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The Hittite middle voice

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Abbreviations

Glosses

1	first person	IRR	irrealis
2	second person	M	masculine
3	third person	MID	middle
ABL	ablative	N	neuter
ACC	accusative	N/A	nominative-accusative
ALL	allative	NEG	negation
CONJ	coordinative conjunction	NOM	nominative
CONN	connective	PL	plural
DAT	dative(-locative)	POSS	possessive
DEM	demonstrative	PRS	present
ERG	ergative	PST	past (preterite)
FOC	focus marker	PTC	particle
GEN	genitive	PTCP	participle
IMP	imperative	QUOT	quotation marker
INDF	indefinite	REFL	reflexive particle
INF	infinitive	REL	relative
INST	instrumental	SG	singular
INTJ	interjection	SUP	supine
INTS	intensifier	VN	verbal noun
IPFV	imperfective (also for <i>-ske/a-</i>)		

Languages

Av.	Avestan	MW	Middle Welsh
Akk.	Akkadian	NH	New Hittite
Arm.	Armenian	OCS	Old Church Slavonic
CLuw.	Cuneiform Luwian	OE	Old English
Eng.	English	OH	Old Hittite
Fr.	French	OHG	Old High German
GAv.	Gatha-Avestan	OIr.	Old Irish
Grm.	German	ON	Old Norse
Goth.	Gothic	Pal.	Palaic
Gr.	Ancient Greek	PAnat.	Proto-Anatolian
Hitt.	Hittite	PGrm.	Proto-Germanic
HLuw.	Hieroglyphic Luwian	PIE	Proto-Indo-European
IE	Indo-European	Skt.	Sanskrit
It.	Italian	Span.	Spanish
Lat.	Latin	TochA	Tocharian A
Lith.	Lithuanian	TochB	Tocharian B
Lyc.	Lycian	Ved.	Vedic
MH	Middle Hittite		

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Part One

Chapter 1: Introduction

1.1. Goals and structure of the work

Hittite, similarly to other ancient Indo-European (IE) languages such as Sanskrit and Ancient Greek, features a two-fold system of voice opposition indicated by two sets of verbal endings, traditionally labelled active and middle respectively. Our current understanding of the middle voice in Hittite mostly stems from a two-volume groundbreaking monograph published by Erich Neu in 1968, which nowadays still constitutes the fundamental reference work on the topic. Even though Neu's work has undoubtedly aged well over the past 50 years, it now results partly obsolete in light of our increasing knowledge about Hittite language and texts on the one hand and the typology of middle voice systems on the other hand. Building upon Neu's work, this dissertation aims at providing a new description of the middle voice in Hittite based on a corpus analysis of the occurrences of Hittite middle verbs in original texts, with a focus on their syntax and semantics. Two are the main novelties of this work as compared to Neu's. In the first place, thanks to advances in Hittite text dating, occurrences of middle verb are investigated according to their distribution in Old, Middle, and New Hittite, thereby allowing a fine-grained diachronic analysis of verbal voice in Hittite that would have been impossible at Neu's time. In the second place, the description of the function(s) of the middle voice can now benefit from new insights from the linguistics scholarship on middle voice systems and valency changing strategies. Specifically, in this work, I frame the description of the Hittite middle voice within the model of middle voice systems and valency changing operations as elaborated in linguistic typology. Applying typological generalizations to the description of ancient languages has nowadays become a well-established practice, and the mutual relationship between historical linguistics and language typology has proved increasingly fruitful for both fields (cf. Luraghi 2017a). The basic insight behind the use of typological categories in the analysis of ancient languages, known as *uniformitarian hypothesis* (see Joseph & Janda 2003: 23-37), is the assumption that the way natural languages work is essentially the same over time, so that generalizations based upon the observation of modern languages can be extended to the interpretation of ancient ones as well. Therefore, this work lies at the crossroad between Indo-European linguistics, historical linguistics, and linguistic typology.

The work consists of two main parts. The first part presents in a concise and easily accessible way the results of the analysis, even to readers less acquainted with Hittite language and philology. This part includes Chapters 1 to 3. Chapter 1 is an introductory chapter that sets the foundation for the rest

of the work and provides the reader with the necessary background knowledge to follow my treatment of the Hittite data. Chapter 2 deals with the description of the middle voice from a synchronic standpoint. In this chapter, I discuss how the middle voice is associated with two main groups of verbs. The first group are non-oppositional middle verbs or *media tantum*, i.e. those middle verbs which lack an active counterpart. The second group are oppositional middle verbs, i.e. those verbs that stand in some sort of functional opposition in terms of valency changing operations with a corresponding active verb. In addition, the role of labile verbs is also investigated. Extensive discussion is devoted to the two groups, and the interpretation of the data is couched within the lexical typology of *media tantum* (e.g. Kemmer 1993) and the typology of voice operations (e.g. Kulikov 2010). The complexity of the Hittite middle voice is subsequently investigated from a diachronic perspective in Chapter 3, where I discuss the Proto-Indo-European (PIE) background of the Hittite middle voice and illustrate how its use develops throughout the recorded history of Hittite. Adopting such a diachronic perspective not only allows a more fine-grained description of the Hittite historical data, but also greatly contributes to our understanding of the history of the middle voice in IE languages and more generally offers well-documented evidence for the diachronic typology of middle voice systems cross-linguistically.

The second part offers an exhaustive description of the Hittite data on which the analysis presented in Part One rests, and is basically intended for consultation. In this chapter, I provide a description of 105 middle verbs attested in original Hittite texts. Based on the insight that verbal meaning can be understood as a combination of idiosyncratic lexical semantics (i.e. *roots* in Levin & Rappaport Hovav's 2005 terms), aspect, and valency (cf. Ježek 2016: 107), I provide for each verb a thorough discussion of its semantics, its aspectual construal, and the argument structure constructions in which it occurs. Moreover, noticeable diachronic developments undergone by individual verbs are also documented and discussed.

Hittite examples presented in this work, as well as those from other lesser known languages, have all been transliterated and glossed following the *Leipzig Glossing Rules*. For the Hittite material, I follow the conventional transcriptional practices, and specifically have opted for a *broad transcription* of Hittite sentences (see further Hoffner & Melchert 2008: 10-15). Nevertheless, readers interested in the spelling of middle forms can find all occurrences of middle verbs in original texts given in *narrow transliteration* in the Appendix. I also indicate the text edition of all Hittite examples when available according to current conventions (cf. Hoffner & Melchert 2008: 7 and *HPM*). A final note is in order concerning the bibliographical references that I provide in this work. Given the breadth of different topics and issues that this dissertation touches upon, I decided for reasons of conciseness to only give the most recent literature on more tangential issues when they are not

immediately relevant for the discussion at hand, and reserve a more thorough treatment of previous scholarship only to matters directly concerning the Hittite middle.

The remainder of this chapter is organized as follows. Section 1.2 brings together and compares different perspectives on the middle voice domain in various theoretical framework. After a note on the terminology and the use of the term *middle* in different linguistic traditions (sec. 1.2.1), I succinctly outline the development of the study of the middle voice in IE linguistics (sec. 1.2.2), and then move on to describing different approaches to the middle in general linguistics, with a particular focus on linguistic typology. In section 1.3, I offer a working definition of *middle voice system*, and outline the theoretical background upon which my own analysis of the Hittite middle voice is grounded. Ample room is given to the typology of individual valency changing operations (sec. 1.3.1), as well as to the cross-linguistic encoding of *media tantum* (sec. 1.3.2). In addition, I outline some noticeable trends in the development of middle voice systems as reported in the literature (sec. 1.3.3). In section 1.4 the attention shifts to Hittite. I start by discussing the status of the middle voice in Anatolian languages (sec. 1.4.1), and then briefly introduce the Hittite language and its texts in sec. 1.4.2. In this section, I also review the state of the art in Hittite text dating and provide some clarifications concerning the criteria applied in the selection of the corpus employed for the present work. Section 1.4.3 recapitulates previous scholarship on the Hittite middle, with a focus on Neu's book (1968a, 1968b), whereas in section 1.4.4 issues that concern the morphology of the middle inflection are addressed. Finally, section 1.5 is intended to provide the reader with some background knowledge about some basic facts of the Hittite grammar that play a key role in understanding the discussion on the Hittite middle.

1.2. The middle voice as a linguistic category

The study of the middle voice is a complex task that has been undertaken by several scholars within different linguistic traditions, and is notoriously fraught with difficulties. It thus comes as no surprise that one finds in the literature a wealth of widely different approaches to the subject, based on the different perspectives adopted and on different scholars' research agenda. As Manney (2000: 16) puts it: "the term *middle* has been used to designate a range of extremely diverse phenomena, both synchronically as well as diachronically." In this section, I survey different perspectives on the middle voice, before moving to my own working definition of the middle voice in sec. 1.3. Note that this section is not intended as a systematic and exhaustive history of the research of on the middle voice, but mostly aims at making explicit where my work stands in the current scholarly debate on the middle.

1.2.1. Definitions and terminology: an overview

Few terms in linguistics have enjoyed such a wide use and diffusion as the term *middle*. Its denotation is intimately connected with a long-lasting history of research on the question: what is the middle voice? As we will see, scholars have provided diverging answers to this question, resulting in a somewhat puzzling layering of older and newer definitions in the relevant scholarship. Let us try and disentangle this intricate debate by outlining a short history of the use of this term in different linguistic traditions.

As is well known, the use of the term *middle* has its root Classic Antiquity (cf. Kulikov 2013: 261). It was first introduced by ancient grammarians such as Apollonius Dyscolus and Dionysius Thrax, who coined the term *mesótēs diáthesis* to describe the inflectional middle voice of Ancient Greek (on the interpretation of the *mesótēs diáthesis* of Ancient Greek grammarians see Andersen 1993: 189–198, Benedetti 2012, 2014 with further references). However, it is only in the 19th century that the middle voice becomes a structural part of the research agenda of the new-born discipline of comparative historical linguistics (see sec. 1.2.2). Building upon works of the Ancient Greek grammarians on the *mesótēs diathesis*, which came to be equated with the *Ātmanēpadam* of Indian grammarians, already Bopp in his *Conjugationssystem* (1816) identified the middle as an inflectional category of the IE verbal system, primarily connected with the encoding of reflexivity (cf. Benedetti 2016). Even though the middle of ancient grammarians and the one of Neo Grammarians do not entirely overlap (cf. Delbrück 1897: 413), a common trait in the two linguistic traditions is that they offer an essentially morphology based definition of the middle voice, equated with a specific set of endings of ancient IE languages that stand opposition to the active (and also to the passive) inflection.

Originally confined to the denotation of a specific inflectional class of the IE verbal system, the term *middle* soon made its way into general linguistics. Investigations on the middle voice have been intensively revived in the last decades.

A striking difference between the usage in traditional IE linguistics and that of modern general linguistics is that in the latter the term *middle* extended its use to denote a more abstract functional content. A narrow definition of the term *middle* has long been in use in the generative tradition, where it was used to refer to the intransitive use of otherwise transitive verbs in English sentences such as *the book sells well* (see e.g. Steinbach 2002), a use that remounts at least to late 19th century (cf. Langedoen 1990). Narrower functional definitions of the middle can also be found in typological works: for example, Keenan & Dryer (2007: 352) use it basically as a synonymous of *anticausative* (see sec. 1.3.2.3 for a definition). To further complicate the issue, scholars have also variously referred to the middle as either a ‘voice’ or a ‘diathesis’ (cf. Andersen 1993), but the definition of these two notions is in turn highly controversial (on the history of these two terms in different linguistic

traditions see now Kulikov 2010, Meneghel 2014, and Rousseau 2014). In this work, I follow Kulikov (2010, 2013) and treat the two terms as indicating two distinct notions. Diathesis is a syntactic notion and refers to a specific “a pattern of mapping of semantic arguments onto syntactic functions (grammatical relations)” (Kulikov 2013: 262). In this respect, *diathesis* is closely related to *valency* (see sec. 1.3.1). By contrast, voice refers to “a regular encoding of diathesis through the verbal morphology” (*ibid.* 264), that is, to the morphosyntactic realization of valency patterns.

A different use of the term *middle* has become the standard in linguistic typology. Starting from the works of Klaiman (1991) and Kemmer (1993), typologists have used *middle voice* in a broader sense to refer to a unitary semantic domain that, according to Kemmer (1993), is intertwined with the domain of reflexivity and can be characterized by the low degree of elaboration of events (see sec. 1.2.3 for details). In addition, the term *middle* has also been used as a cover term to refer to polyfunctional morphosyntactic markers that encode various valency reducing operations. As Givón puts it “middle voice constructions are a cluster of variants on semantically-transitive verbs, most commonly involving a shift of the semantic focus away from the agent” (2001: 116).

This cursory overview offers but an oversimplified picture of the densely intricate scholarly debate surrounding the middle voice, but it suffices to show that scholars often refer to different notions when they speak about the middle voice, and that these differences must be kept in mind when comparing cross-linguistic and language specific accounts of this and related phenomena (see further Manney 2000: 17-37, Kulikov 2013, Rousseau 2014, Camugli Gallardo & Nakamura 2014, Calude 2017 and extensive references therein). In particular, one should pay attention to whether scholars employ the term *middle* as a *descriptive category*, i.e. a label to describe a language-specific morphosyntactic phenomenon, or as a *comparative concept*, i.e. an abstract cross-linguistic category (Haspelmath 2010, see further below sec. 1.3).

1.2.2. The middle voice in Indo-European languages and linguistics

As remarked in the previous section, early research on the middle was prompted by the study of the middle inflection of ancient IE languages such as Ancient Greek and Sanskrit. It is thus useful to summarize here the general characterization of the middle voice in mainstream IE linguistics. Since the focus of this work is not the PIE middle, I do not dwell on it further here and devote a section in Chap. 3 to discussing its complex pre-history in connection with the origin of the Hittite middle voice.

A morphological opposition between two distinct sets of endings, traditionally labelled *active* and *middle* is common to most IE languages, and comparative evidence strongly suggest that it already constitutes a feature of the verbal system of the proto-language. Outcomes of the PIE middle voice

can be observed in most IE languages, but they are not equally distributed in individual branches.¹ A full-fledged opposition between active and middle paradigms, the latter featuring both *media tantum* and oppositional middle forms, is found only in Ancient Greek, Indo-Iranian, and Anatolian. Tocharian attests to traces of the middle inflection, mostly with *media tantum*, but also with a small group of oppositional anticausative and passive verbs. In Latin, besides a good number of *media tantum* (traditionally labelled *deponents* in Latin linguistics; see sec. 1.3.2), one also finds oppositional verbs mostly restricted to the passive function, with only a few anticausative verbs. Celtic inherited the PIE middle endings but already shows signs of restructuring: the inherited middle voice is mostly confined to *media tantum* and passive verbs in the present stem, with a newly created passive inflection in the preterite. Despite its late attestation, Albanian is also described as featuring a non-active voice, connected with the encoding of different valency changing operations, which at least in the present and the imperfect can be shown to be historically derived from the PIE middle voice. By the time of their earlier attestations, Balto-Slavic and Germanic languages (with the exception of Gothic, which still attests to middle forms in passive usage only) show no traces of an inflectional middle voice, and functions of the PIE middle are taken over by new reflexive morphemes (see e.g. Holvoet *et al.* 2015: 185, with an update discussion of modern Baltic data).

This sketchy overview nicely illustrates how despite the fact that traces of the middle voice can be individuated in virtually all IE branches, with the exception of Balto-Slavic, the earliest and clearest examples of a fully functioning system of voice opposition are confined to Ancient Greek and Indo-Iranian. Therefore, also owing to the late discovery of Anatolian and Tocharian, it is unsurprising that earlier descriptions of the middle voice in IE languages and PIE are strongly based (and biased) on Ancient Greek and Indo-Iranian.

As already mentioned, mentions of the middle voice can be already found in the work of ancient grammarians in their descriptions of the verbal systems of Greek and Sanskrit. It is only with the rise of modern comparative historical linguistics that a more systematic study of this phenomenon has started (cf. Andresen 1993, Stempel 1996, Rousseau 2014, Meneghel 2016 for a detailed *Forschungsgeschichte*). As early as in Bopp (1816: 36) and Brugmann (1904 [1889]: 598), the middle voice of ancient IE languages has been characterized as being associated with events that take place in the sphere of the subject or by which the subject is affected (see Bendetti 2016 for an overview the

¹ Studies devoted in whole or in part to the middle voice of ancient IE languages are numerous. For reasons of space, I do not list them all here and refer the reader to Clackson (2007: 142), Kulikov (2013: 273-275), and Luraghi *et al.* (forthc.) for extensive discussion with references; on the individual languages see also the useful introductions in Fortson (2010) and Kapović (2016).

study of the middle voice in early works of comparative historical linguistics). These constitute recurrent themes in later descriptions of the middle voice.

A first systematic description of the middle voice in ancient IE languages can be found in Delbrück's *Vergleichende Syntax* (1897: 417-425). Delbrück focuses his attention on the *media tantum* and only briefly touches upon the status of oppositional middles. He observes that, based on different properties, *media tantum* in ancient IE languages, chiefly Indo-Aryan and Ancient Greek, can be grouped into specific semantic classes. These include positional stative verbs, e.g. Gr. *hēmai* 'sit' and *keīmai* 'lie', verbs indicating spontaneous change-of-state events, verbs that denote events connected to the human body, e.g. Gr. *pérdomai* 'break wind', verbs of motion, e.g. Gr. *kínūmai* 'move (intr.)', and verbs of emotion, e.g. Gr. *skúzomai* 'be angry at'. More generally, according to Delbrück, for a verb to belong to the *media tantum*, it must either have a specific aspectual construal (state/change-of-state), or it must indicate an event in which the subject is fully involved and/or affected.

Wackernagel (1950²) takes a different stance, and concentrates rather on the study of oppositional middles, with a focus on Homeric Greek. In particular, Wackernagel argues that most oppositional middle forms in Homer indicate that the subject is performing the action denoted by the verb at his own benefit. In other words, the self-beneficent function is taken by Wackernagel as the semantic core of the middle voice.

The notions of subject affectedness and subject involvement recur as central themes even in later discussions on the issue. For example, Meillet (1937: 244) argues that the middle voice is specifically characterized by subject affectedness. Similarly, according to Benveniste (1966 [1950]), the crucial difference between active and middle forms is to be sought in their relationship with the subject: whereas active forms refer to events that happen outside of the subject's sphere, middle verbs indicate events that are internal to it. A slightly different definition is provided by Gonda (1960), according to whom middle endings have a primarily eventive meaning, as they denote events that happen to subject or by which the subject is affected.

General definitions that line up with the trajectory that can be traced from Delbrück to Gonda are common in modern textbooks of IE linguistics. The following quotes are representative of the *communis opinio* in the field: "the middle voice is employed when the event denoted by the verb either falls onto the subject either directly or indirectly, or does not have an effect beyond the subject" (Meier-Brügger 2010: 396, transl. mine); "middle means the subject is either acting upon itself or in some other way 'internal' to the action" (Fortson 2010: 89); "the middle is the voice used to denote that the subject is on some way affected by the verbal action" (Clackson 2007: 143); "[the middle]

generally refers to an action which in one way or another falls on the subject or on in which this latter has some interest or special participation” (Adrados *et al.* 2016: 354).

Starting from the ‘90s, the debate concerning the IE middle voice has been revived also owing to an ever-increasing and fruitful exchange with general linguistic.

In a pioneering 1990 paper, Lazzeroni proposed a prototype-based semantic account of the (P)IE middle. Lazzeroni challenges traditional approaches that seek a unitary functional account for the middle voice. Instead, building upon works on linguistic categorization and the prototype effect (cf. Rosch 1978), Lazzeroni argues that the middle voice should be interpreted as a radial category, featuring a prototype as well as several less-prototypical members. According to Lazzeroni, the synchronic prototype of middle verbs can be identified with the group of stative *media tantum*. All other categories, including oppositional middles, can be variously explained as sharing at least one semantic feature with the prototype. The prototype approach has the great advantage that it does away with the need to establish “an original and unitary value that occurs on all members of the category as a necessary and sufficient trait for their classification” (Lazzeroni 1990: 14, transl. mine).

A second line of research has focused on the interaction between the middle voice and intransitivity. The first full-fledged formulation of this approach can be found in Benedetti (2002). Benedetti sets out to investigate the reason why in ancient IE languages, and thus likely in PIE, transitive verbs are prototypically active (with the exception of some transitive *media tantum*, see Chap. 2 for discussion), whereas intransitive verbs display a split between those that take active endings, i.e. *activa tantum*, and those that take middle endings, i.e. *media tantum*. According to Benedetti, the distinction between intransitive *activa* and *media tantum* can be explained by appealing to the notion of *split intransitivity* or *unaccusativity* (see sec. 1.3.1). Already in PIE, those intransitive verbs whose subject was more Agent-like received active inflection, whereas those verbs whose subject was more Patient-like signaled the non-prototypical semantic role of their subject through a dedicated set of endings, viz. the middle inflection. Explorations on the interplay between unaccusativity and the middle voice have been pursued by other scholars, who have shown how the principle of voice distribution hypothesized by Benedetti (2002) also fits the historical data of Sanskrit (e.g. Lazzeroni 2004), Ancient Greek (Romagno 2010), and Latin (Gianollo 2005, 2010).

Research on the middle voice of ancient IE languages has also been influenced by advances in linguistic typology and cognitive linguistics. An excellent case in point is Allan’s (2003) description of the middle voice in Ancient Greek. Drawing from insights on polysemy in cognitive linguistics, and partly in line with Lazzeroni’s prototype approach (1990), Allan suggests treating the Greek middle as a polysemous network (a similar account has also been proposed by Manney 2000 for Modern Greek). Polysemy networks are a tool to represent variation in meaning in terms of

categorization, whereby multiple meanings of a linguistic items can be categorized as distinct and yet interrelated values in a network centered around a prototype.² Specifically, Allan adopts Langacker's (1987) *complex network category*, in which, besides the different concrete meanings that are articulated in a network and centered on a prototypical member, the existence of higher level *abstract schemas* is also postulated. In his work, Allan surveys a number of meanings of the Ancient Greek middle voice, which can be analyzed according to three main parameters that relate to the subject of middle verbs: its animacy, its semantic role (Agent, Patient, Experiencer, Recipient), and the degree of affectedness, i.e. whether it undergoes a change of state or not. Based on semantic similarities, as well as on evidence from semantic change, the various functions are arranged into a polysemy network. In order to pick up the prototype of the network, Allan combines two parameters: the token frequency of the meaning and its centrality in terms of connections with other meanings. The combination of these two results in *mental processes* as being the category prototype (Allan 2003: 92). Note that in this respect Allan's results greatly diverge from Lazzeroni's prediction that the prototype of the IE middle voice is associated with stativity.

As this summary has shown, in IE linguistics a clear trend can be detected. In spite of the individual differences, what all the account outlined in this section share is the effort to capture the complex heterogeneity of the middle voice domain in terms of a single and abstract semantic core, with notions such as stativity, unaccusativity, and subject affectedness and/or involvement recurring as explanatory factors. As we will briefly see, similar tendencies also characterize research on the middle voice in general linguistics. Note also that, in IE linguistics, definitions such as the ones overviewed in this section are mostly based on data from Ancient Greek and Indo-Aryan, which remain the better studied languages even in more recent comparative studies (cf. e.g. Benedetti 2006), with Anatolian and Hittite playing only a minor role in the discussion. This is unfortunate, since, as I argue in this work, Anatolian provides an invaluable contribution to the study of the middle voice in early IE languages and in PIE.

