<sup>MES</sup> *karū*  
 land N. suddenly=FOC former.GEN.PL to king(PL) formerly  
*ḫarkanza* *ēšta*  
 perish.PTCP.NOM be.PST.3SG  
 “The land of Nerik had already suddenly perished under (the leadership of)  
 the previous kings.” (KUB 21.19 + iii 11, NH/NS)

In Example (6) and (41) the constructions refer to the completion of an event prior to the time reference in the past. This reading is supported by the occurrence of the adverb *karū* “already” in (41) (cf. Cambi 2005).

### 4.3 Discussion

In §4.1 and §4.2 we discussed occurrences of the *ḫark-* and *eš-* plus participle constructions with different verbal moods and tenses. We provided evidence for considering the occurrences as instantiations of the stative construction, or as periphrastic perfects or pluperfects, that is, AVCs.

Concerning the relationship with mood, we argued that periphrastic perfects and pluperfects do not occur with the imperative: imperatives of *ḫark-* and *eš-* plus participle must all be taken as stative or passive constructions. This explains the remark in Hoffner & Melchert (2008: 311) that “[t]his construction is **more common** with the auxiliary verb *ḫar(k)-* in the **imperative**.” In fact, the impression that the stative construction is more frequent with the imperative is a consequence of the non-availability of the perfect AVC with this mood.

With the indicative mood, participles of atelic intransitive verbs, which are not resultative, only occur in the stative construction. With participles of other verbs, one can find either the stative(-resultative) construction or an AVC, with the

interpretation dependent upon the context. AVCs can be of two types: either they indicate an anterior, or, in the case of transitive verbs with *eš-*, a passive. Only in the former case does the whole construction trigger an A-oriented interpretation, while in passive constructions the participle remains P-oriented. This difference is possibly reflected in the different chronology of the emergence of the two constructions, as we argue below. AVCs featuring *ḫark-* with transitive and telic unergative verbs or *eš-* with telic unaccusative verbs may indicate completion of an event prior to a reference point in the present, and function as perfects, or in the past, and function as pluperfect.

According to Boley (1984, 1992) the *ḫark-* construction shows a diachronic development, with a turning point between Old and Middle Hittite: while only the stative construction is attested in Old Hittite, in Middle Hittite one also starts finding evidence for the anterior. In fact, all occurrences of *ḫark-* plus participle from Old Hittite originals can be held to instantiate the stative (or stative-resultative) construction. However, as we have argued in the case of (33), some bridging contexts are available, in which the anterior reading is also possible. Notably, the periphrastic passive construction is already well attested in the Old Hittite original of the Laws (see examples in Hoffner & Melchert 2008: 303), thus likely preceding the development of the periphrastic perfect. This is unsurprising, since the combination of the copula with ‘passive’ participles can be possibly traced back to PIE (Kümmel, this volume).

Boley (1992) further envisages a restriction of the use of the perfect with respect to the preterite in New Hittite, and also highlights the frequent equivalence of the pluperfect with the preterite. She also argues that the resultative meaning gave way to the anterior meaning, especially in New Hittite. Because Boley uses resultative and anterior in a slightly different way from the way in which we use the term, it is not clear whether her observation captures a real decay in the use of the stative-resultative construction.

We have said that *ḫark-* and *eš-* have auxiliary status only in the perfect and pluperfect (anterior) periphrases, and, in the case of *eš-* only, in the periphrastic passive. However, as we remarked in 3.1, stative constructions show a high degree of conceptual integration, while their meaning remains compositional. Adopting a dynamic definition of auxiliary, as we proposed in §2.1, we can regard *ḫark-* and *eš-* in the stative construction as quasi-auxiliaries, and the constructions as being on their way to becoming AVCs.

Broadening the view to all constructions discussed in this paper, including the stative (and stative-resultative), the passive, and the perfect or anterior, we can detect differing degrees of grammaticalization. The lowest, as we argued above, pertains to the stative and stative-resultative construction, whose meaning remains compositional, in spite of conceptual integration (cf. §3.1). The lower degree of

grammaticalization of stative constructions is partly reflected by the behavior of third person clitic subjects (cf. §3.4), and by the fact that *ḫark-* and *eš-* can freely occur with the same verb, in which case they provide different construals of the same event based on their lexical meaning (see fn. 7). The periphrastic perfect and pluperfects show the highest degree of grammaticalization: the construction as a whole acquires a new meaning, that of anterior, which is non-compositional, as shown by the fact that the participle of transitive verbs is not P-oriented. In addition, in this construction alternation between *ḫark-* and *eš-* is strictly determined by the syntax of the base verb, and can be described in terms of auxiliary selection (Garrett 1996). We argued that the verb *eš-* in the periphrastic passive can be regarded as an auxiliary. The degree of grammaticalization, however, is lower than in the case of the periphrastic perfect, because, as we remarked in 3.3, the meaning of this construction derives directly from the P-oriented meaning of the participle. Based on these observations we can draw the auxiliarization cline in (42).