² Polysemy networks differ from semantic maps (see Georgakopoulos & Polis 2018). Whereas the former represent the relationship between the different meanings and/or functions of a language-specific item, the latter constitute a tool to visually represent cross-linguistic significant patterns of polysemy and are based on typological data. Moreover, polysemy networks have been predominantly employed in the study of lexical semantics, whereas semantic maps constitute the preferred tool to investigate polysemy in the domain of grammar. On the use of semantic maps to describe the middle voice domain see further sec. 1.2.3.

1.2.3. The middle voice in general linguistics: functional and formal approaches

Long confined to the domain of IE linguistics, the middle voice soon entered the research agenda of general linguistics, and for good reasons, as it encroaches core issues about the syntax and semantics of the verbal system that are of interest to scholars working in different theoretical frameworks.

Earlier definitions of the middle voice in general linguistics heavily draw upon accounts of the inflectional middle of ancient IE languages. For example, Lyons maintains that the middle voice is used when “the ‘action’ or ‘state’ affects the subject of the verb or his interests” (1969: 373). As in the case of previous definitions in IE linguistics discussed in sec. 1.2.1, one remains with the impression that these accounts remain rather vague and abstract, and do not do justice to the complexity of the linguistic data.

Linguistic typology has greatly contributed to improving our understanding of the nature of the middle voice. Cross-linguistic groundbreaking works by Faltz (1977) and Geniušienė (1987) on reflexives, by Lichtenberk (1985) on reciprocals, and by Barber (1975) and Klaiman (1991) on verbal voice, brought the attention to the complexity of the domain verbal voice, and all contributed to elucidating at least parts of it. However, as remarked by Kemmer (1993: 3) “none of these [...] deal with the middle in sufficient detail to establish how the various phenomena that comprise it relate to each other”.

Kemmer (1993) provides the first cross-linguistic description of the middle voice. Kemmer’s work is groundbreaking in many respects. Indeed, not only is it the first cross-linguistic overview of middle voice systems, but it also constitutes one of the first attempts to tackle the polyfunctionality of the middle from a diachronic perspective.

The main result of Kemmer’s study is that the middle voice can be cross-linguistically characterized as “coherent but relatively diffused category that comprises a set of loosely linked semantic subdomains” (*ibid.*: 238). Based on a sample of 32 genetically and areally diverse languages, Kemmer observes that middle markers distribute in a principled way, as they encode a similar range of situation types, i.e. “semantic/pragmatic contexts that are systematically associated with a particular form of expression” (*ibid.*: 7). The situation types individuated by Kemmer are the following: grooming (Lat. *lavor* ‘wash oneself’, *ornor* ‘adorn oneself’), non-translational motion (Gr. *trépomai* ‘turn (intr.)’), change in body posture (Gr. *klinomai* ‘lie down, recline’), translational motion (Gr. *èrkhomai* ‘move’), emotion (Lat. *īrascor* ‘get angry’), emotive speech action (Gr. *mémphomai* ‘blame’), cognition (Lat. *meditor* ‘think’), perception (Lat. *conspicior* ‘perceive’), spontaneous event (Lat. *morior* ‘die’), indirect middle (Lat. *apīscor* ‘acquire’), natural reciprocal (Lat. *conflictor* ‘fight’), reciprocal (It. *uccidersi* ‘kill each other’), passive (Lat. *amor* ‘be loved’), impersonal (Lat. *itur* ‘one

goes'), facilitative (It. *il libro si vende bene* 'the book sells well'), direct reflexive (It. *colpirsi* 'hit oneself'), indirect reflexive (It. *mangiarsi un panino* 'eat a sandwich'), logophoric.

Kemmer devotes extensive discussion to clarifying how these situation types should be kept distinct but yet relate to one another. In her view, the reason why all these situation types can be expressed by the same marker is that they bear striking semantic similarities. Specifically, Kemmer provides an elaborate account whereby all middle situation types can be shown to share one core semantic property that she labels *relative elaboration of events*, which can be further understood as relative distinguishability of the participants and of the sub-events. As Kemmer discusses, whereas two-participant events feature two maximally distinct participants and one-participant events feature only one participant, middle situations can be characterized as those situations that involve two participants, labelled Initiator and Endpoint, that are not fully distinguishable, thereby falling halfway between one- and two-participant events. Extensive discussion is also devoted to establishing the precise relationship between middle situation types and true reflexives, and to illustrate how reflexive and middle markers distribute within and across languages. As Kemmer proposes, a complementary distribution exists whereby if languages have two distinct markers for reflexivity and the middle domain, the former is morphologically heavier and tend to be confined to the encoding of reflexives proper, whereas the latter is lighter and covers the broader middle domain. The relationship between middle and reflexive is also investigated from a diachronic perspective, and based on case studies in Romance, Germanic, and Nilo-Saharan languages the hypothesis is put forward that middle markers arise out of earlier reflexive markers (e.g. Lat. *sē* REFL > It. *si* MID) rather than the other way around. In other words, Kemmer concludes that "of the two categories [i.e. reflexive and middle], the reflexive is the one that is synchronically and diachronically primary" (*ibid.* 231). Moreover, it is worth mentioning that in order to explain the complexity of the middle voice domain, Kemmer propose to arrange the various functions in a semantic map. This is a particularly innovative aspect of Kemmer's work, as her map constitutes one of the very first attempt at explaining cross-linguistic patterns of polysemy by means of this tool.

Kemmer's work has proven highly influential and has set the agenda for the research on the middle voice for the following decades. To date, it still remains the only description of the middle voice as a consistent domain from a cross-linguistic perspective, and many of Kemmer's findings still prove highly insightful. One of her greatest merits is that she has convincingly shown that most languages that have middle markers also display a relatively high amount of non-oppositional middle verbs, and that these tend to fall within the same range of situation types across languages. Therefore, accounts of middle voice systems have to integrate oppositional and non-oppositional verbs in a principled way. Since its first appearance, Kemmer's work has been used as a guideline to describe middle voice

systems in an ever-increasing number of languages, and it has also been more or less thoroughly applied to the study of ancient IE languages, such as Ancient Greek (Allan 2003), Latin (Gianollo 2005, 2010), Tocharian (Malzahn 2010), and even PIE (Meiser 2010).³

Nevertheless, Kemmer's work results nowadays outdated in some respects and presents a number of shortcomings (see already earlier criticism by Palmer 1995, Saeed 1995, and Haspelmath 1995). The first objection that was moved to Kemmer's work is that her language sample is too limited to offer valuable cross-linguistic generalizations: for example, entire language families, such as Afroasiatic, were excluded from the study (cf. Palmer 1995). Indeed, the more languages are added to the sample, the more situation types turn out to belong to the middle voice domain: for example, Mous (2001) makes the case that Cushitic languages offer evidence for new situation types such as intensive actions, negative connotation, separation, and even imperfective aspect (see also Tsunoda 2006 on Warrungu). It is thus not clear how many situation types need to be individuated and how fine-grained the classes should be. Moreover, Kemmer does not address the issue of overlap between classes (cf. Saeed 1995). This is relevant to the discussion of Hittite data as well: for example, should the verb *lazziye/a-^{ta(ri)}* 'be(come) good' be grouped together with spontaneous change-of-state events or with emotion middles (see Chap. 2)? More generally, the issue arises whether the distribution of *media tantum* in the world languages should be rather investigated with the tools of lexical typology (cf. Koptjeskaja-Tamm *et al.* 2015). Concerning oppositional middle verbs, Kemmer's description also results largely outdated, as subsequent work on the typology of individual valency changing operations has shown that functions that Kemmer takes as a single situation type in her account, e.g. reciprocal or passive, show indeed a higher degree of internal complexity (see sec. 1.3.1). In addition, surprising is the marginal status of spontaneous events in Kemmer's map, since the anticausative alternation lies at the core of many middle voice systems (cf.

³ Typologically informed accounts of the middle voice in non-European languages originally not featuring in Kemmer's study include the following (the list does not aim to be exhaustive). Languages of the Americas: Na-Dene (Chad 1996), Bella Coola (Beck 2000), Creek (Martin 2000), Athapaskan (Rice 2000), Tarascan (Nava & Maldonado 2004), Otomi (Palancar 2004), Pima Bajo (Estrada 2005), Halkomelem (Gerdtts & Hukari 2006). Languages of Africa, including Semitic languages: Iraqw (Mous & Qorro 2000), Amhraic (Amberber 2000), Cushitic (Mous 2001), Dogon (Culy & Fagan 2001), Seereer (Mous & Faye 2006), Konso (Mous 2007), Hebrew (Gzella 2009), Arabic (Danbolt Ajer 2015), Bantu languages (Dom *et al.* 2016). Languages of Asia: Tibeto-Burman languages (LaPolla 1996, LaPolla & Jiangling 2005), Dulong/Rawang (LaPolla 2000), Tagalog (Nayaga 2009), Laz (Lacroix 2012), Kryz (Authier 2012), Burushaski (Piar 2013), Korean (Kim 2014), Vietnamese (Dao & Do-Hurinvill 2014). Languages of the Pacific: Warrungu (Tsunoda 2006), Oksapmin (Loughnane 2009), New Caledonian languages (Brill 2005), Oceanic languages (Moysse-Faure 2008, 2017, Janic 2016), Worrorra (Clendon 2014).

already Haspelmath 1995: fn. 1), as well as the lack of systematic discussion of the antipassive, which is indeed a function frequently performed by middle markers cross-linguistically (cf. Janic 2015, Sansò 2017).

In the second place, Kemmer's semantic map should be treated with due care. This is an important point to keep in mind, as many scholars still employ Kemmer's map as a guideline in their description of middle voice systems (see most recently e.g. Dom *et al.* 2016). Since the 1990s, semantic maps have become a popular tool to describe cross-linguistic variation in linguistic typology, and the methodology and techniques to build semantic maps have been increasingly refined (see Croft 2001, 2003, Haspelmath 2003, Cristofaro 2010, Cysouw 2010, van der Auwera 2013; for an exhaustive overview on the state of the art of semantic maps see Georgakopoulos & Polis 2018 and references therein). As a result, the methodology on which Kemmer's map is based is not entirely consistent with current standards of the field. For instance, situation types on Kemmer's map are arranged based on their shared semantic similarities, and not solely on the patterns of encoding that they receive in the world's languages (cf. Haspelmath 2003). As such, the map does not possess the same explanatory power as more recent semantic maps, as it does not entirely respond to the *semantic map connectivity hypothesis* (cf. Croft 2003: 133 ff.). Moreover, more articulated semantic maps have been proposed for some of the situation types described by Kemmer, as in the case of e.g. passive (cf. Sansò 2006, 2010) and impersonal situations (cf. van der Auwera *et al.* 2012). Based on these observations, I suspect that Kemmer's semantic map requires further refinements before it can be safely used as a tool to describe the cross-linguistic variation across middle voice system in a reliable way. This is why, in this work I do not systematically employ Kemmer's semantic map as a model to explain the polyfunctionality of the Hittite middle.⁴

A more serious critique to Kemmer's approach concerns the need to establish a single underlying semantic core that serves as a common meaning to all middle situation types and therefore provides

⁴ A more recent semantic map of middle and reflexive markers has been offered by Haspelmath (2003), based upon previous maps by Haspelmath (1987) and Kemmer (1993). However, Haspelmath does not discuss the data and the methodology on which his map is built, so that I remain skeptical that it can be used as a means to successfully describe the Hittite middle voice. One of the main shortcomings of Haspelmath's map is that it does not include many situation types that are typically encoded by *media tantum* (e.g. verbs of emotion, cognition, and motion). As the author himself acknowledges "reflexive-like markers have quite a few other functions in many languages. These would eventually have to be integrated into the semantic map, but since their occurrence is strongly lexically determined, cross-linguistic comparison is not easy." (Haspelmath 2003: 224). I return on the diachronic implications of Haspelmath's map in sec. 1.3.3.

the synchronic explanation as to why languages group apparently diverging situations under the same morphosyntactic encoding. As already pointed out by earlier reviewers of Kemmer's work, this assumption is far from trivial (see e.g. Palmer 1995, Saeed 1995, Haspelmath 1995). As Haspelmath puts it "low elaboration of events seems to be the best approximation if one wants a common meaning for all middle situations, but couldn't it be that there is no real common meaning that all situation types share? The existing obvious similarities could be attributed to the fact that that arose by grammaticalization from the same marker" (Haspelmath 1995: 373). More generally, Haspelmath's (1995) observation relates to a still ongoing discussion in functional typological linguistics on whether meaningful synchronic generalizations in terms of underlying functional principles can be provided to account for cross-linguistic and language-specific patterns of polyfunctionality or whether language variation in synchrony can best be explained as the outcome of cross-linguistic recurrent patterns of diachronic development (see e.g. Haspelmath 2018). I return to these issues in Chap. 2 and 3.

It should be observed that the tendency to reduce the polyfunctionality of middle voice markers to a single semantic property also recur in works dedicated to language-specific middle voice systems, whether explicitly based on Kemmer's model or not. Attempts are varied and cannot all be mentioned here. For example, Arce-Arenales *et al.* (1994) survey the use of middle voice markers in Spanish, Koykon Athabaskan, and English, and observe that in these languages the middle voice is connected with the indication of subject affectedness. Maldonado (2000) provides an account of Spanish *se* whereby the different functions of this marker boil down to a single functional principle: focalizing on the core property of an event without giving prominence to its arguments (see also Calude 2017 for similar remarks on Rumanian).

More elaborate accounts refute a strictly monosemous approach to the middle voice, and instead provide finer-grained descriptions based on the notions of polysemy networks and semantic prototypes (see already Lazzeroni 1900). However, even within such accounts, the different functions are classified according to a limited number of semantic parameters that define the category's prototype. A case in point is Manney's (2000) cognitive linguistics treatment of the middle voice in Modern Greek. The author investigates different usages of the middle voice, and argues that in Modern Greek the two prototypical usages of the middle voice are the encoding of *noninitiative emotional response* situations and *spontaneous events*. From these two prototypes, the rest of the function can be easily derived through semantic extension, which is ultimately based on the features of high affectedness and low volition of the subject.

Formal linguistics has been less concerned with the middle voice. As already mentioned, in the generative tradition the term *middle* has been long limited to refer to the so-called facilitative function

(cf. Manney 2000: 32-37 and Steinbach 2002 with further references). However, studies on transitivity alternations, especially in languages other than English such as Romance languages and Modern Greek, have led to a renewed interest in middle voice systems in formal frameworks. A lot of effort has been put into developing syntactic tests to distinguish passive, reflexive, and anticausative operations, with the goal to provide theoretically well-grounded definitions of these notions and describe them in terms of syntactic structure and operations on verbal arguments (cf. Kaufmann 2007, Kalulli 2007, Knootz-Garboden 2009, Alexiadou & Doron 2012, Alexiadou *et al.* 2015 and references therein). Notably, the focus of these work being on the syntax of oppositional middle verbs, non-oppositional middles have not prominently featured in the discussion, even though their existence is often acknowledged (cf. Kaufmann 2007, Zombolou & Alexiadou 2014). It should be mentioned that even within formal approaches, a tendency can be detected to characterize the polyfunctionality of middle voice markers as conforming to a single parameter. For example, Kaufmann (2007), based on a thorough discussion of Fula data, argues that the middle voice can be described as being connected with non-canonical control properties of the subject.

1.3. Towards a working definition of the middle voice

As I have discussed in sec. 1.2, scholars have offered different definition of middle voice. Some of these definitions are language-specific and simply indicate morphosyntactic devices of individual languages, as e.g. the middle voice in Ancient Greek. In other words, these are *descriptive categories* as defined by Haspelmath (2010). On the other hand, cross-linguistics characterization of the middle voice, such as Kemmer (1993), imply the use of the term as a *comparative concept*, i.e. a linguists' constructs that are useful for the purpose of cross-linguistic comparison (Haspelmath 2010).

Since this work is not devoted to a cross-linguistic study of the middle voice, I do not venture further into discussing to what extent the middle voice as described by Kemmer can be rightfully considered a *comparative concept* à la Haspelmath (2010).⁵

It is however useful to establish a working definition of *middle voice system* for the purpose of the present work. An extensive definition of middle voice is given by Kemmer (1993: 15), who defines middle-marking languages are languages that possess a middle marker. Middle markers are in turn defined as “language-specific morphosyntactic marker[s] that appear in the expression of some cluster of distinct situation types that are hypothesized to be semantically related to one another and fall within the semantic category of middle voice.” Languages with middle markers are said to have

⁵ On the debate concerning descriptive categories and comparative concepts in linguistic typology see the papers in *Linguistic Typology* 20: 2 with references therein.

middle systems, i. e. “a set of form-function mappings in a middle marking language between the marker(s) of reflexive and middle semantics, and the situation types they express.” (*ibid.*). Kemmer’s definition combines both a formal parameter, i.e. the occurrence of a dedicated marker, and a functional one, i.e. the association with a semantically coherent domain. However, the definition risks of circularity: the middle voice is the grammatical domain encoded by middle markers, which in turn are defined as the markers that express the situation types associated with the middle voice.

I would like to propose a more explicit definition of the middle voice, combining insights from Kemmer (1993), Haspelmath (2003), Kaufmann (2007), Kulikov (2013), and Zombolou & Alexiadou (2014), among others. A language can be said to feature a *middle voice system* if it possesses (at least one) polyfunctional morphosyntactic verbal marker that displays both oppositional and non-oppositional usages. Oppositional usages are defined as those contexts in which the marker is used in opposition with some other marker (or lack thereof) and is associated with the encoding of valency changing operations such as anticausative, reflexive, passive, antipassive, reciprocal, impersonal etc. Non-oppositional usages instead refer to those cases in which an unmarked counterpart for the middle-marked verb does not exist. The distribution of non-oppositional usages is not entirely random, as non-oppositional verbs tend to occur within specific semantic classes such as spontaneous events, verbs of motion, emotion, cognition, perception, as well as naturally reciprocal and naturally reflexive events. These can be conceived as canonical functions of middle voice markers (on non-canonical non-oppositional functions see further Grestenberger 2016, 2018 and Chap. 2). To put it differently, middle voice markers are highly polyfunctional and display a complex behavior, as their occurrence is partly grammatically and partly lexically determined. In this respect, middle voice markers differ from (polyfunctional) valency changing markers, as the latter do not apply to *media tantum*.

In the following sections, I elaborate further on this definition and offer a more in-depth description of the typology of oppositional (sec. 1.3.1.) and non-oppositional usages (sec. 1.3.2). I then turn to discussing how middle voice systems as defined in this section arise cross-linguistically, and various ways in which oppositional and non-oppositional usages are historically related (sec. 1.3.3).

1.3.1. Oppositional middle verbs between voice, valency, and (in)transitivity

As discussed in the previous section, middle voice markers are in part defined by their use as valency changing devices, i.e. the encoding of voice phenomena. Voice phenomena have received extensive attention in functional typological frameworks, and the understanding of verbal voice is intimately connected with the notions of transitivity and valency, two crucial facets of verbal meaning.

Valency can be broadly understood as the number of entities involved in the verbal predication and their encoding. Theories of verbal valency differ (see Haspelmath & Hartman 2015: 45-46, Ježek 2016: 108-121 for an overview with further references), but there is a consensus that a distinction should be established between semantic and syntactic valency (e.g. Creissels 2006: 1, Götz-Vottler 2007, Kulikov 2010). As Luraghi phrase it “semantic valency refers to the number of participants typically implied in the event, whereas syntactic valency refers to the number of real constituents that a predicate needs in order to occur in a grammatically acceptable construction” (2010c: 228). As we shall see below, such a distinction is also crucial in the definitions of valency changing operations, as they may operate on different valency levels.

The notion of transitivity has many affinities with valency. The concept of transitivity has prominently featured in the debate on verbal semantics and its definition has far-ranging implications for the understanding of the facts of languages, since “in many languages [...] the transitivity relationship lies at the core of most grammatical processes” (Hopper & Thompson 1982: 1). Definitions of transitivity can be sorted out into formal, semantic, and pragmatic ones (see Kittilä 2010 and references therein). I briefly recall here the tenants of formal and semantic approaches. Formal approaches define transitivity in syntactic terms, based on the number and the encoding of verbal arguments. Transitive verbs are defined as those that require two arguments, i.e. a subject and a direct object, as in e.g. *John fixed the roof*, whereas intransitive verbs are unable to take a direct object **John arrived the gift* (cf. Ježek 2016: 108). In this respect, formal definitions of transitivity overlap with syntactic definitions of valency. As pointed out by Kittilä (2010: 348), formal approaches view transitivity as a property of individual verbs, and they set up a strict binary distinction between transitive vs. intransitive verbs.

Semantic approaches instead characterize transitivity as a bundle of different semantic components, as discussed in the groundbreaking work by Hopper & Thompson (1980). Such definitions focus on the semantics of events, in terms of e.g. lexical and grammatical aspect, modality, dynamicity, as well as on the features of the participants, including their number, agency, affectedness, and individuation (cf. e.g. Croft 2012). In these approaches, transitivity is viewed as a scalar notion, and verbs can be more or less close to a prototypical transitive event, that is, “a verbal event in which a human entity (an Agent) acts volitionally, exerting physical force on an inanimate definite entity (a Patient) which is directly and completely affected by that event” (cf. Kemmer 1993: 50; see further Givón 2001: 93 and Næss 2007). As Givón rightly observes (*ibid.*), a consequence of such parametric approach to transitivity is that operations that reduce a verb’s transitivity may affect any of these parameters, e.g. they can indicate decrease in the Agent’s agentivity, decrease in the Patient’s affectedness, or decrease of telicity/perfectivity.

Cross-linguistic research has also considered the extent to which the lexical semantics of predicates can be used as a predictor for their syntactic behavior in terms of transitivity. Pioneering research by Tsunoda (1985, see now 2015), has suggested that verbs meaning e.g. ‘break’ or ‘kill’ cross-linguistically tend to display transitive syntax, and thus behave as good proxies for the prototypical transitive event, whereas, verbs such as ‘sit’ and ‘live’ tend to be associated with intransitive syntax. These tendencies can be further systematized into implicational hierarchies, in which individual verbs and semantic classes can be ranked according to their likelihood to display transitive syntax (see Haspelmath 2015, Aldai & Wichmann *forthc.* with references).

As I have mentioned, early approaches to transitivity and valency hold the view that these constitute properties of verbs. A different perspective, whereby valency is considered a property of clauses rather than verbs, has been advocated by Levin & Rappaport Hovav in several publications (e.g. 1995, 2005). What characterize Levin & Rappaport Hovav’s approach is that verbs are grouped together into valency classes based on the types of clauses that they can occur in, i.e. based on the syntactic alternations in which they are involved. This work has paved the way for large-scale investigations of valency classes in the languages of the world, i.e. classes of verbs that display the same behavior concerning their distribution in language-specific argument structure constructions (cf. Malchukov & Comrie 2015; see Haspelmath & Hartman 2015 for an overview on the methodology). Even though not directly related, this approach has many affinities with Construction Grammar approaches to argument structure, in which valency is regarded as a property of argument structure constructions and not of individual verbs (cf. Goldberg 1995, 2006, Croft 2001; see further Croft 2012 for an elaborate account of clausal structure and argument realization).

Study on transitivity and verbal semantics have also brought to light the existence of a cross-linguistic noticeable divide among intransitive verbs. Based on the syntactic behavior of their subjects, intransitive verbs can be grouped into *unaccusative* and *unergative*. Unaccusativity is a complex notion that cannot be done justice to here (see Ježek 2016: 108-111 for an overview; phenomena that relate to unaccusativity have also been discussed under the name of *split intransitivity*, see e.g. van Valin 1990, Bentley 2006, *fluid intransitivity*, cf. Creissels 2008, and *semantic alignment*, cf. Donohue & Wichmann 2008). However, since it has often been discussed in relationship with the middle voice, especially in works in IE linguistics (cf. sec. 1.2.2.), I find it useful to provide here a brief overview of approaches to unaccusativity.

The terms *unaccusative* and *unergative* were first introduced in formal linguistics to describe the fact that the subject of a group of intransitive verbs syntactically behaves as the object of transitive verbs (cf. Perlmutter 1978, Burzio 1986). Syntactically, unaccusativity has been shown to surface in various ways in the languages of the world, and several language-specific diagnostics have been

developed to assess the grouping of intransitive verbs (see Zaenen 2006 and Creissels 2008: 145-146 for an overview). For example, in Italian tests to distinguish unaccusatives from unergatives notoriously include *ne*-cliticization and auxiliary selection (see e.g. Ježek 2003, Bentley 2006). As we will see more diffusely in sec. 1.5.4, in Hittite diagnostics for unaccusativity include auxiliary selection in perfect constructions and the syntax of clitic subjects (Garrett 1996). Further study has shown that verbal classes that can be grouped according to the diagnostics for unaccusativity/unergativity tend to be semantically coherent (see Levin & Rappaport Hovav 1995). As Ježek puts it:

“Unaccusative verbs tend to express changes of state of the subject (*disappear, redden, dry*); changes of location of the subject associated with directed motion (*arrive, leave*); states (*remain, own*); instantaneous happenings (*occur, happen, take place*). Unergative verbs, on the other hand, describe voluntary actions (*swim, sing, dance*); bodily processes (*shake, breathe, cry*); manners of motion (*run, walk*), and others.”
(Ježek 2016: 111)

Nonetheless, it must be stressed that language-internal and cross-linguistic variation exists as to whether specific verbal meanings receive unaccusative encoding. As already observed by Rosen (1984: 61-62), similar meanings can be differently lexicalized in the world’s languages: whereas *morire* ‘die’ is unaccusative in Italian and *sudare* ‘sweat’ is unergative, the reverse pattern occurs in Choctaw (Muskogean), whereby *illi-* ‘die’ is unergative and *laksha-* ‘sweat’ is unaccusative. Indeed, the cut off between unaccusative and unergative encoding is language- and even construction-specific, and different factors concur to determine it (cf. e.g. van Valin 1990, Sorace 2000, and Bentley 2006 on Italian). In this respect, it seems more appropriate to conceive unaccusativity as a gradient category featuring a core of stable unaccusative verbs and a fringe of verbs whose treatment as unaccusatives is more fluid (cf. Sorace 2000).

So far, I have discussed attempts by researcher to characterize the behavior of verbs in terms of their valency and (in)transitivity. As is well known, much research has also been devoted to investigating how languages encodes variations in verbal valency, i.e. voice phenomena (see among others Dixon & Aikhenvald 2000, Givón 2001, Kazenin 2001a, 2001b, Shibatani 2006, Creissels 2006, Kittilä 2010, Kulikov 2010, Malchukov 2015 and references therein; for an overview of the treatment of voice phenomena in formal frameworks see Alexiadou *et al.* 2015). As discussed by Kulikov (2010), verbal voice can be understood as a systematic means to encode changes in verbs’ valency, with various effects. Voice alternations can be broadly distinguished into four groups:

valency-increasing strategies, in which an argument is added to a base clause type (causative, applicative), valency-decreasing (passive, anticausative, antipassive, object incorporation, impersonal), valency-rearranging, in which object and subject positions are swapped (inverse, applicative), and argument-identifying strategies (reflexive, reciprocal). Notably, voice operations can be combined: for example, passives can be made out of derived causative verbs (see Chap. 2 sec. 2.3.2; see Creissels 2006: 12ff. on the combination of voice operations). According to Givón (2001: 92), voice phenomena can also be distinguished based on whether they are primarily semantically or pragmatically driven. In his view, operations such as reflexive and reciprocal affect the semantics of the event, because the event encoded by e.g. a reciprocal verb is semantically different from its transitive counterpart. By contrast, passives, antipassives, and inverse voice constructions operate on the level of pragmatics because they denote the same event as their transitive counterpart but profile it from a different perspective, and their occurrence is driven by discourse concerns of e.g. reference tracking and relative topicality of participants (Givón 2001: 93 with extensive references). In addition, valency changing operations differ as to the layer of verbal valency that they affect. As pointed out by Kulikov (2010), valency changing operations can operate on the level of syntactic valency only: in this case, the argument structure construction of the verb is altered, but the inventory of participants entailed by the event and their semantic role are left unaltered. This is the case of the passive voice, as I discuss in sec. 1.3.1.2. Alternatively, valency changing operations can affect the deeper level of the verb semantic structure, by altering the number of participants in the lexical representation of the event: a case in point is the anticausative, as I discuss in sec. 1.3.1.1.

It is important to keep in mind that valency changing alternations of the type discussed in this section can be altered in the course of time, to the effect that marked and unmarked forms of the same verb coexist but they cannot be synchronically analyzed as instantiating any productive voice pattern. Kulikov (2009) discusses a number of such cases in Sanskrit. Compare active *śap* ‘curse’ vs. middle *śāpate* ‘swears’ and active *śā* ‘sharpen’ vs. middle *śīśīte* ‘is to nimble’. In both verb pairs, one finds active and middle forms of the same verbal root, but the two cannot be related by any kind of valency operation. This situation arises when one of the two members of a transitivity alternation undergoes a semantic change so that its meaning cannot be transparently derived from its counterpart anymore, thereby making the pattern of voice alternation increasingly opaque. In the case of the Sanskrit examples, both middle verbs go back to previous productively derived true reflexives, i.e. *śāpate* ‘swears’ < * ‘curse oneself’ and *śīśīte* ‘is to nimble’ < * ‘sharpen himself’ (Kulikov 2009: 82). I follow Kulikov (2009) and describe cases such as these in Hittite in terms of *lexicalization* of the middle voice (for discussion on the term *lexicalization* see among others Brinton & Traugott 2005 and Traugott & Trousdale 2014: 32-35 with references).

In the remainder of this section, I provide a more in-depth description of the typology of those valency changing operations that are relevant for the description of the Hittite middle voice as a valency changing device. Valency changing operations discussed are anticausative (sec. 1.3.1.1.), passive (sec. 1.3.1.2), reflexive (sec. 1.3.1.3), and reciprocal. In section 1.3.1.5, I further elaborate on the similarities and differences among these functions, and also address the role of labiality in the encoding of these valency operations (sec. 1.3.1.6).

1.3.1.1. Anticausative

Anticausativization represents the inverse of a causative construction (Dixon & Aikhenvald 2000: 7). The anticausative is a valency reducing strategy that operates on the verbs' semantic and syntactic valency, to the effect that a Subject (Agent) is removed from the event frame and the Patient is promoted to Subject of the resulting intransitive verb (Creissels 2006: 9, Kulikov 2013: 272). In other words, “the causative verb meaning includes an agent participant who causes the situation, whereas the inchoative verb meaning excludes a causing agent and presents the situation as occurring spontaneously” (Haspelmath 1993: 90; for further discussion on the semantics of spontaneous events in terms of entropy see Kulikov 1998). In cognitive linguistics, the anticausative alternation is understood to correlate with different conceptualizations of the same event in terms of force dynamics (cf. Croft & Cruse 2004: 66).

Alternations that fall under the domain of anticausativization are typically exemplified in English by the intransitive use of otherwise transitive verbs such as *the boy broke the vase* (causative) vs. *the vase broke* (anticausative). Alternations of this type have been thoroughly investigated both in functional (see Nedjalkov & Sil'nickij 1969, Haspelmath 1987, 1993, Nichols *et al.* 2004, Levin & Rappaport Hovav 1995, Haspelmath 2016 among others) and formal frameworks (see *inter al.* Schäfer 2008, Alexiadou 2010, Alexiadou *et al.* 2015 with references). Besides *causative* and *anticausative* (cf. Haspelmath 2016), verb pairs that undergo causative alternations also go under the name of *causative* vs. *inchoative* (e.g. Borer 1991, Haspelmath 1993), *induced* vs. *plain* (Nichols *et al.* 2004), or *causal* vs. *non-causal* (Haspelmath *et al.* 2014).⁶ Note that, since anticausative verbs are intransitive verbs that encode a spontaneous event undergone by a non-controlling Patient, they are

⁶ It should be noted that the terms *causative* and *anticausative* are sometimes not used in a semantic sense to indicate externally induced vs. spontaneous events, but also refer to the pattern of morphological marking. In these approaches, the term *causative* is used for externally caused event with special encoding, whereas the term *anticausative* refers to a spontaneous event with special encoding (see Haspelmath 2016: 37 and references therein). In this work, I employ the term *anticausative* in the semantic sense, without any implication as to the codings of anticausative verbs.

often equated with spontaneous events (Kemmer 1993) or *unaccusatives* in Levin & Rappaport Hovav's (1995) terms (see e.g. Haspelmath 2016), but the two are not coextensive, since anticausatives are by definition those verbs that are opposed to a causative counterpart in a transitivity alternation, whereas, as is well known, intransitive unaccusatives and spontaneous events need not have a causative counterpart (for a more elaborate discussion on the distinction between anticausatives and pure unaccusatives see e.g. Alexiadou *et al.* 2015, esp. pp. 80-96).

In formal approaches, the distinction between causatives and anticausatives lies in their syntactic structure, and not in the complexity of the event as a whole. As pointed out by Alexiadou and associates "causatives and anticausatives do not differ in terms of event complexity or event decomposition, but only in the presence vs. absence of a layer introducing the external argument" (Alexiadou *et al.* 2015: 18).

Even though "cross-linguistically, the core verbs that participate in the causative alternation are verbs of change-of-state and verbs of change-of-degree" (Alexiadou *et al.* 2015: 53), one observes that anticausative verbs actually display different aspectual construal (see sec. 1.5.1.2) and include activities, e.g. *The wheel spins*, accomplishments, e.g. *The snow melted*, and achievements e.g. *The door opens* (see further Cennamo 2012 and Cennamo *et al.* 2015 on aspectual constraints on anticausativization).

Limitations exist as to the verbal classes that can be involved in anticausative alternations (see Cennamo *et al.* 2015: 680-681 and Alexiadou *et al.* 2015: 52-56 for discussion and further references). As first indicated by Haspelmath (1987: 12), verbs such as *cut*, which entail the presence of *agent-oriented meaning components*, hence including "actions [...] which imply specific instruments or methods" (Haspelmath 1993: 94), are excluded from the anticausative alternation (see also Levin & Rappaport Hovav 2005: 11; see Kulikov 1998 for a different view). In other words, verbs that lexicalize a manner component (cf. Rappaport Hovav & Levin 2010) do not participate in the anticausative alternation. Moreover, it has been observed that only verbs that have a thematically unspecified causer (e.g. *break*) can undergo anticausativization, whereas verbs that entail a specified causer (e.g. *murder*) cannot enter anticausative alternation (Koontz-Garboden 2009: 80-86 with further references).

Another important distinction within the class of anticausatives, which is unfortunately not always clearly spelled out, is the one between *decausatives* and *autocausatives* (cf. Creissels 2006: 10). This distinction is crucial, as it is extremely important in explaining diachronic relationships between the domain of reflexivity and the one of anticausativization, as I discuss in Chap. 3 (see sec. 1.3.3. below). Decausatives constitute the prototypical anticausative situation, as they indicate a process that occurs spontaneously without the intervention of any external force, as in the case of e.g. *melt* or *burn*. A

further distinction within decausatives has been recently suggested by Haspelmath (2016: 35-36), who distinguished between *automatic* and *costly* spontaneous events. The former occur without any external energy input, as e.g. *dry*, whereas the latter typically require an energy input of sorts, as e.g. *break*. Autocausatives, known also as *endoreflexives* (cf. Haspelmath 1987), differ from decausatives in that the process is conceived as being internally initiated by the subject, which is construed as (partly) volitional and as controlling at least the onset of the change-of-state event. To this class typically belong verbs of self-induced motion (Cennamo *et al* 2015: 680), such as *mobilize*. In other words, as pointed out by Ježek (2003) in her discussion of the Italian *si*-verbs, autocausatives can be distinguished from decausatives based on the parameter of control. It must be stressed no clear-cut line can be drawn between autocausative and decausative predicates. As a matter of fact, some predicates can be construed as either decausative or autocausative, provided that their subject participant can be conceptualize as exerting control over the event or not.

In typological studies, much attention has been paid to how languages encode alternations of the anticausative type. A systematic typological survey has been provided by Nichols *et al.* (2004), whose aim was not strictly speaking the investigation of causativization strategies *per se*, but rather the assessment of the *basic* or *lexical valency orientation* of languages, i.e. the preferred pattern of encoding the anticausative alternation.⁷ As shown by Nichols *et al.* (2004), individual languages resort to different strategies including transitivity (Fr. *fonder/faire fonder* ‘melt (intr./tr.)’), intransitivization (Fr. *se casser/casser* ‘break (intr./tr.)’), suppletion (e.g. *die/kill*), ablaut (e.g. *fall/fell*), and labiality (e.g. *break/break*). Scholars have variously explained why cross-linguistically some verb meanings tend to be expressed by basic forms more often than others (see Haspelmath 2016 for an overview with references). Early approaches have advocated a semantic explanation along the lines of Haiman’s (1983) principle of economy (see also sec. 1.3.1.3): verbs that indicate events that are more likely to occur spontaneously require heavier encoding when they indicate the causative counterpart, whereas verbs that lexicalize typically causative events need heavier coding when they refer to the spontaneous event. A different approach, in which individual verbs’ frequency is used to explain cross-linguistic asymmetries in the encoding of the anticausative alternation, has been recently advocated by Haspelmath (2016).

⁷ The study of basic valency has also yielded interesting results in IE linguistics. Studies on individual IE languages or branches include Old Church Slavic (Nichols 2006), Sanskrit (Kulikov 2009), Hittite (Luraghi 2012), Gothic (Ottosson 2013), Old Norse and Latin (Cennamo *et al.* 2015), Proto-Germanic (Plank & Lahiri 2015), and Homeric Greek (Sausa 2016). As argued in these studies, ancient IE languages display a system in which a number of derivational transitivity strategies coexisted alongside the use of voice opposition, a situation that can be to some extent reconstructed for Proto-Indo-European (Luraghi *forthc.b*).

1.3.1.2. Passive and impersonal

Dixon & Aikhenvald (2000: 7) define the prototypical passive through the following criteria:

- i. Passive applies to an underlying transitive clause and forms a derived intransitive
- ii. The underlying O becomes S of the passive
- iii. The underlying A goes to peripheral function, and can be optionally omitted
- iv. There is some explicit formal marking of the passive construction

Dixon & Aikhenvald's definition is primarily syntactic in nature, and underscores the fact that passives operate on syntactic valency, by reducing the number of verbal arguments without affecting the inventory of semantic roles associated with the verb (cf. Kulikov 2010). Object to subject promotion is considered a key property of prototypical passives, but less canonical passives may lack object promotion altogether (Abraham 2006: 3). As is well known, the Agent of the passive can either be expressed by an oblique phrase, or it can be omitted altogether. Languages vary greatly with respect to the preference accorded to explicit vs. implicit agents, with several factors conspiring in determining the occurrence of explicit agents as well as their morphosyntactic realization (see Siewierska & Bakker 2012 for an overview with further references). However, a clear trend emerges, whereby agents are preferably omitted across languages, and when they occur, they are typically "agentive, specific and lexical as opposed to pronominal" (Siewierska & Bakker 2012: 181).

In functional terms, the passive can be primarily considered an Agent-demoting or defocusing strategy, whereby "an external causer, usually human, is understood to exist, but is pragmatically deemphasized" (Kemmer 1993: 147; on demotion see further Solstad & Lyngfelt 2006). This is why the passive is often regarded as a pragmatically motivated voice operation (e.g. Givón 2001). Though this definition of a prototypical passive is largely uncontroversial (cf. Shibatani 1985, 2006, Haspelmath 1990, Kazenin 2001a, Creissels 2006, Kulikov 2010, Siewierska & Bakker 2012, Malchukov 2015 among many others), not all language-specific constructions interpreted as passives in the languages of the world share all these features (see Creissels 2006: chap. 23 for the discussion of other types of passives; see Siewierska & Bakker 2012 on the distinction between prototypical vs. canonical passives). Constructional types dedicated to the encoding of the (prototypical) passive are varied, and the domain of passive voice shows a good deal of cross-linguistic variation (see Haspelmath 1990 and Sansò 2006 among others). In languages that feature more than one passive construction, these are not always fully equivalent, but rather tend to show preferences for specific semantic types: for example, Fried (2006) argues that in Czech and Russian reflexive passives are

mostly employed as event foregrounding devices, whereas *be*-passive are rather result-centered (see also Sansò 2011 for similar observations on Italian periphrastic and reflexive passives).

One construction that is often recognized as instantiating a less prototypical passive situation goes under the name of *agentless passive*: in this construction, the A argument cannot be expressed as oblique, but its presence is still entailed (see further Siewierska & Bakker 2012, Keenan 2013). A special type of the agentless passive is the so-called potential passive, labelled *facilitative middle* by Kemmer (1993), which indicates the potentiality of the subject to undergo a given process and often adds a habitual reading, as in *the book sells well* (as discussed in 1.2.1. in generative tradition, the label *middle* is reserved for this construction). Also, since the passive focuses on the object undergoing the event denoted by the verb, it is most suitable to be used to refer to the state attained by the object as a result of such process, thereby showing affinities with resultatives (Dixon & Aikhenvald 2000: 8).

A finer-grained description of passive constructions has been recently set forth by Sansò (2006, 2010). As Sansò argues, even though the passive voice as a whole can be characterized as expressing Agent defocusing, passive constructions in fact appear in different discourse contexts, and passive forms are used by speakers to manage a wide range of discourse related phenomena connected with information structure, such as establishing topic chains and introducing new referents/events in discourse.

Specifically, Sansò (2006, 2010) convincingly argues that cross-linguistically passive constructions can be used to encode three different situation types: *patient-oriented processes*, *bare happenings*, and *agentless generic events* (examples below are from Sansò 2006 and come from the Italian version of Umberto Eco *Il Nome della Rosa* and its English translation).

Patient-oriented processes instantiate the prototypical passive function, in which a two-participant event is profiled from the perspective of the Patient (note however that passive constructions are by no means limited to Patient participants, as there exist languages that allow passivization of other semantic roles, such as e.g. Recipients and Locations, cf. Siewierska 1984: 28-92). In these cases, a definite and specific Patient participant is promoted to subject of the clause, because it is more salient than the Agent from a discourse perspective. Since the Patient is already given in the discourse context, it can be easily expressed by an anaphoric pronoun rather than by a full NP, and from a discourse perspective, the main function of such passive forms is either to introduce new topical referents or to signal participants continuity by establishing topic chains focusing on the Patient. This situation is exemplified in (1). Here, a passive form is used to create a topic chain and establish participant continuity of the discourse topic, viz. Benno (Sansò 2006: 238-239).

(1) *Perché Bencio è giovane, è **stato nominato** aiuto quando Malachia era ancora vivo*

“Because Benno is young, and **he was named** assistant while Malachi was still alive.”

Bare happenings differ from patient-oriented process inasmuch as they conceptualize the event in a way such that none of the participants is focused and the entire event is characterized by low saliency. In this case, the passive construction focuses on the coming about of a new event, and the Agent participant is considered irrelevant to the point that the Patient is promoted to subject even though it lacks any specific topical feature. As a consequence, the Patient is generally new to discourse and is therefore mostly encoded as a full NP. Consider the passage in (2) as an example. Here, the passive forms in boldface indicate the coming about of events new to discourse, in which the patients are not particularly individuated and there is no explicit mention of possible agents (Sansò 2006: 241).

(2) *Così la fede dei semplici **venne irrisa**, i misteri di Dio **furono sviscerati***

“So the faith of the simple **was mocked**, the mysteries of God **were eviscerated**.”

As discussed at length by Sansò (2006), *patient-oriented processes* and *bare happenings* are alike to the extent that they refer to individuated events, and this is reflected by the tendency of these constructions to occur in realis and perfective contexts. In this respect, they both contrast with *agentless generic events*. According to Sansò, the latter are situations in which not only is the Agent left unprofiled because of its low saliency, but the entire event is conceived as generic, hence their frequent occurrence in irrealis contexts and their association with habituality and imperfectivity, as in example (3). Notably, the facilitative middle function is grouped by Sansò together with agentless generic events.

(3) *Negli anni in cui scoprivo il testo dell'abate Vallet circolava la persuasione che **si dovesse scrivere** solo impegnandosi sul presente*

“In the years when I discovered the Abbé Vallet volume, there was a widespread conviction that **one should write** only out of a commitment to the present.”

Based on the patterns of encoding of these three functions in the languages of the world, Sansò (2010) suggests organizing them in the semantic map displayed in Fig. 1.



Patient-oriented processes ——— Bare happening ——— Agentless generic event

Figure 1: A first-generation semantic map for passive constructions (from Sansò 2010: 297)

A final note is in order concerning the relationship between passive and impersonal constructions. As already observed by Sansò (2006), bare happening and agentless generic event can also be encoded by constructions other than the passive, which are often labelled ‘impersonal’. Impersonal constructions can be generally defined as “constructions lacking a referential subject” (Siewierska 2008), and the operation of impersonalization can be defined as “the process of filling an argument position of a predicate with a variable ranging over sets of human participants without establishing a referential link to any entity from the universe of discourse” (van der Auwera *et al.* 2012: 123). Impersonal constructions are problematic within the framework of valency changing operations, as they do not easily fit into any of the four main types (Malchukov 2015: 102). In principle, they can be grouped together with Agent demoting strategies, but as a matter of fact constructions discussed under the label of ‘impersonal’ often differ greatly from one another (cf. Bauer 2000; for a full-fledged typology of impersonal constructions see Malchukov & Ogawa 2011, Siewierska & Papastathi 2011, and van der Auwera *et al.* 2012).