(42) Degree of grammaticalization of *ḫark-* and *eš-* constructions



## 5. Conclusion

In this chapter, we have discussed occurrences of *ḫark-* “have” and *eš-* “be” with the participle in Hittite. We have argued that they instantiate three different constructions. In the first place, and constituting possibly the most ancient construction, we found a stative. In this construction, the verbs *ḫark-* and *eš-* do not function as auxiliaries, and the meaning of the construction is compositional. However, since the events denoted by *ḫark-* and *eš-*, on the one hand, and the participle, on the other hand, share the same participants, we have argued that the two verbs should be considered semi-auxiliaries in this construction. The meaning of the stative construction is maintenance of a state, either permanent, or resulting from a change of state. In the second case, the construction is stative-resultative. As we have shown based on the semantics of the Hittite participle, participles of atelic verbs denote permanent states, while participles of telic verbs are resultative.

A second construction, which only involves *eš-*, is the periphrastic passive. This construction is frequent, and involves participles of transitive verbs. The passive meaning of the construction follows naturally from the P-oriented nature of the participle of transitive verbs in Hittite. Notably, in New Hittite the periphrastic

passive competes with the frequent passive use of the middle voice (cf. Melchert forthcoming; Inglese 2020).

The third construction discussed in this chapter is the anterior, which, depending on the tense of *ḫark-* and *eš-*, can be a periphrastic perfect or a periphrastic pluperfect. We have argued that *ḫark-* and *eš-* in this construction must be regarded as auxiliaries, as the meaning of the construction is not compositional. This is especially clear in *ḫark-* constructions, in which the transitive participle is not P-oriented: rather, the construction as a whole is reinterpreted as being A-oriented. Contrary to some other scholars, we have argued that both *ḫark-* and *eš-* function as auxiliaries in the periphrastic perfect and pluperfect, and that their distribution depends on verbal semantics, with *ḫark-* occurring with transitive and unergative verbs, and *eš-* with unaccusative verbs, as shown in Garrett (1996). Contrary to Garrett, we do not consider occurrences of imperative forms of *ḫark-* and *eš-* with the participle as perfect periphrases. Rather we have argued that only the stative or the passive constructions are available with the imperative.

Concerning the chronological development of the periphrastic perfect, we have followed Boley (1984, 1992), who argues that the anterior meaning developed after the Old Hittite period. However, we have shown that some bridging contexts occurred in Old Hittite, in which both the stative-resultative and the anterior reading were available. We have also argued that the development of constructions containing *ḫark-* and *eš-* and the participle in Hittite follows a well attested path of grammaticalization, whereby anteriors may develop out of resultatives. Figures 1 and 2 contain a summary of our findings, and of the development of the Hittite constructions.

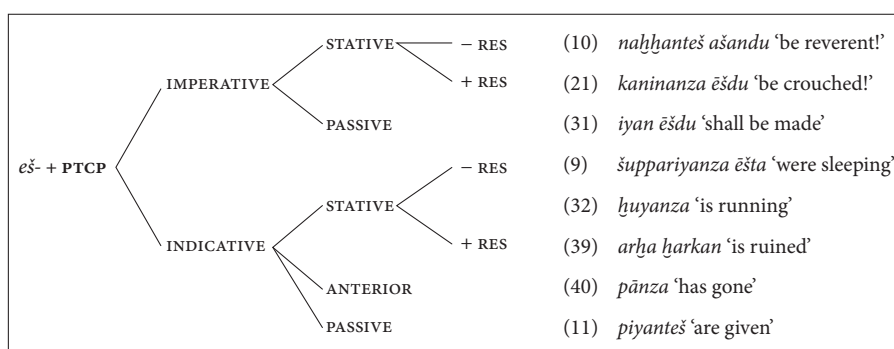


Figure 1. Meanings of the [*eš-* + participle] construction

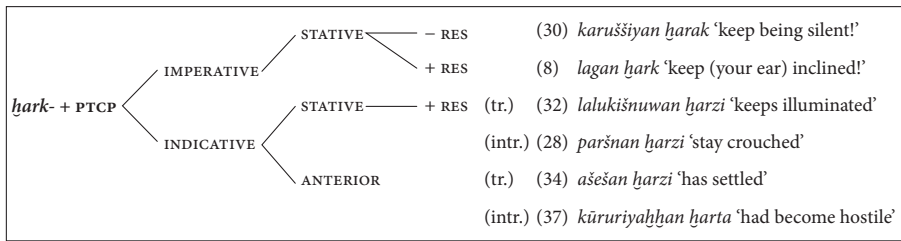


Figure 2. Meanings of the [*ḫark-* + participle] construction

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