Even though functionally akin in some respect, it is important to stress that passives and impersonals are not fully equivalent. Syntactically, impersonal constructions as defined by van der Auwera *et al.* (2012: 123) differ from passives in that the latter always have a referential Patient subject. Even in the case of agentless generic events, the generic participant is by definition not encoded as one of the arguments of the verb but at best as an oblique agent phrase, whereas the hallmark of impersonalization is the occurrence of a generic argument. Moreover, impersonals can also be built on intransitives, whereas passives are restricted to transitive verbs. Since the Hittite middle voice is only marginally connected with the encoding of impersonal situations (see Chap. 2), I do not wish to elaborate further on the distinction between passive and impersonal constructions, and I find Sansò’s (2006) a fully adequate model to describe the passive use of the middle voice in Hittite.

1.3.1.3. Reflexive

Reflexive is commonly described as an argument-identifying valency operation: as Faltz (1977: 34) observes “the essence of a reflexive is coreference” (for a useful overview with particular reference to ancient IE languages see also Puḍḍu 2005). Drawing from Faltz (1977) and Geniušienė (1987), Kemmer (1993) semantically describes the “archetypal reflexive context” as a simple clause

expressing a two-participant predication in which one participant is a human Agent or Experiencer and the other a Patient or a Stimulus, and in which the two participants refer to the same entity. In other words, the reflexive is “a derivation that encodes the referential identity of the main argument of the initial structure and some other argument” (Kulikov 2013: 268). As Kazenin (2001b: 916) points out, this situation type is grammatically relevant because it often receives a dedicated encoding. Languages tend to avoid using two or more coreferential full NPs within one clause, so that coreference between participants tend to be signaled by dedicated constructions. Cross-linguistically, different strategies are employed to encode reflexivity (see already Faltz 1977). These can be broadly distinguished in two groups, based on whether they affect the verb’s valency or not. First, coreference can be encoded through the substitution of one of the coreferential NPs with a dedicated pronoun, which fills in an argument slot of the verb. Alternatively, the coreferential NP can be deleted altogether and the verb receives special marking of sorts (cf. Dixon & Aikhenvald 2000: 11, see Kazenin 2001b and König & Gast 2008: 10-11 for the discussion of various possible configurations). In the latter case, the reflexive strictly speaking acts as a valency reducing strategy, as Kulikov remarks (2013: 268), since the resulting clause is syntactically intransitive.

Two different situation types fall within the domain of reflexivity (cf. Kazenin 2001b: 918). The first situation, known as *direct reflexive*, is the one in which the Agent and the Patient arguments are coreferential, as in *John hits himself*. This situation type is often assumed to constitute the prototypical reflexive situation (Kemmer 1993, Creissels 2006). A less prototypical function is the so-called *indirect reflexive* situation, in which the Agent is coreferential with a Recipient\Beneficiary, as in e.g. *John bought himself a new car* (Kemmer 1993: 46, Kazenin 2001b: 918). The indirect reflexive is also sometimes referred to as *self-benefactive* or *auto-benefactive* (Kulikov 2013: 270). Notably, if a language has a verbal reflexive dedicated to the encoding of direct reflexive situations, the same strategy can also encode indirect reflexive, but there is no language in which only an indirect reflexive marker exists and the direct reflexive does not receive dedicated encoding (Kazenin 2001b).

When the reflexive construction is syntactically realized with a dedicated pronoun, it has been observed that this pronoun might be associated with intensifiers/emphatic pronouns. In particular, as discussed by König & Siemund (2000: 41), two patterns are cross-linguistically relevant: either reflexives differ from intensifiers, and the two can be combined (It. *sé* vs. *stesso*, combined in *sé stesso*) or the two functions are expressed by the same form (Eng. *X-self*). In the latter case, it is the syntactic distribution that disambiguates between the two functions. Notably, if in a language the reflexive marker covers both reflexive and intensifier functions, the same marker will not be used to encode other de-transitivizing domains. The reason behind this polysemy is that intensifiers, and in particular the ones defined as *exclusive intensifiers*, “evoke alternatives to the focus referent [...] and

exclude those alternatives as possible values of the relevant predicate” (König & Siemund 2000: 47). As a consequence, intensifiers of this type can be used in contexts in which speakers normally do not expect coreference between two arguments of a transitive verb (e.g. *kill*, where the killer and the victim are prototypically distinct), to overly mark the unexpected coreference. This usage paves the way to the development of reflexive pronouns, which arise in contexts in which they are pragmatically required to negate the speaker’s coreference expectation (see Ariel 2008: chap. 6).

Expectation of coreference has also been widely investigated with respect to the distribution of reflexive markers on reflexive proper and related domains (see further sec. 1.3.2), with the ultimate aim to distinguish the reflexive from the middle domain. As is well known, a language may feature more than one ‘reflexive’ marker, and when this is the case, the two often differ as to their morphophonological complexity and in their distribution. These have been referred to as light vs. heavy reflexive markers, or also SE- vs. SELF-reflexives (cf. Kemmer 1993, Alexiadou *et al.* 2015: 70). This pattern can be illustrated by comparing Russian, English, and Italian examples in (4) to (6).

(4) Russian (from Haspelmath 2008: 40)

a. *Vanja moet-sja*

“Vanja washes himself.”

b. *Vanja nenavidit sebja*

“Vanja hates hiself.”

(5) English

a. *John shaves*

b. *John hates himself*

(6) Italian

a. *Marco si lava*

“Marco washes himself.”

b. *Marco si odia*

“Marco hates himself.”

In Russian and in English, a distinction exists between those verbs that receive light or no marking as e.g. ‘wash’ and ‘shave’, as opposed to those verbs that receive more complex or overt marking, as in the case of ‘hate’. By contrast, languages such as Italian employ the same marker to encode both situations. The coding asymmetry between SE- and SELF-reflexives as in (4) and (5) as often be interpreted as the reflex of distinction between the reflexive and the middle domain, and has been variously explained.

Haiman (1983) first suggested that this pattern is motivated by economy (see Kemmer 1993: 60), whereby heaviness of coding correlates with expectedness of information. SELF-reflexives are said to receive heavier marking because they derive prototypical reflexives based on two-place transitive verbs. By contrast, SE-reflexives apply only to verbs that are inherently or naturally reflexives, i.e. verbs in which the reflexive component is already conveyed by the predicate's lexical semantics, and as such this information needs less overt coding. To put it differently, SELF-reflexives indicate *coincidental* coreference, whereas SE-reflexives indicate *expected* coreference (cf. Calude 2017: 606). It is thus somewhat misleading to label both classes of verbs as 'reflexive': as a matter of fact, only heavily marked SELF-forms are dedicated to the encoding of grammatical (in)direct reflexives proper, whereas light SE-marking rather belongs to the middle domain, as it covers situation types such as verbs of grooming and body care (cf. Kemmer 1993). The distinction between the two groups is also a semantic one: true reflexives establish coreference between two fully distinct participants, whereas grooming and body care verbs indicate part-to-whole relationships (cf. Holvoet *et al.* 2015: 185). Moreover, the two groups show a different distribution: whereas all SELF-reflexives by definition stand in opposition to a non-reflexive counterpart, SE-reflexives do not necessarily need a corresponding transitive verb, i.e. they can be *media tantum*, as in e.g. It. *arrabbiarsi* 'get angry'.

Haiman's (1983) view has proven highly influential in the literature. For example, König and Siemund, who employ the terms *extrovert* and *introvert* terms respectively, state that "the more complex strategy tends to be used for the more remarkable (i.e. other-directed) situation; the less complex strategy tends to be used for inherently reflexive verbs and for non-other directed situations" (2000: 62). The problem however remains as to how to distinguish reflexive proper from related situations in languages in which the two receive the same encoding, as in Italian, and whether simply looking at the verb lexical semantics in the terms of Kemmer's situation types is a sufficient diagnostic.

In Haiman's approach, predictability of coreference between the participant is invoked as the key element to explain asymmetries in coding such as the ones observed in (4) and (5), but what precisely counts as predictability has received less discussion (see Haspelmath 2008 with references). The role of predictability has been more seriously addressed by Haspelmath (2008) and Ariel (2008). Adopting a frequentist perspective, the two authors independently reach very similar conclusions: it is speech frequency of certain predicates in specific constructions, and not real-world frequency of the relevant situations, that triggers the expectation of non-coreference and consequently the need for overt marking for coreference. Later on, as pragmatic markedness is progressively lost, this pragmatically motivated pattern can be routinized and turned into a structural pattern (Haiman 1998, Ariel 2008: 249ff.). To put it differently, in order to assess whether a verb classifies as a prototypical reflexive

cannot be simply predicted from a verb's lexical meaning, but should be rather assessed with empirical quantitative data.

1.3.1.4. Reciprocal

Cross-linguistic research carried out in the last decades has increasingly unveiled the complexity of the reciprocal domain: reciprocals encode a wide array of different semantic configurations, and several constructions exist for their encoding, both within and across languages (cf. Nedjalkov *et al.* 2007, König & Gast 2008, and Evans *et al.* 2011; see Inglese 2017: 959-963 for a recent overview with further references).

The prototypical reciprocal is a situation involving at least two participants, labelled *reciprocants*, that (i) are in the identical reverse relation to each other, (ii) perform two identical semantic roles each (Kemmer 1993: 95ff., Nedjalkov 2007a: 6-7). In other words, reciprocals are predicate of the type N1 V N2 that can be rephrased as N1 V N2 and N2 V N1 (Creissels 2006: 30), and typically indicate a simultaneous, inverse, and symmetric relationship between the two participants (Evans *et al.* 2011: 31, Cuzzolin 2015). Less prototypical reciprocal situations include situations in which more than two participants are involved (Kemmer 1993: 98), and situations in which only one of the participants actually perform the act denoted by the base verb (e.g. *They wake up each other*, termed *pseudo-reciprocal* in Nedjalkov 2007a: 26, see also Evans *et al.* 2011: 11). As a matter of fact, the semantic domain of reciprocal constructions is varied and covers several configurations, based on the number of participants involved, the direction of the relationship between them, and the temporal structure of the event in terms of sequentiality and simultaneity (see Dalrymple *et al.* 1998, McGregor 2000, Plank 2008: 352–53, Maslova 2008, and Majid *et al.* 2011). It appears that these semantic types are also relevant for linguistic encoding (cf. Maslova 2008). As convincingly argued by Evans *et al.* (2011: 19), the view that reciprocal construction can all be accounted for by an abstract and general reciprocal meaning is unwarranted (*contra* e.g. Dalrymple *et al.* 1998). Rather, the reciprocal domain should be conceived as a network of closely related and yet different situations. Another important semantic distinction between reciprocal situations concerns their lexical semantics: reciprocal verbs can be distinguished into *spatial* reciprocals (e.g. *separate*, *be near*) and *non-spatial*, or *proper*, reciprocal situations (Nedjalkov 2007a: 13, 69 ff.).

Reciprocal situations may be encoded by various constructions cross-linguistically. As Evans *et al.* put it there exists “[an] exuberant range of constructional types for encoding reciprocals” (2011:16). Various classifications of reciprocal constructions have been proposed in the literature. One of the first systematic classification has been proposed by König & Kokutani (2006), who build

on Faltz's (1977) structural typology of reflexive constructions. This classification has been further elaborated by Nedjalkov (2007a, 2007b), König & Gast (2008), and Evans *et al.* (2011: 15-16), among others.

Building upon Kemmer's (1993: 96-97, 100-108) observation that a distinction can be established between reciprocals proper and natural reciprocal events, Nedjalkov (2007a) further elaborates on this point, and suggests distinguishing *grammatical* vs. *lexical* reciprocals. In grammatical reciprocals, a reciprocal event is derived from a two-participant event, by establishing a symmetric and inverse relation between the two participants. Lexical reciprocals instead can be defined as "items whose meaning is not a mere sum of the meaning of the base and the meaning 'each other'" (Nedjalkov 2007a: 14). This class includes three sub-types: (i) cases of *reciproca tantum*, i.e. those reciprocal that lack a corresponding non-reciprocal base; (ii) lexicalized reciprocals that have a corresponding non-reciprocal base but whose semantics is unpredictable given the basic meaning of the verb in the transitive construction (cf. Japanese *naguru* 'hit' > *naguri-a-u* 'fight' Alpatov & Nedjalkov 2007 ex. 68); (iii) verbs without a reciprocal marker with reciprocal semantics (e.g. *argue*, *fight*). Even though setting up a valid cross-linguistic class of natural reciprocals has proved a difficult task (Evans *et al.* 2011: 9), the distribution of lexical reciprocal is nonetheless not entirely random, as they usually include verbs of general symmetrical relationships (e.g. *be similar*), spatial relationships (e.g. *be far*), and human social relationships (e.g. *be enemies*). What these verb classes share is their connection with the notion of symmetry (cf. Knjazev 2007, Dimitriadis 2008).

Other classifications concern the constructional types dedicated to the encoding of reciprocal situations. Nedjalkov (2007b) groups reciprocal constructions based on their morphosyntactic status into syntactic, morphological, and clitic strategies. Morphological reciprocals, that is, reciprocals encoded through verbal morphology alone, tend to behave as a valency reducing strategy (see also Kulikov 2013: 269), and often share the shape of reflexive morphemes (on the reflexive/reciprocal polysemy see extensively Nedjalkov 2007c, Maslova 2008, Heine & Miyashita 2008).

Two further syntactic parameters according to which reciprocal constructions can be classified are diathesis and continuity. Diathesis is intended here following Nedjalkov (2007a: 54-69) as the syntactic role of the reciprocants. Subject-oriented reciprocals encode a reciprocal relationship between the subject of the clause and either the direct object (direct reciprocals, e.g. *Mary and John kissed*) or the indirect object (indirect reciprocals, e.g. *Mary and John sent themselves letters*). Moreover, a reciprocal relationship can also be established between two participants that behave as direct objects (object-oriented reciprocals, e.g. *Mark mixed coffee and milk*). Other diathesis configurations that involve participants that are not verbal arguments include possessive, adverbial, and irreversible reciprocals. It should also be remarked that a correlation exists between diathesis

configuration and constructional type, to the extent that morphological reciprocals tend to be restricted to the encoding of argument-oriented reciprocals only (Nedjalkov 2007a: 64).

Discontinuity refers to whether the two reciprocants are encoded in the same syntactic position in a *simple* construction, be it either by means of a plural noun or by means of coordinated NPs (e.g. *Mark mixed coffee and milk*), or one of the two participants is encoded by means of an oblique NP in a *discontinuous* construction (e.g. *Mark mixed coffee with milk*). As discussed by Allan (2003: 52-53), simple and discontinuous constructions can be understood as expressing different construals of the same event.

1.3.1.5. Passives, reflexives, anticausatives and how to distinguish them

In the previous sections, I have outlined a typology of four basic valency changing operations, and I have provided theoretically clear-cut definitions of the notions of reflexive, reciprocal, anticausative, and passive. Unfortunately, the facts of language are more complex, and it is not always an easy task to tell these functions apart in the analysis of real texts. This is a problem especially when analyzing the behavior of syncretic middle voice markers, which are by definition polyfunctional and encode a cluster of detransitivizing functions (cf. Givón 2001: 91, Kulikov 2013: 265). It is therefore useful to recall here the main differences that exist among the different valency changing operations, and possible diagnostics that allow us to assess which function a given middle verb performs in discourse.

The first issue concerns the delimitation between passives and anticausatives. Passives and anticausatives share the promotion of an underlying (Patient) object to subject position but they differ in their treatment of the Agent. As Comrie (1985: 326) puts it “passive and anticausative differ in that, even when the former has no agentive phrase, the existence of some person or thing bringing about the situation is implied, whereas the anticausative is consistent with the situation coming about spontaneously”. In formal frameworks, this difference is interpreted in terms of the presence of a layer introducing an external argument or lack thereof (see Alexiadou *et al.* 2015).

Thus, in theory, passive and anticausative are syntactically distinguished, since licensing of explicit oblique agents is only available to true passive and not to anticausatives. However, in practice determining whether a given verb is an anticausative or an agentive implicit passive can be difficult, and only the context can suggest the more appropriate interpretation, as Kulikov (2013: 272-273) points out. In particular, whereas the occurrence of oblique agent provides unambiguous evidence for passive function (even in the case that object promotion is lacking, cf. Abraham 2006: 3), lack of an agent phrase is by no means compelling evidence for anticausative meaning (Kulikov 1998: 140).

Syntactic tests to distinguish passives from anticausatives have been developed especially in formal approaches (see Alexiadou *et al.* 2015: 20-23 for discussion with references; see Gianollo

2014: 980-981 for the application of similar criteria to Latin). Besides the occurrence of oblique agents, which goes under the name of *by*-phrases licensing, the following tests can be mentioned. Passives, as opposed to anticausatives, are compatible with purpose clauses, they license instrumental PPs, and they can occur with agentive adverbs (e.g. *deliberately*; cf. also Siewierska & Bakker 2012: 164-165). By contrast, anticausatives can occur with *by-itself* adverbials, and license *from*-phrases that encode the cause component of the event (see Alexiadou *et al.* 2015: 36-44). Unfortunately, these tests are often of limited or no use when analyzing a dead language such as Hittite, as it is not an easy task to retrieve the appropriate contexts from the limited corpus evidence.

Finally, passives display a wider lexical base to which they apply as compared to anticausatives: whereas virtually every transitive verb can have a passive counterpart, only a semantically restricted class of transitive verbs can be construed as anticausative, i.e. those characterized by the absence of agent-oriented meaning components (Haspelmath 1993).

Let us turn now to the distinction between anticausatives and reflexives. From a syntactic point of view, reflexives pattern with passives as opposed to anticausatives in that neither alter the semantic valency of the event, but only affect the number of arguments of the verb (cf. Kittilä 2010: 360). Functionally, anticausative share features of both reflexives and passives. On the one hand, anticausatives as defined by Haspelmath (1993), i.e. spontaneous events, are closer to passives than to reflexive, as they both prototypically feature a non-controlling Patient subject. On the other hand, reflexives and anticausatives share an important semantic property, i.e. the lack of an instigating agent external to the verbal event. Clearly, this is not the case for passives, where the entity is conceptualized as undergoing an event initiated by an external Agent.

The feature of control is often considered a distinctive feature of reflexives proper as opposed to anticausatives (cf. Ježek 2003 on Italian). Indeed, anticausatives indicate a spontaneous event, whereas reflexives by default indicate an event initiated by a controlling Agent which is coreferential with the Patient. The systematic association of reflexivity with control can be further tested by the possibility of reflexives to occur with *himself* forms (see Calude 2017 for discussion): *the boy hit himself* vs. *the ship sank *itself*.

The picture is however not as clear: as a matter of fact, the feature of control only allows a distinction between reflexives and anticausatives. The problem remains as to how can one successfully distinguish reflexives from anticausatives, as both feature a controlling (animate) agent. This fact is well known: as Plank & Lahiri observe “the divide between a half-way genuine reflexive, perhaps with attenuated referential force, and a middle [i.e. anticausative] marker may be tenuous” (2015: 6).

Even though the classification of individual verbs as either reflexives or anticausatives might prove a difficult task, there are nevertheless well-grounded reasons to keep the two notions distinct.

In the first place, as argued by Kaufmann (2007: 1682), the reason to treat intransitive readings of verbs such as *move* or *turn* as autocausative rather than as reflexive proper is that these verbs also allow inanimate subjects (and therefore a nonagentive reading). Therefore, reflexives are those verbs that are only compatible with an animate controlling subject, whereas anticausatives are not so restricted.

In Kemmer's (1993) approach, anticausatives also differ from reflexives in that the two entail different degrees of event elaboration. In her account, reflexives establish coreference between fully distinguishable Initiator and the Endpoint participants, whereas anticausatives conceptualize the event as unary. In other words, "the reflexive implies a conceptual differentiation of a referential entity into discrete conceptual subparts, whereas the middle [i.e. anticausative] is lacking in this differentiation" (*ibid.* 72).

Evidence of this distinction also comes from coding patterns of autocausatives as opposed to reflexives. Indeed, as already hinted at in sec. 1.3.1.3, whereas some languages employ the same morphosyntactic encoding for the two groups (e.g. It. *muoversi* 'move (intr.)' and *colpirsi* 'hit oneself'), there exist languages in which the two groups are expressed differently. A case in point is English, where anticausatives can be encoded through lability (see 1.3.1.6), as in e.g. *move* (tr./intr.), whereas proper reflexives are never labile and must receive over encoding by means of *himself* phrases, e.g. **The boy hit* vs. *the boy hit himself*.

1.3.1.6. Valency change and lability

As already observed, valency reducing operations can be variously encoded in the world's languages. A broad distinction can be established between overt strategies, i.e. those that employ a dedicated valency changing marker, and labile strategies, i.e. those in which a change in valency is not overtly marked.

In typological and descriptive works, the term *lability* is usually employed to describe those verbs that "can show valency alternation, i.e. change in syntactic pattern, with no formal change in the verb" (Kulikov & Lavidas 2014: 871; see also Letuchiy 2009 and Creissels 2014 for a more elaborate definition; labile verbs are also termed *ambitransitive*, cf. e.g. Malchuckov 2015: 108). Most often, the term *labile* is used with reference to verbs that can be used either transitively or intransitively, as in examples (7) and (8):

- (7) a. *The wind broke the window*
b. *The window broke*
- (8) a. *The dog bites the man*

b. *The dog bites*

The verb pairs in (7) and (8) instantiate different types of lability: in both cases a transitive verb is used intransitively, but the two differ as to which participant is retained as the subject of the intransitive form. Example (7) instantiates the so-called *Patient-preserving lability (P-lability)*, as the patient of the transitive verb is retained as subject of the intransitive verb, while (8) constitutes an example of *Agent-preserving lability (A-lability)*, in which the agent subject of the transitive verb is retained as the only participant of the intransitive counterpart. P-lability has been extensively studied as one of the means to encode the anticausative alternation cross-linguistically (cf. Haspelmath 1993, Nichols *et al.* 2004, Creissels 2014), whereas A-lability has been often discussed in connection with “indefinite object deletion” (e.g. Allerton 1975: 214), and can also be understood as a type of antipassive lability (cf. Sansò 2017). As pointed out by Letuchiy (2009: 224-225) and Malchuckov (2015: 108-113), beside A- and P-lability, labile verb pairs can also be associated with other valency changing alternations, including reflexive, reciprocal, passive, and converse lability. These types are not however equally well represented in the languages of the world: whereas A- and P- lability constitute a relatively widespread phenomenon, reciprocal and reflexive lability is usually constrained to so-called inherently reciprocal and reflexive verbs, e.g. *hug* and *shave* respectively, and passive lability is extremely rare altogether, being attested only in a few languages of Africa (cf. Letuchiy 2009: 225). Note that despite the wealth of studies dedicated to aspects of lability in synchrony, the diachrony of lability has so far received comparatively less attention (but see the papers collected in Kulikov & Lavidas 2014).

1.3.2. Non-oppositional middle verbs

As discussed in 1.3, the hallmark of middle voice systems is that alongside oppositional usages associated with valency changing operations such as the ones discussed in 1.3.1, they also feature a more or less copious class of middle-marked verbs for which an unmarked counterpart does not exist and that do not synchronically enter in any pattern of transitivity alternation (Kazenin 2001b: 922).

Before proceeding to discussing the nature of these middle verbs, a terminological note is in order. As already mentioned, this group of verbs has been variously labelled. In traditional IE linguistics, these verbs are known as *media tantum* (cf. Delbrück 1987). Following the established tradition in Latin grammars, some authors have also termed these verbs *deponents* (cf. Kemmer 1993: 22 and *passim*; see Flobert 1975 for the history of this term; in more recent theoretical linguistic research, the term deponency has been used with references to all kinds of forms that feature some sort of form-function mismatch, see papers in Baerman *et al.* 2007 and Müller 2013 for a comparison of various

formal approaches to deponency). In this this work, I follow Grestenberger (2016: 105-106), and keep the term *deponent* distinct from the broader term *media tantum*. The latter is a cover term for all non-oppositional middle verbs, whereas the former is restricted to indicate those *media tantum* that display transitive syntax. Note also that I use the terms *media tantum* and non-oppositional middles interchangeably.

Non-oppositional middles have often been treated as marginal within valency-oriented approaches to the middle both in functional (e.g. Creissels 2006: 29) and formal approaches (e.g. Alexiadou *et al.* 2015). The reason is that whereas the use of the middle voice with valency reducing function can be motivated by a productive synchronic valency alternation, there is no straightforward motivation as to why certain non-oppositional verbs should occur in the middle voice. As Alexiadou *et al.* state in discussing the patterns of encoding of lexical anticausatives:

“there is actually no coherent lexical semantic or conceptual reasoning available as to why an individual verb (or verbal concept) in an individual language shows up in one or the other class [i.e. marked, unmarked, and optionally marked anticausatives]. This in turn means that, at a synchronic level, the membership in the three classes needs to be stipulated (i.e. learned by children) and cannot be derived from any lexical-semantic considerations.” (2015: 65)

Nevertheless, even though one cannot predict the morphological encoding of individual verbs based solely on their lexical semantics, cross-linguistic research has shown that non-oppositional middle verbs show a certain degree of regularity in their usages, and if a language displays non-oppositional middle verbs, these tend to fall into specific semantic classes (cf. Kemmer 1993, Kazenin 2001b: 923, Zombolou & Alexiadou 2014). As already discussed in sec. 1.2.3, the following semantic classes are taken by Kemmer (1993) as being recurrently associated with middle morphology cross-linguistically: grooming verbs, change in body posture, (non-)translational motion, emotion, emotive speech action, cognition, perception, spontaneous event, indirect middle, and natural reciprocal.

Kemmer offers an elaborate account of how and why these situation types are associated with middle marking. To sum up, in her view, the reason why speakers group these situations together under the same morphosyntactic marking is that they all display a reduced degree of elaboration of events as compared to prototypical two-place transitive situations. As an example, of her reasoning, let us consider the sub-domain made up of grooming actions, change in body posture, non-translational and translational motion situations. All these situations can be described as actions carried out by human (or at least animate) entities either on or through their body, and hence “tend to

be conceived as unary of atomic actions” (Kemmer 1993: 58). These semantic types fall between two- and one-participant events, with grooming actions being more like two-participant events (some can be even construed transitively, as in e.g. It. *lavarsi* ‘wash oneself’ vs. *lavarsi le mani* ‘wash one’s hands’) and translational motion being more like one-participant events (see full discussion in Kemmer 1993: 67 ff.). The types can be arranged along the following cline, based on the increasing participation of the Endpoint and on the consequent decrease of the distinguishability between the two participants: *grooming actions* > *change in body posture* > *non-translational motion* > *translational motion*.

As discussed in sec 1.2.3, other attempts to describe the class of *media tantum* as a consistent semantic class include e.g. Kaufmann (2007), who groups *media tantum* together on the ground of the common feature of lack of control.

As I have mentioned in sec. 1.2.3, Kemmer provides the first ever systematic account of the behavior of *media tantum*, but her work is not without problems. Indeed, a description of the *media tantum* based exclusively on their lexical semantics is not entirely satisfactory, as it does not explain why similar meanings are treated differently within and across languages. This is a well-known problem in the description of the IE *media tantum*. A good case in point are lexical reciprocals, which are one of the middle situation types identified by Kemmer (1993). A survey of ancient IE languages shows that there is no semantically principled way to tell whether a lexical reciprocal will have active or middle morphology, both within, and across languages. For example, the meaning ‘fight’ is expressed in Latin by the active verb *contendo* as well as by the middle verb *proelior*. The same variation can be observed if one compares different IE languages. A case in point is the meaning ‘agree’, which is encoded by active *concordo* and *omologéō* in Latin and Ancient Greek respectively, but by a middle verb in Sanskrit, i.e. *sammanyate* ‘agree’.

The existence of lexical reciprocals brings about a more general issue that is not explicitly addressed by Kemmer (1993), that is, among non-oppositional verbs one surprisingly finds predicates with reciprocal and anticausative meaning. Middle marking with these verbs is often explained by recurring to the notion of ‘inherent’ or ‘natural’ meaning, but it remains unclear why they lack a non-middle counterpart altogether. Clearly, whatever their origin and their status, these verbs provide the natural bridge between oppositional and non-oppositional usages of the middle voice.

1.3.3. Middle voice systems in diachrony

Studies on middle voice systems have mostly focused on the synchronic analysis of the polysemy of middle voice markers. Diachronic investigations in the domain of the middle voice have received comparatively less attention, to the effect that nowadays there exists no comprehensive diachronic

typology of middle voice systems. The reason, as Kemmer (1993: 197) puts it, is partly that “many verbal middle markers [...] are so grammaticalized in all their occurrences across a particular family that no diachronically prior function can be stated with confidence”. Establishing a well-grounded diachronic typology of middle voice system is clearly a task that goes beyond the scope of the present work. In this section, I will only limit myself to discussing possible trends in the development of middle voice systems as reported in the literature, in order to better understand the analysis of the diachrony of the middle voice in Hittite in Chap. 3.

Since middle voice systems can be defined as systems in which the same morphosyntactic encoding is dedicated to both oppositional and non-oppositional verbs, the chief diachronic question is how these two groups can be diachronically related. Unfortunately, scholars’ attention has focused more on the development of valency changing markers and their possible sources, and less on their relationship with the *media tantum*.

Cross-linguistic studies dedicated to individual function include, to name but a few works, Haspelmath (1990), Heine (2002), and Wiemer (2011) on the passive, Haspelmath (1987, 1993) on the anticausative, Koenig & Siemund (2000) and Schladt (2000) on reflexives (see also Heine 2005 for an interesting overview on the rise of reflexive markers in creoles), Heine & Miyashita (2008) and Kulikov (2014) on reciprocals, and Janic (2015) and Sansò (2017) on antipassives. These studies have shown that valency changing markers arise from cross-linguistic recurrent paths of grammaticalization out of several different sources (see also Kulikov 2010: 397 and Malchukov 2015 for useful overviews). The development of valency changing markers can be conceived as a two-step process. To begin with, individual lexical sources can undergo a process of primary grammaticalization and be reanalyzed as a means of indicating one valency changing operation (cf. Lehmann 2016, Hopper & Traugott 2003; for a more extensive discussion on grammaticalization see also Chap. 3. sec. 3.3.3). These processes are well-documented and include e.g. passive constructions developing out of verbs meaning ‘eat’, ‘fall’, or ‘get’, reciprocals out of nouns meaning ‘friend, comrade’, or reflexives out of words for body or soul (see Heine & Kuteva 2002 for discussion with extensive references).⁸ Once grammaticalized into valency changing markers, these items can undergo further development (i.e. secondary grammaticalization; for this term see Breban 2014, 2015 and discussion in Chap. 3 sec. 3.3.3) and be extended to the encoding of others valency changing

⁸ It should be remarked that apparently identical developments that recur cross-linguistically may actually be the result of different mechanisms of language change, and also depend on the shape of the individual languages’ grammatical system. See e.g. Verstraete (2008) for discussion on the different mechanisms underlying the similar development of nouns meaning ‘person’ into reflexive markers in Paman languages.

operations. Secondary grammaticalization of this type is not random. For instance, there is evidence that reflexive markers can develop into anticausatives and eventually into passive markers (cf. Haspelmath 1990, 2003 among others), and reflexives typically serve as the basis of reciprocal constructions as well (cf. e.g. Heine & Miyashita 2008). All in all, cross-linguistic data robustly points towards the reflexive function as the most likely grammatical source for other valency reducing strategies. As a matter of fact, the reverse development from passive to reflexive is virtually unattested (see Dik 1983 for a possible example of this development in Uto-Aztecan languages), and the shift from passive to anticausative has been shown to occur only under a restricted set of circumstances, that is, in those discourse contexts in which passives with generic agents can be reanalyzed as encoding spontaneous events (cf. Kulikov 2011 for discussion of Sanskrit data). The development of reciprocal markers into anticausatives, even though it has been documented for Oceanic languages (see Lichteberk 2000, Moysse-Faure 2008, 2017, Janic 2016) and Turcic (Gandon 2013), remains to our knowledge relatively uncommon.

As already mentioned, the systematic relationship between oppositional valency changing and non-oppositional usages of middle voice markers remains an understudied topic. In principle, two diachronic scenarios are conceivable: either oppositional functions extend to the encoding of the *media tantum*, or the *media tantum* serve as the basis of the development of oppositional functions. The first scenario has been widely discussed in the literature, at least since Geniušienė (1987) and especially Kemmer (1993). Comparing data from Romance, Germanic, and Niger-Congo languages, Kemmer reaches the strong generalization that “the diachronic path connecting the reflexive and middle uses [i.e. *media tantum*] is probably unidirectional; specifically, [...] reflexive markers can be sources of middle markers but not vice versa” (*ibid.*: 233, on the unidirectionality see *ibid.* 229-233). It must be stressed that Kemmer (1993: 197-200) acknowledges that middle markers can actually have a different origin than reflexive, but nevertheless she maintains that “middle markers from non-reflexive sources will not develop into markers of reflexive semantics” (*ibid.* 229).⁹ When reflexive markers extend to the domain of the *media tantum*, they tend to do so in an order that reflects the similarity between the reflexive source functions and the other target functions, following the cline *reflexive > non-translational motion > body care > change in body posture > translational motion > others*. As Kemmer extensively discusses, reflexive markers that undergo this development are

⁹ Other languages in which middle markers do not derive from earlier reflexive markers include for instance Creek, in which the marker originated out of an earlier auxiliary verb (Haas 1977), Na-Dene languages, in which the middle morpheme was possibly impersonal to begin with (Thompson 1996), and Pima Bajo, where the middle marker comes from a third-person pronoun *-a* which is neutral in number (Estrada 2005).

often semantically bleached to the point that a new marker dedicated to the encoding of direct reflexivity arises.

Since Kemmer’s work, the unidirectionality of the REFLEXIVE > MIDDLE development has remained widely unchallenged (cf. e.g. König & Siemund 2000, Heine 2002, Heine & Kuteva 2002, Kaufmann 2007), also owing to the fact that similar developments have been observed in several unrelated languages, such as Halkomelem (Gerdts & Hukari 2006), Na-Dene (Thompson 1996), Dogon (Culy & Fagan 2001), and Tibeto-Burman (LaPolla 1996), among many others. The same position is also held by Haspelmath (2003), who presents a semantic map of the reflexive and middle functions illustrated in Fig. 2, and comments upon it that “grammatical morphemes can only acquire new meanings from left to right on this figure”.

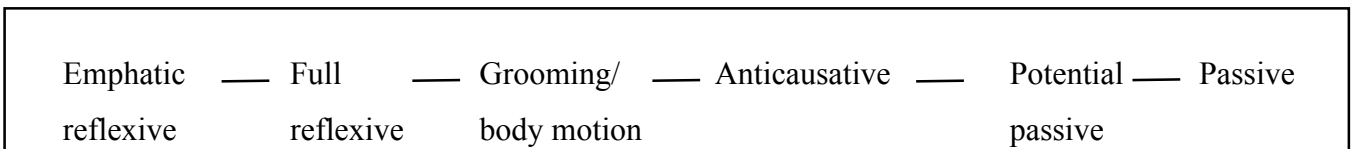


Figure 2: A first-generation semantic map for passive constructions (from Haspelmath 2003: 14)

In other words, as Kaufmann (2007: 1688) puts it, “the existence of *media tantum* in middle marking languages is a consequence of a reinterpretation of the device which derives the differential readings”, and the OPPOSITIONAL > NON-OPPOSITIONAL development is understood as driven primarily by functional similarity (cf. Givón 2001: 92), so that “once the device that derives middle stems is established in the verbal system, the function of middle morphology is generalized to marking semantic verb classes with properties similar to that of the differential [i.e. oppositional] readings” (Kaufmann 2007: 1688).

The development of the reflexive pronoun into the middle marker of the Romance, Germanic, and Balto-Slavic languages constitutes a textbook example of this cline of change and its dynamics (cf. Kemmer 1993, Puddu 2005: chap. 4, esp. 136-140). Let us consider as an example the development from Latin *sē* to Italian *si* (on which see e.g. Ježek 2003, Bentley 2006, Cennamo & Ježek 2011 with references), as described by Cennamo (1993, 1998). In short, in Latin the reflexive pronoun *sē* was mostly used in contexts of proper reflexivity, even though it could also marginally be used in conjunction with anticausative verbs already in Classical Latin (cf. Cennamo *et al.* 2015). Starting from Late Latin, two processes can be detected: on the one hand, the pronoun further spread to the encoding of anticausative, reciprocal, impersonal, and passive situations (on passive and impersonal *si* see further also Sansò 2011, Giacalone Ramat & Sansò 2012, and Cennamo 2014), thereby widening its scope as a marker of valency changing operations in opposition to plain transitive verbs;

on the other hand, it became lexically associated with a number of verbs that can be broadly described as unaccusative (cf. Ježek 2003) and falls into the classes of middle situation types described by Kemmer (1993).

I would like to point out that not only is the inverse scenario to the one envisaged by Kemmer (1993) in principle conceivable, but even though less described, it has nevertheless been documented in a few number of languages. These are cases in which, as Palancar phrase it “some middle markers develop functions that enter the realm of syntax and thus come to serve a syntactic function where the valency of the verb is increased or decreased” (Palancar 2004: 55). More research is needed to fully understand the dynamics of this second type of process. A good candidate is provided by the middle marker(s) of Bantu languages. As recently discussed by Dom *et al.* (2016), Bantu languages feature different morphemes that can be shown to cover at least some parts of the middle voice domain as described by Kemmer (1993). Among these, the Proto-Bantu derivational suffix **-ɔk-* has been shown to have an original separative meaning ‘movement out of some original position’, as also reflected by its frequent occurrence with *media tantum* that denote (non-)translational motion such as **-jídɔk-* ‘run’. Out of this core function, the suffix also extended to the encoding of spontaneous events such as **-kámɔk-* ‘dry up (intr.)’, which are prone to develop an oppositional anticausative function. In some Bantu languages, the development of the suffix was carried one step further, and in Cuwabo, it came to express canonical passive situations.

To sum up, evidence from different language families shows that two developments underlie the formation of middle voice systems. On the one hand, grammatical morphemes that are primarily employed in grammatical alternations progressively weaken their grammatical function and become lexically associated with specific classes of predicates. On the other hand, originally derivational morphemes may start being used in grammatical motivated alternations for the encoding of various valency changing derivations.

1.4. The Hittite middle voice: state of the art

In this section, I outline the state of the art in the research on the Hittite middle voice. In order to do so, I first sketch the distribution of the middle voice in the Anatolian languages (sec. 1.4.1), and then move on to a brief introduction of the Hittite language and documentation (sec. 1.4.2.). Section 1.4.3 recapitulates previous research on the middle voice in Hittite. I summarize the main findings of Neu’s work (1968a, 1968b) and address the reasons why it calls for an update. Finally, in section 1.4.4, I provide a more detailed discussion of several issues connected with the morphological history of the Hittite middle.

1.4.1. The middle voice in Anatolian languages

The Anatolian branch of the IE family includes a number of languages that are attested in the Anatolian peninsula and northern Syria from the second millennium BCE to the first and second centuries CE (on the position of Anatolian within the IE family see recently Eichner 2015, Adiego 2016 and Melchert forthcoming with references; on issues related to the origin and the arrival of the Anatolian languages in Anatolia see the up-to-date discussion in Kroonen *et al.* 2018). Languages that nowadays specialists regard as Anatolian are Palaic, Hittite, Luwian, Lydian, Lycian, Carian, Sidetic, and Pisidian. I refer to Melchert (2017) and Zinko (2017) for a brief profile of the individual languages, their geography, chronology, and sources (see 1.4.2. for a more extensive discussion of Hittite). The documentation of Anatolian spans over two millennia, and varies greatly from language to language, ranging from the extensive cuneiform corpora of Hittite in the second millennium BC to the handful of alphabetic Sidetic and Pisidian inscriptions in the late first millennium. Attempts have been made to describe the genealogical relationships between Anatolian languages in terms of traditional family tree model (e.g. Oettinger 1978), but the extensive contact that these languages underwent in historical times (e.g. Hittite and Luwian, Luwian and Lydian and Palaic [cf. Yakubovich 2010], Lycian and Carian) partly blur the picture, and suggests that the use of dialect geography may provide a more realistic description, as pointed out by Melchert (2017: 171-172) and Rieken (2017a).

Comparative evidence from Anatolian languages strongly suggests that Anatolian inherited from PIE a distinction between active and middle voice (Melchert 2017a: 188, see further Chap. 3). As an example, consider the PIE root **kei-* ‘lie’, which is continued in Hittite *kitta(ri)*, Palaic *kītar*, Cuneiform Luwian *ziyar(i)* and Lycian *sijēni* ‘lies’. In this work, I focus on the middle voice in Hittite, and leave a systematic comparison with other Anatolian languages for future study.

The middle voice in Anatolian languages besides Hittite has received little attention, also due to the scarcity of the data. Combined evidence from Cuneiform and Hieroglyphic Luwian shows that Luwian featured a distinction between active and middle endings, both in the present and in the preterite tense (cf. Neu 1968a: 209-212, Melchert 2003: 192-193, Rieken 2004, Payne 2010: 30-31).¹⁰ According to Melchert (2003: 205) “the middle voice indicates that the action of the verb is subject-oriented”. Middle verbs in Luwian include *media tantum* such as e.g. CLuw. *zī-* ‘lie’ as well as transitive deponents, such as CLuw. *aztūwari* ‘eat’. Oppositional middle forms are rare, and the passive voice is mostly expressed by a construction involving a participle (Payne 2010: 37). Traces

¹⁰ Our understanding of the Luwian middle voice is also severely hampered by the scarcity of attestations. A search in the *Annotated Corpus of Luwian Texts* reveals that only 96 tokens of middle verbs are attested against 2029 of active ones (<http://web-corpora.net/LuwianCorpus>).

of the middle voice can also be detected in Palaic (Neu 1968a: 213, Carruba 1970: 46) and Lycian (Melchert 1992a). The situation of Lydian is more complex to assess. According to Gusmani (1964: 41, 106), sporadic forms such as *ēnsarbtat* ‘is/was carved (?)’ can be interpreted as middle with passive function, but this interpretation has been called into question by Melchert (1992b). Melchert (2006) has later suggested that the Lydian ending *-t(a)λ* should be interpreted as middle (but see Kloekhorst 2012 for an alternative scenario). Finally, there is no evidence of middle verbal forms in Carian (Adiego 2010), Sidetic (Pérez Orozco 2007), Pisidian (Brixhe 2016).

1.4.2. Hittite language and texts

Hittite is the most anciently attested IE language, part of the Anatolian branch of the family. It was the main official language of the Hittite kingdom, and later on empire, which ruled over Anatolia in the late Bronze Age (cf. Hoffner & Melchert 2008: 1-3, Melchert 2017a: 172; see Bryce 1998 for a historical overview). Our knowledge of the languages stems entirely from written sources, from which a rather standardized use of the language emerges, greatly limiting our understanding of the spoken language and of its internal variation.¹¹ In other words, Hittite belongs to the ‘corpus languages’, i.e. those languages that are “no longer anybody’s native language[s] and what we can know of [them] as [...] living language[s] is to be traced in the written material still at our disposal” (Cuzzolin & Haverling 2010: 25). As a consequence, any linguistic study on Hittite is fraught with difficulties typical of historical languages, and one should always be aware that the picture that emerges from the textual documentation is partial and fragmentary to some extent (cf. Joseph & Janda 2003: 15-19).

Hittite written sources mostly consist of clay tablets written in cuneiform script, which have been recovered from the archives of Hattusa, the capital city of the Hittite Kingdom, as well as from other minor centers (Hoffner & Melchert 2008: 3). The language was first deciphered in 1915 by Czech linguist Bedřich Hrozný, paving the way for a new era in the study of IE languages and the reconstruction of PIE (for a summary of the contribution of Hittite to the PIE reconstruction see Coticelli-Kurras 2009 and Melchert 2018 with further references).

¹¹ On the origin of the Hittite cuneiform script and the rise of literacy in Hittite see e.g. van den Hout (2009a, 2009b) with further references. It appears that the language was possibly restricted to the ruling elite, and that even within this group, it began to compete with Luwian as the spoken language starting from the 14th century BCE onwards (cf. Yakubovich 2010: Chap. 5).

The extant documentation spans over several centuries. Scholars usually distinguish three chronological stages of the language: the oldest stage, Old Hittite (OH, ca. 1650-1500), followed by Middle Hittite (MH, ca. 1500-1350), and finally New Hittite (NH, ca. 1350-1180), the language of the Hittite Empire (cf. Kloekhorst 2014: 6). This tripartite chronology is admittedly somewhat artificial, as it has been partly influenced by the historiographic tradition of referring to the period between the end of the Old Kingdom and the Hittite Empire as ‘Middle Kingdom’, a concept that has nowadays generally been abandoned by historians (see Archi 2003). Broadly speaking, whereas OH and NH can be conceived as two different stages of the language with different grammatical features on various levels, spanning from phonology to syntax, MH is rather a phase in which the documentation offers evidence of a series of linguistic changes that lead from the OH to the NH situation (Melchert 2008), and that were possibly triggered, among other things, by extensive contact with Luwian speakers (Melchert 2005, Rieken 2006, Yakubovich 2010). Moreover, it remains unclear to what extent this chronology accurately reflects ongoing changes in the spoken language, or whether MH is a phase in which changes that have already taken place in the spoken varieties firstly start to be recorded in written sources. Nevertheless, for the purpose of this work, I keep in line with the traditional chronology and distinguish between OH, MH, and NH texts.

The dating of Hittite texts is a complex matter, which still fuels a lively scholarly debate. I summarize here the main positions, in order to clarify the choices that I have made in selecting the corpus employed for this work. In the first place, a careful distinction must be made between the dating of the composition, i.e. the content of a text, and the dating of the manuscript, i.e. the clay tablet on which the text is materially recorded. This distinction is crucial, because the dating of the two may diverge, as I discuss below. Compositions can be dated thanks to mention of individuals or events whose absolute chronology has been established by historians. In addition, linguistic features can also be employed to date a given composition, since it has been shown that a number of grammatical traits can be regarded as characteristic of a given stage of the language (e.g. the third person clitic pronoun =*e* is typical of OH vs. =*at* in MH and NH; see already Melchert 1977 for extensive discussion of various such features).

More important is the dating of manuscripts. Since the 1960s, the combined efforts of several scholars have led to the establishment of paleographic techniques that allow a precise dating of Hittite tablets (see van den Hout 2009a for a detailed history with references). The chief criterion is the *ductus*, i.e. the shape of individual signs (less attention has been paid to other aspects of writing practices, cf. Weeden 2011), according to which texts can be dated to Old Script (OS), Middle Script (MS), and New Script (NS), in a three-fold system that roughly matches the linguistic chronology between OH, MH, NH (scholars often disagree about the absolute dating of the individual stages and

their relationship to different *ductus* stages, cf. different proposals in Neu & Rüter 1975, Starke 1985, Miller 2004).

The development of the paleographic dating has allowed the identification of original texts, i.e. those whose composition and manuscript dating coincide (OH/OS, MH/MS, NH/NS), and has also led to the understanding that older texts were often recopied in later times, resulting in a mismatch between the linguistic and the paleographic dating (OH/MS, OH/NS, MH/NS, NH/LNS). Specifically, scholars have discovered that in copying older texts, Hittite scribes would often alter the original linguistic form of the composition, either by updating the language to more recent stages (cf. van den Hout 2006), or by erroneously inserting older traits as an attempt at archaizing the language of the composition (cf. Rieken 2001). This is why copies are often unreliable as to the original linguistic layer of a given composition, and should be handled with due care as a source of linguistic evidence.

This chronological classification of Hittite texts has greatly impacted the study of Hittite grammar. To begin with, chronological layers are now the norm in lexica (cf. *HW²*, *CHD*, Kloekhorst 2008). Moreover, corpus-based studies have flourished, either dedicated to linguistic phenomena at a specific stage of the language or to the development of linguistic traits over time (see Chap. 3 sec. 3.2 for discussion with references).

However, it must be mentioned that a series of recent studies has cast new light on the methodology and the effectiveness of paleographic dating, calling into question different aspects the well-established OS, MS, and NS distinction (Melchert 2017c). This has often resulted in a new dating of individual texts or even entire phases, especially concerning the distinction between Old vs. Middle Script (see e.g. Popko 2007, van den Hout 2009a, 2009b, 2012, Weeden 2011, Rüter & Wilhelm 2012, Goedegebuure 2014: 7-11, and Kloekhorst 2014: 6-7 with references).

Since these issues are still debated among hittitologists, in this work I adopt the more traditional dating of Hittite texts. This study is based on a corpus of original OH/OS, MH/MS, and NH/NS compositions (see Appendix for the complete list of middle verbs analyzed). The corpus is varied and features texts from different literary genres, ranging from administrative, historical, and religious texts, mythological narrations, state correspondence, international treaties, etc. (see Haas 2006 for an overview). In this respect, the corpus is at least representative of stylistic variation according to textual genres. In assembling the corpus, I have mostly followed the list of original compositions given by Goedegebuure (2014), which has been cross-checked with the dating of the texts in the *Hethitologie Portal Mainz*. In the following chapters, cases of uncertainty in the dating of individual texts are discussed with reference to the examples in the text. As anticipated above, the reason to focus on original texts only is that the distinction among data from different periods of the language allows to

establish a precise chronology of the different usages of middle verbs in the history of Hittite. In other words, a systematic dating of the examples enables a detailed diachronic analysis of the development of the middle voice in Hittite, to which Chap. 3 is devoted. This constitutes a major update as compared to Neu's (1968a) work, as I discuss in the next section.

1.4.3. The Hittite middle voice: current research and open problems

The existence of a class of verbs that inflected differently from *-mi* and *-hi* verbs and was characterized by endings in *-ri* was observed since the beginning of Hittitology (Hrozny 1915: 37 fn. 5 already compared the form *kisari* 'becomes' with Umbr. *ferar*). Following the common practice in IE linguistics, the two inflectional classes were taken as instantiating a system of voice opposition, and received the names of *active* and *middle* or *mediopassive* respectively (for simplicity's sake, in this work I only use the term *middle*). As far as its function was concerned, in early works the Hittite middle was only cursorily compared with the middle voice of Ancient Greek and Indo-Iranian, but no detailed descriptions of its functions in texts were given (cf. e.g. Kronasser 1956, Friedrich 1960).

It was only in 1968 that Erich Neu provided the first in-depth and comprehensive description of the middle voice in Hittite. Neu's work consists of two volumes. The first volume (Neu 1968a) features a full list of Hittite middle verbs, and results from a meticulous collection of middle verbs and their attestations in Hittite texts known at the time. For many verb, a brief discussion of the different meanings and passages of difficult interpretation is also given. This impressive data collection has proven fundamental for every subsequent analysis of the Hittite middle, and I have used it as a guideline in collecting my own dataset.

In the second volume (Neu 1968b), Neu provides a structured discussion of his findings. The volume consists of three main parts. The first part is devoted to the discussion of the morphology and the semantics of the Hittite verbs. Concerning the function of middle verbs, Neu first established a distinction between *media tantum* and those verbs that also have an active counterpart (Neu 1968b: 52-54). For the latter group, he provides extensive discussion of the different attested patterns of voice alternation (Neu 1968b: 54-83) and identified various possible functions of middle forms as opposed to active ones, namely transitive, intransitive, reflexive, *mediostatisch*, and passive. Generalizing over these findings, Neu proposes a four-fold distinction among stative middle (*Zustandsmedium*), process middle (*Vorgangsmidium*), activity middle (*Tätigkeitsmedium*), and passive middle. Stative middles are those middle verbs that denote a state of the subject participant, and include most *media tantum*, such as *ar-ta(ri)* 'stand' (*ibid.* 93-95). Process middles by contrast indicate processual dynamic events, and are mostly intransitive, as in *handai-ta(ri)* 'be(come) aligned'. *Media tantum* also belong to this class, as e.g. *kist-a(ri)* 'perish', as well as weather verbs and verbs of illness (*ibid.* 95-104). The class

of activity middles is made up by verbs that denote a process initiated by the subject, and by and large include verbs that Neu understands as reflexive. These are verbs such as *warp*-^{ta(ri)} ‘wash oneself’ or *munna*-^{ta(ri)} ‘hide oneself’, and they can optionally co-occur with the particle =za. Together with activity middles, Neu also groups those middle verbs that display transitive syntax such as *tuhs*-^{a(ri)} ‘cut’. According to Neu, the distinction between the three groups is also an historical one: the middle voice was originally connected to the encoding of stative verbs, and only later extended to processual and eventually activity verbs (*ibid.* 93). Finally, Neu discusses how middle verbs can also behave as passive to active transitive verbs, and can also optionally take an overt oblique agent expression.

In the second and in the third part of his book, Neu is mostly concerned with the morphological history of the middle voice. Ample room is dedicated to the discussion of the origin of the middle set of endings and its relationship to the PIE verbal system, with a specific focus on the origin of the *r*-endings (cf. 1.4.4).

Neu’s work has constituted for a long time one of the finest pieces of scholarship on the Hittite verbal system, and his treatment of the middle voice has to date remained largely unsurpassed. Proof of it be that, in their reference grammar, Hoffner & Melchert (2008: 303-305) only give a very brief description of the functions of the middle voice, and refer to Neu’s work as the only available thorough treatment of the subject.

In the 50 years following Neu’s enterprise, only a limited number of works dedicated in whole or in part to the middle voice has appeared. A sizable amount of research has been concerned with elucidating controversial aspects of the morphology and the history of the middle voice, especially concerning its PIE background (see discussion in 1.4.4 for details). In this respect, Yoshida’s treatment of the *-ri* endings should be mentioned, especially for its groundbreaking use of text dating to trace inner-Hittite developments in the distribution of the endings, as well as the historical account of middle verbs formation in Oettinger (1979) and the recent etymological treatment of individual middle verbs in the *HED* edited by Puhvel and in Kloekhorst (2008).

Much less attention has been paid to the function of the middle voice, which has enjoyed a renewed attention only in recent years. The role of the middle voice in the encoding of transitivity alternation has been investigated in recent works by Luraghi (2010a, 2012), where the author shows how the Hittite middle voice contributes to the encoding of the anticausative alternation, and points out an original connection of the middle with uncontrolled events. The interplay between the middle voice and the particle =za in the encoding of reflexivity and related domains has been the focus of Cotticelli-Kurras & Rizza (2011, 2013). Issues raised by the status and the prehistory of transitive *media tantum*, i.e. deponents, have been addressed by Grestenberger (2016). Finally, Melchert (forthc.b) provides a

useful up-to-date overview of the various functions of the middle voice, and for the first time also attempts at a sketch of diachronic distribution within the recorded history of the language.

In spite of this renewed interests, many issues about the syntax and the semantics of the Hittite middle voice and its historical development remain unsettled. In fact, whereas the aforementioned contributions provide several interesting remarks on the function of the middle voice, a large-scale account in the spirit of Neu's work is still a *desideratum*, and the present work aims at filling this gap. Indeed, our increased knowledge about both the history of the Hittite language and the typology of middle voice systems and valency changing operations has made Neu's work partly obsolete, and an update is now called for. Specifically, Neu's work can be further improved on at least two fronts: the material employed and the linguistic theoretical framework.

Concerning the material, the first step consists in including in the corpus texts that were unavailable to Neu, such as the corpus of Hittite letters retrieved at Mašat and first edited by Alp (1991). Most importantly, by the time of Neu's work, the elaboration of the techniques of paleographic dating of Hittite texts was only at its onset (see sec. 1.4.2). As a consequence, Neu's account of the middle voice remains synchronic in spirit. As I discuss in Chap. 3, the correct dating of Hittite texts turns out to be crucial for the understanding of several patterns of voice distribution. Thanks to text dating, not only can one follow the step-by-step distribution of the functions of the middle voice over time, but also many synchronic idiosyncrasies receive a well-grounded historical explanation. For example, Neu identifies a group of verbs that escape a functional explanation concerning their voice selection, as they puzzlingly attest to both active and middle forms with identical syntax and semantics. A closer look at these verbs reveals however that either voice can be shown to be historically older, as evidenced by the distribution of the relevant forms in texts dating to different language stages.

Neu's account of the middle voice can also benefit from a more up-to-date and well-informed linguistic theoretical background. For example, Neu's distinction of middle verbs into stative, processual, activity, and passive verbs lumps together aspectual and syntactic factors in the explanation of voice distribution, and overlooks a number of important differences among oppositional functions. For example, anticausatives, reflexives, and passives are not always carefully distinguished. For this reason, in this work I adopt a typological-functional perspective and provide a new description of the behavior of middle verbs along the lines of the typology of middle voice systems and valency changing operations introduced in sec. 1.3.

1.4.4. Morphological aspects of the Hittite middle inflection

Like most ancient IE languages, Hittite can be morphologically classified as a synthetic and fusional language. Finite verbal forms display a fixed structure: they are made up by a root, one or more optional derivational suffixes, and personal endings. The root carries the idiosyncratic lexical meaning of the verb (cf. Levin & Rappaport Hovav 2005). Derivational suffixes attach onto the root to form a verbal stem, and have various functions, ranging from causative *-nu-* to ‘imperfective’ *-ske/a-* (Hoffner & Melchert 2008: 175-179; see further sec. 1.5.1.3 and Chap. 2 sec. 2.3). Inflectional endings attach to roots or stems and express at once several grammatical features: tense (present, preterite), person (1, 2, 3), number (singular, plural), mood (indicative, imperative), and voice (active, middle). Specifically, three sets of endings can be distinguished: *hi-* and *mi-* endings in the active inflection and a distinct set of middle endings (Neu 1968b: 3, Kloekhorst 2008: 117-118, Hoffner & Melchert 2008: chap. 11). An overview of the middle endings is given in Table 1. In the remainder of this section, I survey a number of issues connected with the morphology of the middle voice, in order to provide the reader with some background knowledge on the (pre-)history of the middle endings and the stem formation of Hittite middle verbs.

Table 1: Hittite middle endings (adapted from Hoffner & Melchert 2008: 184)

	Singular	Plural
1	<i>-ḫḫari, -ḫḫāri, -ḫḫaḫari</i> ¹²	<i>-wašta, -waštati</i>
2	<i>-tta, -ttari, -ttati</i>	<i>-dduma, ttuma, -ttumari, -ttu(m)mat</i>
3	<i>-a, -ari, -āri, -tta, -ttari, -ttāri</i>	<i>-anta/-anda, -antari, -ant/dāri</i>
PRET. 1	<i>-ḫḫati, -ḫḫat, -ḫḫaḫat, -ḫḫaḫati, -ḫḫaḫatti</i>	<i>-waštat, -waštati</i>
2	<i>-at, -tta, -ttat, -tati</i>	<i>-ddumat, -ttumāt</i>
3	<i>-at, -ati, -tta, -ttat, -tati</i>	<i>-tati -antat, -antati</i>
IMP. 1	<i>-ḫḫaru, -ḫḫaḫaru</i>	<i>-waštati</i>
2	<i>-ḫḫut, -ḫḫuti</i>	<i>-ttu(m)mat, -ttumati</i>
3	<i>-aru, -ttaru</i>	<i>-antaru</i>

¹² Yoshida (2013; see also Villanueva Svensson 2009), observes that 1st sg. endings in *-hhaha(ri)* are mostly attested in NH texts, where they replace older *-hha* (cf. *ki-is-ha* KBo 22.2 rev. 15 OH/OS vs. *kis-ha-ha-ri* KUB 26.12 ii 9 NH/NS). Based on this distribution, he claims that *-hhaha(ri)* is a NH innovation, and that the form possibly originated in the preterite to distinguish middle forms from the corresponding active *hi-* forms. As a result, he maintains that these forms cannot serve as comparative basis for reconstructing a PIE **-h₂e-h₂e-* ending (*contra* Weiss 2009: 388-389). However, as kindly pointed out to me by Alwin Kloekhorst (p.c.), the ending *-hhaha(ri)*, with the unlenited second *-h-*, proves that the ending must be of at least of Proto-Anatolian date, as also supported by the cognate Lyc. ending *-χagã* (Melchert 1992a; but see Yoshida 2009 for an alternative explanation, whereby lenition was still operative in pre-Hittite).

As far as their morphology is concerned, the endings of the Hittite middle voice can be safely traced back to PIE (Kloekhorst 2008: *passim* for the etymology of the individual endings with further discussion, see further Chap. 4). Even though the PIE origin of the endings is hardly disputable, there is a number of issues which have caught the scholars' attention and should be mentioned here. In general, as Yoshida (2007a: 379) points out, Hittite preserves archaic features of the original middle paradigm, as compared to other IE languages, including the retention of *-r* and not *-i* as marker of the present, and the 1st person singular ending continuing **-h₂e* (cf. Kortlandt 1981) and not remade with an *m*-element, as in Greek *-mai*. More generally, the Hittite middle inflection shows a relatively low degree of analogical influence of the active voice.

According to Kloekhorst (2008: 151-152) middle verbs can be grouped into various categories, based on their inflectional type (on the PIE background of some of these types see also Villanueva Svensson 2008, 2010). The two main parameters on which this classification is made are the position of the accent and the selection of the 3 sg. *-a/-ta* ending. First, verbs can have a full-grade accented root, with the structure **CéC-o*, e.g. *pahs-ari* < **péh₂s-o* (IIIa) and *tith-^a* (IIIf), or **CéC-to*, e.g. *ki-ttari* < **kei-to* (IIIb). Conversely, when the ending is accented, one should distinguish between verbs with the structure **CC-ó*, e.g. *halzi-ari* < **h₂lt-i-ó* (IIIc), and **CC-tó*, e.g. *ar-tari* < **h₃r-tó* (III d). Notably, some verbs are difficult to assign to either class, as e.g. *supp-^{(tt)a(ri)}* < **sup-(t)ó* (IIIc/d). To these four types, one should add a sub-class of 'impersonal' verbs with the structure **CC-ó*, e.g. *tukk-āri* < **tuk-ór-i*, which consistently take *-ri* endings and are written with plene spelling of the ending. Finally, besides a number of verb of unknown etymology which resist any classification (IIIh), e.g. *tarra-*, the last inflectional class is made up of derived *-ye/a-* verbs, e.g. *kistanziye/a-^{tt(ri)}*. The inflectional types of the Hittite middle verbs are summarized in Table 2.

As discussed by Oettinger (forthc.), a correlation can be detected between inflectional classes and the semantics of middle verbs, at least in OH. Zero grade root verbs with accented endings of the **<-ó-ri* type are confined to intransitive verbs that indicate states or spontaneous change of state events. Comparison with the Skt. Type *vidé* 'is seen/visible' suggests that this formation is inherited from PIE. By contrast, transitive *media tantum* only display root accent and *-a(ri)* endings.

Table 2: Inflectional types of the Hittite middle verbs

Class	Root structure	Example
IIIa	<i>*CéC-o</i>	<i>pahs-ari</i> < <i>*péh₂s-o</i>
IIIb	<i>*CéC-to</i>	<i>ki-ttari</i> < <i>*kei-to</i>

IIIc	*CC-ó	<i>halzi-ari</i> < * <i>h₂lt-i-ó</i>
III d	*CC-tó	<i>ar-tari</i> < * <i>h₃r-tó</i>
IIIc/d Undetermined	-	<i>supp-^{(tt)a(ri)}</i> < * <i>sup-(t)ó</i>
IIIe Impersonal	*CéC-o	<i>tith-^a</i>
III f Impersonal	-	<i>tukk-ari</i> < * <i>tuk-ór-i</i>
IIIg Verbs in -ye/a-	-	<i>kistanziye/a-^{tt(a)ri}</i>
IIIh Other middle verbs	-	<i>tarra-^{tt(a)ri}</i>

Middle verbs come in a variety of different stem formation types (see the thorough treatment in Neu 1968b: 40-51 and Oettinger 1979 for a complete overview of the different patterns). Among ‘vocalic’ stems, two groups are worth noticing. In the first place, there is a group of verbs whose stem ends in a vowel *-a-*, as e.g. *tarra-^{tt(a)ri}* ‘be powerful’. These verbs do not instantiate a thematic formation, but rather constitute cases in which the 3 sg. ending *-a* has been reinterpreted as part of the stem, and the entire paradigm is reformed on the new *a*-stem (Kloekhorst 2008: 152). The second group of verbs consists of verb showing stem alternation between a consonant stem and a stem enlarged in *-i-*, as e.g. *pars(i)-^a* ‘break’, which eventually takes over in time (e.g. in OH/OS texts *pars-* occurs 4 times vs. 42 occurrences of *parsi-*). Notably, the origin of this suppletive pattern is to date unclear (cf. Kloekhorst 2008: *s. pars-*, Jasanoff 2012: 123-124). For some verbs that display voice alternation, either stem can be generalized to one paradigm, giving rise to patterns such as *halza-ⁱ* vs. *halziye/a-^{tt(a)ri}* or *hatt-^{a(ri)}* vs. *hazziye/a-^{zi}*.

Besides being attested for non-derived verbs, middle inflection can also be found with derived verbal stems (cf. Hoffner & Melchert 2008: 175-179), as e.g. *-ske/a-* verbs or causative *-nu-* verbs. I refer to Chap. 2 for a complete discussion of the interaction between the middle voice and verbal derivative suffixes.

1.4.4.1. 3rd person *-a* vs. *-ta* endings

The first issue concerns the 3rd person singular, which notoriously shows two competing forms: *-a(ri)* and *-ta(ri)* in the present and *-at(i)* and *-tat* in the preterite. As Kloekhorst (2008: 151) observes, there is synchronically no semantic difference between the two endings, but they partly stand in complementary distribution, with some verbs consistently selecting either one. For instance, some classes of verbs, e.g. *-nu-* causative and derived *-ske/a-* imperfective verbs consistently take *-ta* endings throughout the history of the language (Neu 1968b: 19-20).

As has been observed by many scholars (already Yoshida 1987: 39 fn. 3), earlier hypotheses that the distribution of *-a* and *-ta* endings is depending upon the inflectional *-hi/-mi* class of the active verb (cf. Goetze 1933: 259, Neu 1968b: 19, Friedrich 1960: 77, Kronasser 1956: 203, Yoshida 2016a: 506-507) do not withstand scrutiny, and should be discarded. To be more precise, as correctly pointed out by Melchert (forthc.b), whereas this correlation might hold for oppositional middle verbs in OH, the pattern was clearly altered by NH times.

Within Hittite, it is clear that the two endings represent different chronological layers, with the *-ta* ending being more recent and spreading from MH times onwards (cf. Neu 1968b: 19-20, Yoshida 1990: 69-71, 2007a: 382-382, 2018, Kloekhorst 2008: 151; that this is an ongoing process of replacement is shown by the fact that some *a*-verbs are transferred to the *ta*-class in the indicative but retain *a*-endings in the imperative, e.g. OH *esa(ri)* >> NH *estat* but IMP. *esaru*, Yoshida 2013: 159).

Even though both *-a* and *-ta* are considered by most scholars as inherited from the corresponding PIE **-o* and **-to* endings, there is some disagreement about the origin of this state of affair. Scholarship on the subject can be roughly grouped under two approaches (see Stempel 1996: 57-66, Villanueva Svensson 2014, Yakubovich 2014: 387-392, Yoshida 2018: 390 for discussion with further references).¹³

In the first place, Hittite *a*- and *ta*- verbs have been compared with Vedic alternating forms such as *bru-te* ‘invokes’ vs. *bruv-é* ‘is called’. Based on this comparative evidence, scholars have interpreted the PIE middle as the merger of two early voice categories, namely the ‘stative’, expressed by the **-o* ending, which displays passive/stative meaning in Vedic, and the middle proper, encoded by the **-to* ending, which shows self-benefactive meaning (see among others Oettinger 1976, Kortlandt 1981, Rix 1988, Kümmel 1996, Gotō 1997, Pooth 2000, Meier-Brügger 2010). This semantic distinction, partly preserved in Vedic only, was possibly already blurred in late PIE, in which, according to Pooth (2000: 107) forms **kei-or* and **kei-tor* stood in free variation, with individual languages generalizing either one. Evidence from this fact also comes from the distribution of the two endings in Anatolian. For example, outcomes of PIE **kei-* surface with *-ta* endings in Hittite *kitta(ri)* and Palaic *kītar*, whereas they appear with the *-a* variant in Cuneiform Luwian *ziyar(i)* and Lycian *sijēni* ‘lies’ (Melchert forthc.a). Eventually, the *-to* ending was generalized as the only middle ending in most IE languages, as in e.g. Gr. *-tai* and Lat. *-tur*, with the exception of Anatolian and Vedic.

¹³ Note further that both endings are clearly inherited in the Anatolian family. For example, outcomes of PIE **kei-* surface with *-ta* endings in Hittite *kitta(ri)* and Palaic *kītar*, whereas they appear with the *-a* variant in Cuneiform Luwian *ziyar(i)* and Lycian *sijēni* ‘lies’ (Melchert forthc.a).

This view however runs into some problems. In the first place, whereas the *-e* and *-te* endings of Vedic can be shown to be semantically distinct, one fails to observe such a semantic distinction in Hittite, where deponent transitive verbs with a highly dynamic meaning consistently show the putative ‘stative’ ending *-a* < **-o*, e.g. *pars(i)a* ‘breaks’ and *hatta(ri)* ‘hit’ (cf. already Hart 1988: 77). Moreover, as discussed at length by Jasanoff (2003: 49-51), the functional distinction between **-o* and **-to* rests on the assumption that PIE already had a distinct passive voice, but comparative evidence in support of this claim is controversial at best (see Chap. 4 for discussion).

The difficulties posed by the ‘stative’ view have led some scholar to develop an alternative approach, whereby the variation between **-o* and **-to* endings is explained as a simple process of morphological renewal. Originally, the PIE 3 sg. middle ending was likely **-o(r)*, which was later replaced by **-to* on analogy to the athematic active 3rd person *-t(i)* ending (cf. Kurylowicz 1964, Watkins 1969, Cowgill 1983, Jasanoff 2003). In other words, as Jasanoff puts it “the 3 sg. of the PIE ‘stative’ was thus a more or less transitory effect of the replacement of **-o(r)* by *-to(r)* in certain stem classes.” (2003: 51)

The issue has been more recently addressed by Yoshida (2007a, 2013, 2018) and Villanueva Svensson (2014) who both ultimately reject the ‘stative’ hypothesis. As observed by Yoshida (2013, 2018), Hittite verbs in *-a* tend to be replaced by *-ta* endings in the course of time (see further Oettinger forthc.). Specifically, as already remarked by Watkins (1969: 85 ff.) two distinct process can be detected: either *-a* forms are entirely replaced by *-ta* forms, as in the case of *suppiyahhati* (OH/OS) >> *suppiyahtari* (NS), or *-a* forms receive double characterization through the enlarged *-atta* ending, e.g. *halziya* (OH/OS) >> *halziyattari* (NH/NS). Notably, whereas *-ta* forms, even though secondary with respect to *-a* forms, can still be traced back to a morphological variation already at play in PIE, the ending *-atta* is a later inner-Hittite innovation (see Oettinger forthc. for discussion). As Yoshida (2013: 161-163) points out, a closer look at the first class of verbs shows that *-ta* forms of *a*-verbs are predominantly found in the preterite, with some verbs showing a split with the *-a* ending in the present and the *-ta* ending in the preterite. This is taken by Yoshida as evidence that *-ta* endings originated in the preterite tense on analogy of the 3rd active ending *-t* and were subsequently extended to the present. The reason why the analogy must have taken place in the preterite is that in the present the primary ending **-ti* was assimilated to *-zi* and could have not therefore provided a viable analogical model for the replacement *-a(ri)* >> *-ta(ri)*.

Similarly, Villanueva Svensson (2014) argues that the alternation between **-o* and **-to* should be explained in morphological terms. Specifically, building upon Jasanoff’s (2003: 51) observation that verbs formed with a thematic suffix consistently select the *-ta* ending in Hittite, Villanueva Svensson argues that in PIE **-o* and **-to* should be best seen as allomorphs whose distribution is based on stem

formation. The **-to* ending belonged to all thematic formations, and to nasal infix and reduplicated presents (as a matter of fact, most Hittite derived verbs in *-nu-*, *-ye/a-*, and *-ske/a-* do show *-ta* endings, see further Yoshida 2018). By contrast, the **-o* ending was found on root athematic presents, denominative **-eh₂-* factitives, *i-* and *u-* presents and root athematic desideratives. The early generalization of **-to*, which originally comes from analogy with the active athematic *-t(i)* ending, to thematic formations can be viewed as a tendency to avoid opaque endings *-e-or > ōr* (Jasanoff 2003: 51). Later on, the demise of **-o* in favor of **-to* shall be understood as being part of the more general tendency to replace athematic with thematic inflection.

1.4.4.2. The *-ri* ending

As the overview in Table 1 shows, Hittite middle endings optionally show a *-ri* in the present tense. The distribution, the origin, and the function of this element *-ri* have been a matter of fierce discussion (cf. Neu 1968: 8-12 and Hart 1988 for useful summaries of early theories on the subject and Yoshida 1990: chap. 4). Notably, the occurrence of an *-r* marker in the middle voice is a trait shared by Anatolian, Italic, Celtic, and Tocharian (cf. Neu 1968b: III), and this distribution has often been explained as the outcome of the retention of an archaic recessive trait in geographically marginal area of the IE speaking community (Clackson 2007: 143-145; for an alternative explanation of the *-r* marker as going back to the nominal inflection, see Hart 1988).

The origin of the *-ri* endings in Anatolian has been thoroughly investigated by Yoshida (1990), who builds upon Neu's (1968b: 140-142) previous observations. Concerning the distribution of *-ri* endings, already Neu (1968b: 35-38) had observed that certain environments tend to favor the occurrence of these endings, which also take over in time, becoming virtually obligatory in NH. Also, there seems to be a lexical distribution at play, in that some verbs lexically disfavor the occurrence of *-ri* endings throughout the history of Hittite.¹⁴

Based on these observations, Yoshida (1990: chap. 3) goes further and shows that in OH *-ri* endings are significantly more frequently attested with *a*-verbs than with *ta*-verbs.¹⁵ This distribution

¹⁴ Consider the data presented by Yoshida (1990: 64-66), who shows that in OH and MH texts certain predicates retain a low frequency of *ri*-forms. Among these, Yoshida lists the following (the token frequency refers to the number of total occurrences in the middle voice, the percentage to the number of *ri*-forms): *halzai-* (36 tok., 17%), *huittiya-* (8 tok., 0%), *lukk-* (53 tok., 0%), *parsiya-* (437 tok., 2%), *salik-* (9 tok., 11%), *tethai-* (6 tok., 0%), *wass-* (11 tok., 0%).

¹⁵ Based on Yoshida's count (1990: 73, the count includes 3rd person singular and plural middle forms in OH), among verbs that show *-ri*, one finds 9 *a*- vs. 3 *ta*-forms, whereas without *-ri*, one finds 15 *a*- vs. 36 *ta*-forms. Notably, this distribution shows that the correlation between *-ri* endings and *a*-verbs is statistically significant (Pearson's Chi-squared test with Yates' continuity correction, p. < 0.01)

is blurred from MH times, with *-ri* endings expanding to *ta*-verbs as well. More specifically, Yoshida observes that some *a*-verbs always occur with *-ri*, and they also happen to have *-a-* plene spelling (cf. this is Kloekhorst's class IIIf [2008: 151]). This correlation can be interpreted as the preference of *-ri* to occur after accented endings (cf. also Kloekhorst 2008: 201). If this is true, this fact contributes to shedding light on the pre-history of the *-ri* element. To sum up, Yoshida's (1990: chap. 4) diachronic explanation of the Hittite facts runs as follows: Anatolian inherited the middle *-r* marker on the 3rd person from PIE (cf. Lat. *-tur*). However, due to facts of historical phonology – final *-r* is lost in unaccented final syllables – this ending was easily eliminated, and was preserved only with a subset of *a*-verbs, which due to their accentual pattern had an accented 3rd person singular (hence the plene spelling *Ca-a-ri*). Where preserved, the *-r* element was re-characterized through the addition of the present tense marker **-i* on analogy of the active inflection, and this *-ri* ending eventually spread to the rest of the paradigm. The ongoing expansion of *-ri* to *ta*-verbs after OH should be interpreted as a tendency to uniform the middle paradigm to the active paradigm in *-i*, and was also useful to avoid ambiguity in the case of homophones such as 3rd sig. pres. mid. *tamasta(ri)* 'he is oppressed' vs. 3rd sig. pret. act. *tamasta* 'he oppressed'.

1.4.4.3. The *-t(i)* element

Besides the *-ri* enlargement, some endings also feature a *-ti* extension, as shown in Table 1.¹⁶ This is arguably an inner-Hittite development, as it is virtually unparalleled in other Anatolian languages (Yoshida 2001, Yakubovich 2006; see Rieken 2004 for a parallel phenomenon in HLuw.) The distribution and the origin of this element is today still controversial (Neu 1968b: 143-148). Synchronically, *-ti* endings appear in the preterite and also in the present, where they are confined to the 1 pl. and 2 sg./pl. person. However, as Yoshida (1987: 32, 1990: 66) remarks, preterite *-ti* endings are likely older. The present endings 2 sg. *-tati* and 1 pl. *-wastati* are attested only in NH/NS texts, and are better interpreted as a later creation based on the over-extension of the preterite *-ti* enlargement.¹⁷ As a possible motivation for this phenomenon, Yoshida (1987: 33) adduces the need to distinguish the 2 sg. *-ta(ri)* from the homophonous 3 sg. ending *-ta(ri)*, but this explanation remains quite *ad-hoc*.

Originally, *-t* and *-ti* were in free variation in the preterite, but the latter came to be associated with the present because the *-i* element was strongly connected with the present tense both in the active and in the middle *-ri* inflection, and the apocopated *-t* ending in the preterite gained ground especially

¹⁶ This element, consistently spelled *-t(i)*, most likely stand for a lenited dental (cf. Yoshida 2001, Rieken 2004, Yakubovich 2006 for details).

¹⁷ But see Yakubovich (2006: 98) for a possible *-ti* present form in OH/OS, cf. also under *suppiahh⁻ⁱ* in Part Two.

in NH (also Kloekhorst 2008: 187). For instance, the OH/OS preterite ending *-antati* as in *ki-i-ša-an-ta-ti* (OS, KBo 6.2 ii 56) is later replaced by *-antat*, as in *ki-i-ša-an-ta-at* (MH/MS, KBo 16.47 obv. 3).

Summing up, it is most likely that the *-t(i)* extension originated in the preterite, and was eventually taken over to the present tense. What remains to be explained is the emergence of the *-t(i)* element in the first place. As discussed by Yoshida (2001), the origin of the *-ti* ending has been explained in two ways. On the one hand, this item has been connected to the imperative particle **-d^hi* (Pedersen 1938: 108 ff., Kronasser 1966: 208, Watkins 1969: 78, Oettinger 1997: 413 ff.) This view is however at best at odds with the fact that **-i* is systematically lost in the imperative ending *-t* in Hittite (Kloekhorst 2008 s. *-t*). On the other hand, scholars who reject this explanation connect this item to the Anatolian reflexive pronoun **-ti* (Neu 1968b: 144 ff., Melchert 1992a: 192; also Yakubovich 2006, 2010: 199-205). According to the latter scenario, the clitic reflexive pronoun was optionally added to (preterite) middle forms and ultimately became part of the inflectional paradigm. Interestingly, this reconstruction is supported by Hieroglyphic Luwian, in which preterite middle forms could be enlarged by a *-si* element, ultimately connected with the reflexive pronoun (Rieken 2004). This solution is however not entirely without problem, as it does not explain why **-ti* did not regularly undergo assibilation, and why word-final *-i* is fully retained (according to Yakubovich 2006: 98-106, assibilation does not occur because the extension generalized the lenited variant *-di* at an earlier stage).

Notably, if this reconstruction is correct, then Hittite shows a very early grammaticalization of reflexive pronouns into a middle marker, which somewhat resemble the later use of the particle *=za* in the middle domain (cf. Yakubovich 2006). Grammaticalization is shown by the fact that the originally reflexive form undergoes semantic bleaching and starts to be used with verbs that clearly do not have any reflexive meaning, including e.g. *media tantum* such as *ki-i-ša-an-ta-ti* (OS, KBo 6.2 ii 56) ‘they became’.

1.5. Elements of Hittite grammar

This section is intended to provide the reader with some background knowledge about those aspects of the Hittite grammar that will be relevant in the discussion of the syntax and semantics of middle verbs in the following chapters. This grammatical sketch includes discussion on aspect and actionality (sec. 1.5.1), the Hittite participle and its syntax and semantics (sec. 1.5.2), alignment and argument marking (sec. 1.5.3), the system of pronominal clitics and split-intransitivity (1.5.4), and the controversial status of the ‘reflexive’ particle *=za*.

1.5.1. Aspect and actionality

As discussed in sec. 1.2.3 and 1.4.3, in studies devoted to the Indo-European and the Hittite middle voice, a connection between verbal voice and lexical aspect has often been observed. Specifically, scholars have repeatedly pointed out that the middle voice seems to be associated with verbs that denote states or atelic situations, especially as far as the *media tantum* are concerned (cf. Neu 1968b, Lazzeroni 1990), or with verbs that indicate spontaneous change-of-state events (Luraghi 2012). In order to evaluate the extent to which lexical aspect plays a role in the distribution of verbal voice, in Part Two I undertake a systematic discussion of the aspectual interpretation of the Hittite middle verbs attested in my corpus. In the remainder of this section, I sketch earlier scholarship on aspect and actionality, and briefly illustrate Croft's (2012) cognitive linguistics approach to aspect, which I follow in this work, as well as summarizing earlier research on aspect and related topics in Hittite linguistics (see also Inglese *forthc.*). Clearly, this section is not intended to provide a comprehensive discussion on possible approaches to the study of aspect, which is not the focus of the present work. Rather, it is meant as a guideline to enable the reader to easily follow the discussion on the aspectual interpretation of middle verbs presented in Part Two.

1.5.1.1. Traditional approaches to aspect and actionality: an overview

Aspect and actionality constitute two of the most debated facets of verbal semantics. Over the decades, scholars working within different linguistic traditions have provided widely different accounts of these semantic features, making the field of aspectology a particularly intricate and complex one.¹⁸

Individual approaches to aspect do differ in their details, but two major trends can be singled out. As Sasse (2002) points out, approaches to aspect can be grouped into two classes: unidimensional and bidimensional. The main feature of unidimensional approaches is that they “proceed from the assumption that there is only [...] a single conceptual dimension in terms of which aspectual phenomena [...] can be analyzed and described” (Sasse 2002: 202). Conversely, in bidimensional approaches a sharp distinction is postulated between two conceptual dimensions, which usually go under the labels of lexical aspect (also *actionality* or *Aktionsart*) and grammatical aspect respectively (see e.g. Bertinetto 1986, 2001, Bertinetto & Delfitto 2000).

¹⁸ For reasons of space, I do not enter here in the details of the history and the development of the field of aspectology. I refer the reader to Bertinetto (1986), Bybee *et al.* (1994), Sasse (2002), Tatevosov (2002), Croft (2012), and Filip (2012) for comprehensive critical reviews of earlier scholarship on the subject.

With the term lexical aspect, scholars by and large refer to the inherent temporal structure of events as lexically stored in verbal roots (see also Ježek 2016: 121-126). Since Vendler’s (1957) seminal work, verbs have been classified based on their lexical aspect into states, activities, achievements, and accomplishments (Table 3).

Table 3: Vendlerian actional classes

	DURATIVE	DYNAMIC	HOMOGENOUS	EXAMPLE
State	+	-	+	<i>Mark is happy</i>
Activity	+	+	+	<i>Mary runs</i>
Achievement	-	+	-	<i>The bomb exploded</i>
Accomplishment	+	+	-	<i>John wrote the letter</i>

As shown in Table 3, Vendler’s classification is grounded on the semantic features of duration, dynamicity, and homogeneity, and a verb’s assignment to a given class is based on a number of syntactic tests, chiefly the possibility to occur with specific temporal adverbs. Later on, this taxonomy has been further refined with the addition of new subtypes, such as ‘semelfactives’, e.g. *cough*, or ‘degree verbs’, e.g. *ripen* (see discussion in Botne 2003, Croft 2012, Bertinetto & Cividari 2015).

By contrast, grammatical aspect refers to the speakers’ viewpoint on events, and is in principle independent of the verbs’ lexical semantics. As Comrie (1976: 3) puts it “as the general definition of aspect we may take the formulation that ‘aspect’ are different ways of viewing the internal temporal constituency of a situation.”. Unlike lexical aspect, which is regarded as being stored in the lexicon, grammatical aspect is considered a grammatical property, and hence receives dedicated morphosyntactic encoding in the world’s languages. The main aspectual distinction is the perfective vs. imperfective one, which subsumes more fine-grained distinctions (e.g. habitual, progressive, continuative, all belonging to the pole of imperfectivity, cf. Bybee *et al.* 1994). Abstracting over language-specific definitions of perfective and imperfective markers, perfectivity can be conceived as an external view on an event as a whole, without explicit reference to the internal temporal constituency of a situation, whereas imperfectivity implies explicit mention of such temporal structure, so that the action is viewed from within (cf. Comrie 1976).

To sum up, in bidimensional approaches, the two dimensions of lexical and grammatical aspect are seen as being fully independent to one another. This is particularly clear in the case of activity verbs, which can be conceived as perfective, i.e. as occurring in within a limited time frame, as in *He walked for an hour*, or as imperfective, as in *He was walking*. Notably, the bidimensional approach has enjoyed a remarkable fortune in Indo-European linguistics, and has been applied to the

description of the aspectual system of different ancient IE languages (cf. Strunk 1994, García Ramón 2002, Napoli 2006, Dahl 2010, Cotticelli Kurras forthc. among others).

Despite the clear-cut theoretical distinction between lexical and grammatical aspect, bidimensional approaches often run into problems when it comes to the handling of empirical data. To begin with, whereas actionality is often considered a lexical property of verbs, it turns out that the same verb can be assigned to different actional classes based on the syntactic construction it occurs in (this phenomenon goes under the name of *aspectual hybridism*, cf. Bertinetto 1986). For instance, the occurrence of a direct object or lack thereof notoriously trigger telic/atelic readings of consumption verbs, as in e.g. *Mark eats* (activity) vs. *Mark eats an apple* (accomplishment). Moreover, the semantic features of the direct object, chiefly quantization and individuation, can also affect the aspectual interpretation of transitive verbs, as in e.g. *Mark eats apples* (activity) vs. *Mark eats an apple* (accomplishment). Another issue is the so-called *telicity paradox* (Bertinetto 2001; see Croft 2012: 77-82), whereby telicity, which in strictly bidimensional approaches constitutes a lexical feature of non-homogeneous verbs, is only realized in perfective contexts, as in *John ate an apple* (telic) vs. *John was eating an apple* (atelic).

It is not my intention here to go on further in discussing the possible shortcomings of bidimensional approaches. It suffices to say that the problems that these approaches face are partly due to the fact that they rely on a number of non-trivial assumptions. In the first place, the Vendlerian actional classes are often regarded as universal, but cross-linguistic studies have shown that this is not always the case, and that verbs that lexicalize similar meanings can be assigned to different actional classes in different languages (cf. Tatevosov 2002; see Botne 2003 for the cross-linguistic variability in the lexicalization of ‘die’). More importantly, bidimensional approaches are grounded on the more or less tacit assumption that a binary distinction between a language’s grammar and lexicon can be set up. However, the existence of such sharp grammar vs. lexicon distinction has been convincingly called into question by linguistic frameworks such as Construction Grammar, where a gradual continuum between a ‘grammatical’ and a ‘lexical’ pole is proposed instead (cf. Goldberg 1995, 2006, Croft 2001), thus calling for a more nuanced untangling of the divide between ‘lexical’ and ‘grammatical’ aspect.

1.5.1.2. Aspect in cognitive linguistics: Croft’s (2012) approach

In his 2012 monograph, Croft has laid out a new approach to aspect, framed within Construction Grammar and grounded on the tenets of cognitive linguistics (Croft & Cruse 2004). In this work, I follow Croft’s approach in the description of the aspect of Hittite middle verbs for various reasons. In the first place, it features a fine-grained inventory of aspectual type that goes beyond Vendler’s

fourfold distinction. In the second place, a notable advantage of this approach is that it frames the study of aspect into the broader field of cognitive semantics, so that various phenomena connected to verbal aspect can be explained by appealing to the principles behind different construal operations, such as metonymy and structural schematization (see below), which have well-studied cognitive bases (see Croft & Cruse 2004). Finally, Croft's approach draws upon both unidimensional and bidimensional approaches to aspect: in Croft's view, aspectual construal results from the combination of the verbs' lexical semantics with the constructions they occur in, and less attention is given to establishing the precise divide between grammatical and lexical aspect. As such, this approach is particularly suitable to describe a language such as Hittite in which aspectual distinctions display a relatively low degree of grammaticalization (cf. sec. 1.5.1.3).

In cognitive linguistics, the concepts of profile and construal play a central role in describing the structure of meaning (see esp. Croft & Cruse 2004: Chap. 3). The notion of profile refers to the assumption that "a semantic representation of a concept denoted by a word or construction must include also a presupposed, 'background' semantic structure" (Croft 2012: 11). A classic example is the difference between quasi-synonymous pairs such as *land* and *ground*, which, despite referring to the same real-world entity, i.e. 'earth', differ in their being profiled against different background, that is, *sea* and *air* respectively. Construal, or conceptualization, is another key concept in cognitive semantics. Construal can be broadly defined as a "semantic structure for an experience" (Croft 2012: 18). According to the principles of cognitive linguistics, multiple construals for a given experiences are available, that is, the same experience can be construed differently according to the speakers' needs. In language use, speakers are forced to choose one construal or another, and no construal is in principle the 'best' one out of context (Croft 2012: 14). As a cognitive operation, construal is constrained by three general principles. In the first place, speakers select a construal of an experience over another based on their goals in communication. In the second place, construal is partly limited by the nature of reality, with some real-world experiences being more easily prone than others to be conceptualized in a certain way. Finally, cultural conventions may also affect the inventory of construals available to the speakers of a community.

As an example of how construal works, consider the difference between the MASS NOUN and the COUNT NOUN construals, whereby the same real-world referent can be conceptualized as either a set of distinct countable entities or as an undistinguishable mass, as in example (9):

(9) *The leaves are pretty* vs. *The foliage is pretty*

In his book, Croft (2012: chap. 2) convincingly argues that aspect is a component of verbal semantics that is subject to construal operations. Specifically, real-world state of affairs as denoted by verbs have the potential to be conceptualized in multiple aspectual types, as already hinted by Dahl (1985: 26-27). Following this approach, verbs should not be assigned an inherent actional value, as per Vendler (1957). Instead, it should be investigated how the constructions in which verbs occur in discourse contribute to profiling the temporal unfolding of events in different ways. This is not to say that the conceptualization of events is entirely random. Individual predicates can be shown to have a default construal, i.e. a more frequent construal in discourse, the choice of which results from the interplay between the different principles that govern construal operations discussed above. Croft’s approach also adopts a usage-based perspective. This implies that because of their frequency, the different aspectual construals of a given verb may have different degree of entrenchment, i.e. conventionalization (cf. Bybee 2007), so that the study of aspectual construal becomes an empirical matter to be addressed with quantitative data (cf. Janda 2015).

Further elaborating on previous works on aspect and on cognitive linguistics, Croft (2012: 53-57) introduces a geometrical phasal analysis of aspectual types. Aspect is defined as “how events are construed as unfolding over time” on two dimensions, that is, time (*t*) and qualitative state (*q*). The former is a continuous dimension and consists of the linear unfolding of time, whereas the latter refers to the semantic properties peculiar to a predicate’s meaning, that is, a lexical constant in Levin & Rappaport Hovav’s (2005: 71) terms. The two dimensions combined provide a geometric definition of the *aspectual contour* of events, onto which particular *aspectual types* or *construals* can be profiled. To illustrate how this applies to the interpretation of individual verb, let us consider the English verb *see*. As Croft argues, this verb is associated with a single aspectual contour, onto which two alternative aspectual types can be profiled, as exemplified in (10) and illustrated in Fig. 3.

- (10) a. *I see Mount Tamalpais*
 b. *I reached the crest of the hill and saw Mount Talmapais*

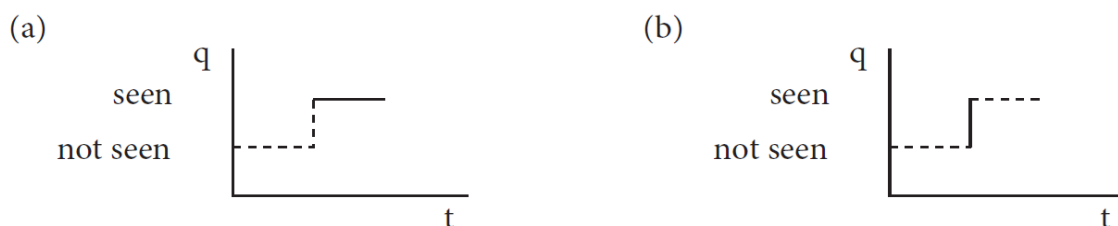


Figure 3: *Alternative profiling for English see (Croft 2012: 55)*

Croft builds upon Vendler’s original classification, as well as on subsequent refinements, and comes to a more fine-grained identification of at least eleven possible aspectual types. Since most aspectual types will be relevant in the description of the aspectual construal of Hittite middle verbs in Part Two, I briefly illustrate them here.

The first class discussed by Croft (2012: 57-59) is the class of stative verbs. Instead of a single class of states, as identified by Vendler, Croft suggests distinguishing among four types of stative verbs: transitory states, permanent states, either acquired or inherent, and point states. These types are illustrated in Fig. 4.

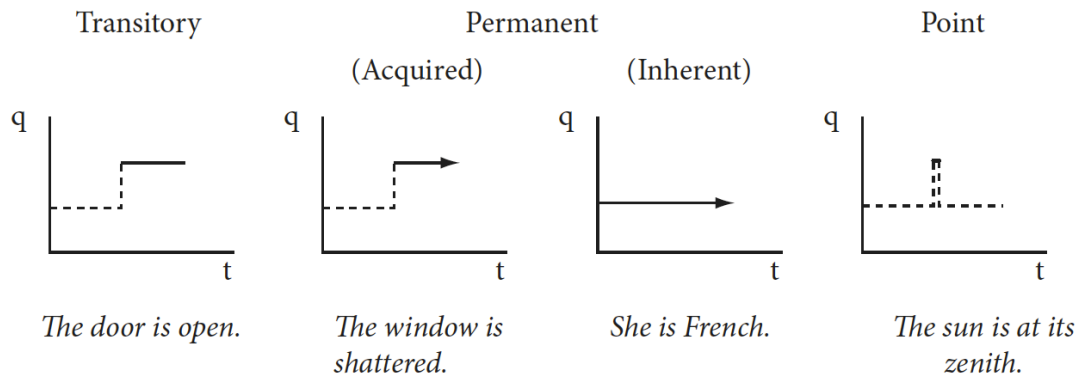


Figure 4: *Croft’s classification of stative verbs (Croft 2012: 58)*

As Croft puts it, “in states, the profiled phase is only a single point on the q dimension. The subtypes of states differ in their extension on the t dimension: a point or an interval, including intervals extending the whole relevant timeline” (Croft 2012: 59). Whereas transitory states have a specific starting point (and might also have an ending point), permanent states, which can be either inherent or acquired, hold for the life span of an entity. Point states by contrast profile a state that holds only for a single point in time.

All states, with the exclusion of inherent ones, result from a transition of sorts, and they can be paired with three corresponding types of achievements, as shown in Fig. 5: reversible, irreversible, and cyclic achievements.

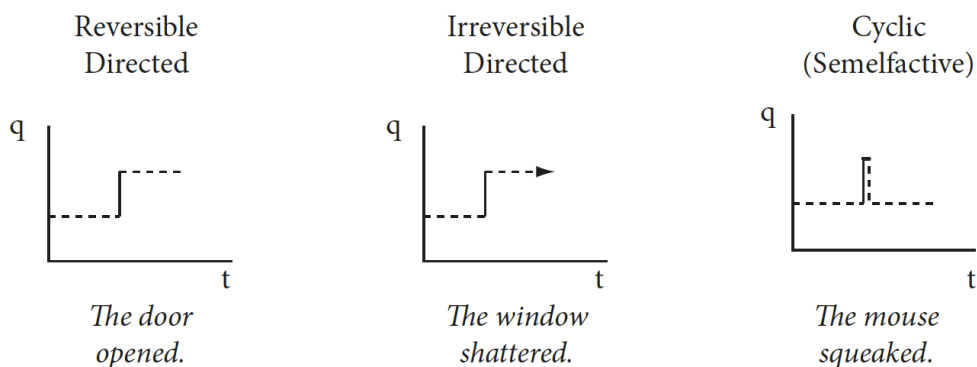


Figure 5: Croft's classification of achievements (Croft 2012: 60)

In Croft's geometrical model, achievements are defined as "transition[s] from one state to another on the q dimension at a single point on the t dimension." (Croft 2012: 60). This is a broader definition than Vendler's, as three kinds of achievement can be distinguished, which basically differ in the punctual transition being profiled against different aspectual contours: "reversible achievements result in transitory, hence reversible, result states. Irreversible achievements result in permanent, hence irreversible, result states. [...] Cyclic achievements result in point states, which then revert to the rest state." (Croft 2012: 59-60).

Activities in the broader sense are "durative, unbounded processes" (Croft 2012: 59), and are also split into two distinct sub-types: directed and undirected activities, as shown in Fig. 6.

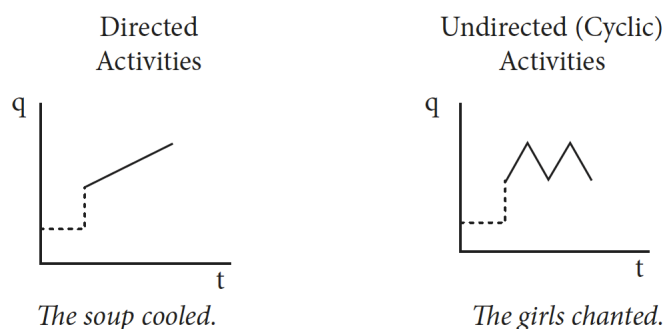


Figure 6: Croft's classification of activities (Croft 2012: 61)

Both types of activities refer to ongoing and durative processes, and profile extended phases on both the t and q dimensions. Directed activities indicate continuous and/or incremental directed changes on the q dimension, whereas undirected activities do not involve such a change (on the notion of incrementality see discussion in Croft 2012: 70-77). Directed activities can be equated to degree verbs (cf. Bertinetto & Civardi 2015). Undirected activities can also be thought of as a succession of cyclic achievements, hence the name *cyclic activities* (Croft 2012: 61).

Parallel to the two-fold distinction between activities, Croft distinguishes two types of accomplishments: incremental and nonincremental accomplishments, the latter also termed runup achievements. The two types are shown in Fig. 7.

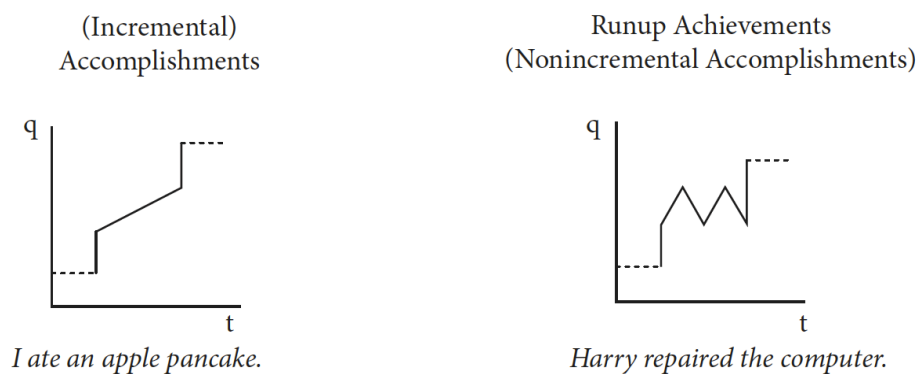


Figure 7: Croft's classification of accomplishments (Croft 2012: 62)

As Croft discusses, accomplishments can be contrasted with the other aspectual types in that they profile three temporal phases, that is, inception, change, and completion, with the inception and the completion bounding the change-of-state component. The two types of accomplishment also in relation with the incrementality of the change-of-state event and lack thereof. As such, accomplishments “represent temporally bounded versions of the two types of activities” (Croft 2012: 65).

As already mentioned above, one of the main tenets of Croft's approach is that aspectual types are analyzed as being independent from of individual predicates. Instead, the interplay between the predicates' lexical meaning and the grammatical and discourse contexts in which predicates are embedded result in different construals of the verbal event. In other words, the possibility of verbs to belong to more than one actional class, i.e. aspectual hybridism (cf. Bertinetto 1987), constitutes a structural part of Croft's theory, and is the result of alternative construals being available for the same real-world event. Drawing from usage-based approaches to language, Croft argues that whether individual verbs are more or less stably associated with a single default aspectual construal is only the result of specific patterns of usage, and is not an “a priori assumption about lexical semantic representation” (Croft 2012: 92).

The cognitive mechanisms that underlie the alternative aspectual construals of events in discourse are varied (cf. Croft 2012: 83-100 for discussion and further references), and are instances of more general conceptualization processes identified in cognitive linguistics (see Croft & Cruse 2004 for a detailed classification of construal operations).

An important construal operation is selection or metonymy, whereby “a word may be used to describe two or more concepts associated in a semantic frame” (Croft 2012: 93). For instance, metonymy is the process that allows the same predicate to be construed as either a transitory state or as a directed achievement. Consider the case of *remember* in Fig. 8, which attests to (at least) two uses that share the same aspectual contour and only differ in the profiled phase.

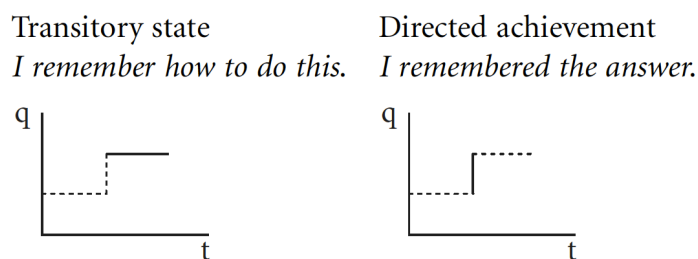


Figure 8: *Alternative aspectual construals of remember and metonymy (Croft 2012: 93)*

A second important cognitive operation that accounts for a number of aspectual shifts is *structural schematization* (cf. Talmy 1985), i.e. the process whereby “the mind construes a single complex object from seemingly fragmented perceptual sensations.” (Croft 2012: 94). Structural schematization, for instance, accounts for the alternative construals of events as either cyclic achievements or as undirected activities. This is exemplified by the behavior of the verb *light* in Fig. 9. The verb can either refer to a single or to multiple events. In the latter case, speakers may choose to construe the event as an iteration of individual cyclic achievements, or as a single complex undirected activity.

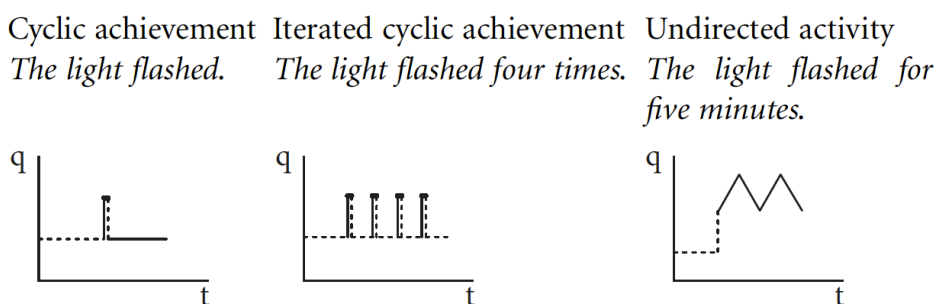


Figure 9: *Alternative aspectual construals of light and structural schematization (Croft 2012: 94)*

Processes of *scalar adjustment* also play a key role in the aspectual construal of events. Scalar adjustment can be described as the process by which entities (and events) can be conceptualized according to different degrees of granularity. Croft (2012: 95-101) discusses several possible ways in which scalar adjustment affects event conceptualization. As an example, consider the alternative

aspectual construals of *die* in Fig. 10, whereby speakers can construe the event as fine-grained, i.e. profiling a complex event including the terminal phase that leads to the punctual transition to death, or as coarse-grained, i.e. profiling only the instantaneous transition, without reference to the preceding phase (on the different conceptualizations of events of dying see also Botne 2003).

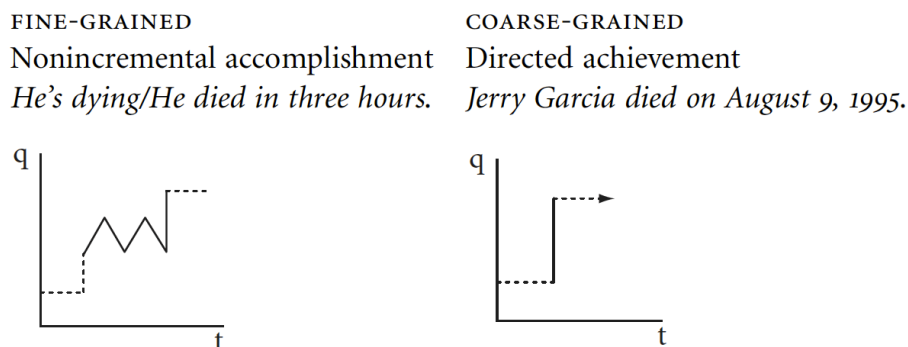


Figure 10: *Alternative aspectual construals of die and scalar adjustment (Croft 2012: 98)*

1.5.1.3. The encoding of aspect in the Hittite verbal system

Hittite, and more generally Anatolian, contrasts with other ancient IE languages in that it features a monothematic verbal system, in which all finite and non-finite forms of the verb are built on a single verbal stem, onto which derivational affixes and personal endings attach. This contrasts with the verbal system of other IE languages, chiefly Ancient Greek and Indo-Aryan, which is based on a three-fold distinction between the present, the aorist, and the perfect stems.¹⁹ To put it differently, in Ancient Greek and in Indo-Aryan, aspectual distinction were grammatically encoded via stem alternations, with the present stem associated with imperfectivity and the aorist stem with perfectivity (see e.g. the treatment of Homeric Greek in Napoli 2006 and of Vedic in Dahl 2010). By contrast, in Hittite “any basic verbal stem in Hittite may be read as perfective or imperfective, provided that its inherent meaning and the context are appropriate” (Hoffner & Melchert 2008: 317). For example, preterite forms of *uwa-* ‘come’ can be interpreted as profiling either a bounded or an unbounded event based on the context, as shown in (11)a and (11)b.

¹⁹ Whether Anatolian split off from the IE family before the distinction between the present and the aorist (and the perfect) had been established, or whether it inherited such distinctions and later lost them due to a heavy restructuring of the verbal system still constitute hotly debated issues that I cannot further discuss here (see among others Jasanoff 2003 and Cotticelli-Kurrass forthc. with references). Melchert (1997) has argued that isolated stem alternations of the type *kars-* vs. *karsiye/a-* ‘cut’ constitute relic of an older thematic present vs. root aorist distinction, thus suggesting that the two were already established before the split of Anatolian, but the evidence remains rather scanty.

- (11) a. *namma=as* *INA* ^{HURSAG}*Zukkuki* *EGIR-pa* *uet*
 then=3SG.NOM to mountain.Z. back come:PST.3SG
 “Then he came back to Mt. Zukkuki.” (KBo 5.6 i 1)
- b. *nu* *kuitman* ^{m.GiŠ}*GIDRU-LÚ-is* *IŠTU KUR* ^{URU}*Mizri* *EGIR-pa*
 CONN while *H.:*NOM from land Egypt back
uet
 come:PST.3SG
 “While Hattusaziti was coming back from the land of Egypt.” (KBo 5.6 iii 26, NH/NS)

From a morphological standpoint, one can argue that in Hittite aspectual distinctions are mostly encoded via *conversion*, that is, variation in the aspectual interpretation of verbal forms is not paired with an overt morphological encoding (cf. Croft 2012: 17, 84-92). Conversion is not limited to the encoding of the perfective vs. imperfective distinction, but is also associated with other aspectual construal operations. For instance, as is well known, in languages such as Ancient Greek, a stative vs. change-of-state construal of psych verbs is morphologically encoded via stem alternation. As Napoli (2006: 149) discusses, some Homeric verbs can be interpreted as stative when they occur in the imperfective stem, and as profiling the dynamic entry into a state when occurring in the perfective stem. A case in point is the verb *khalepainō* ‘be(come) angry, bitter’, which indicates a state when inflected in the imperfective stem, as in the optative present form *khalepainoi* ‘it might be bitter’, and indicates a change of state when inflected in the perfective stem, as in the aorist form *khalépēna* ‘he becomes angry’ (Napoli 2006: 155). By contrast, in Hittite, forms based on the same stem of verbs such as *lazziye/a-* ‘be(come) good’ can be paired with either a stative or a change-of-state interpretation, based on the context (cf. Part Two for discussion).

Despite the lack of a morphological distinction between perfective and imperfective verbal stems, Hittite features several constructions that alter the verbal meaning and are responsible for the encoding of different aspectual construal operations. These can be broadly distinguished into derivational, syntagmatic, and phrasal strategies (cf. Cambi 2007, Cotticelli-Kurras forthc.), depending on the morphosyntactic status of the lexical item that combines with the verb.

Phrasal strategies can be defined as those strategies in which two verbal forms are combined in a complex construction. Hittite attests to a wide range of periphrastic constructions that involve a finite and a non-finite form of the verb (cf. Hoffner & Melchert 2008: Chap. 25), as recently surveyed by Cotticelli-Kurras (2015). These include the construction of the verb *zinni-zi* ‘finish’ with an infinitive with the meaning ‘finish X-ing’, and the construction of the verbs *dai-/tiya-* ‘place, step’ with the supine and the verb *epp-* ‘take’ with the infinitive, both with the meaning ‘start X-ing’. More attention

has been given to periphrastic constructions that involve a participle and the verb *hark-* ‘hold, have’ and *es-* ‘be’, paired with a perfect or a stative interpretation. I return on the latter more diffusely in sec. 1.5.2.

Syntagmatic strategies involve a finite form of the verb combined with a morphologically unbounded lexical item. These include the use of local particles and the use of local adverbs.²⁰ Hittite possesses five clitic particles, i.e. *=kan*, *=san*, *=an*, *=asta*, and *=apa*, that occur in Wackernagel’s position, i.e. roughly speaking after the first accented constituent of the clause or the proclitic sentence initial connective *nu* (cf. Luraghi 1990, Luraghi 1998, Hoffner & Melchert 2008: 410, Kloekhorst 2014; see also sec. 1.5.5). Etymologically, Hittite local particles can be at least in part connected with preverbs of other IE languages (cf. Luraghi 2001, see also the etymological treatments in Kloekhorst 2008 and Dunkel 2014). These particles originally contributed to the encoding of specific spatial configurations with motion/positional verbs, but eventually developed more abstract meanings, including aspectual ones (cf. Josephson 1972, 2010, Boley 1989, Luraghi 2001, Hoffner & Melchert 2008: 364-383). Among the particles, scholars have repeatedly pointed out that *=kan* can be combined with various verbs to express a higher degree of telicity/perfectivity (cf. Josephson 2008, 2013 and Cotticelli-Kurras 2014). A telicizing function has also been attributed by Josephson (2003, 2008) to the particle *=za* (cf. sec. 1.5.5).

It is well-known that in IE languages preverbs can alter the meaning of verbal forms by adding either dynamicity and/or perfectivity/telicity to the event encoded by the base verb (see e.g. Haverling 2000 on Latin prefixes; the aspectual function of preverbs is mostly developed in Slavic languages, on which see e.g. Wiemer & Seržant 2017 with references). Such behavior has also been discussed with respect to Hittite local adverbs (see Francia 2002a: 175 ff., Hoffner & Melchert 2008: 295 ff.). For example, the verb *ar-ta(ri)* ‘stand’ shows the default aspectual construal of a transitory state (see discussion in Part Two). However, the combination with specific adverbs trigger a dynamic change-of-state construal, as in the case of *anda ar-* ‘go in’ and *arha ar-* ‘fall out’ (cf. Neu 1968a: 7-10).

²⁰ Hittite, similarly to other ancient IE languages, features a class of independent words, usually termed ‘local adverbs’, that encode spatial relationships and that display a complex categorial status (cf. Cuzzolin *et al.* 2006; see now Zanchi *forthc.* for an up-to-date discussion with references). In short, these items can behave as free-standing adverbs, they can combine with verbs and serve as preverbs, or they can build up adpositional phrases when occurring with nouns. It is often only the (syntactic) context that can disambiguate among the different functions. On the details of the syntax and semantic of Hittite local adverbs see Starke (1977), Luraghi (2001), Francia (2002a), Hoffner & Melchert (2008: Chap. 20), Melchert (2009), and Brosch (2014). See also Boroday & Yakubovich (2018) for a recent discussion about the origin of Hittite local adverbs.

Morphological strategies include the use of derivational suffixes. Verbal suffixes with aspectual function include *-anna-*, *-ss(a)-*, and *-ske/a-*. From a synchronic standpoint, these suffixes are functionally equivalent and mostly stand in complementary distribution with respect to the verbs that they attach to (cf. Hoffner & Melchert 2008: 318-323).²¹ It is nowadays commonly accepted that the suffix *-ske/a-* is synchronically associated with the following functions (see Bechtel 1936, Dressler 1968, Melchert 1998, Hoffner & Melchert 2008, Cambi 2007; definitions are taken from Hoffner & Melchert 2002):

- PROGRESSIVE/DESCRIPTIVE: “An action is described as ongoing (often as setting the scene for another action - so-called ‘backgrounding’)”
- DURATIVE “An activity may be understood as continuing over an extended period of time.”
- ITERATIVE: “An action is described as repeated, either continually (in immediate succession) or on separate occasions.”
- HABITUAL/GNOMIC: “The marked *-ške/a-* stem or equivalents may also express habitual, customary, or characteristic behavior.”
- DISTRIBUTIVE: “An action may be performed once each on a series of objects (the action is thus from a certain point of view iterated).”
- INCEPTIVE: “In the case of verbs that refer to activities or accomplishments, the *-ške/a-* form or equivalent may focus on the beginning of the activity.”

Whereas most scholars agree in assigning to the suffix *-ske/a-* these functions, how this polyfunctionality is to be described remains a relatively controversial issue. Specifically, scholars have long debated whether the suffix should be conceived as either an aspectual or an actional marker (cf. Cambi 2007 for discussion of advantages and shortcomings of either hypotheses). It is clear that the suffix is largely optional, unmarked verbal forms being fully compatible with imperfective contexts, as shown in (11)b. The occurrence of the suffix is however not entirely random: it is unavailable to stative verbs, such as *ki-^{tt(a)ri}* ‘lie’, and it frequently co-occurs with distributive adverbial expressions such as *UD-at UD-at* ‘day after day’, *ITU-mi ITU-mi* ‘month after month’, *GE₆-ti GE₆-ti* ‘night after night’, *MU-ti MU-ti* ‘year by year’, *lammar lammar* ‘moment by moment’, *uddanī uddanī* ‘word by word’, and *1-an 1-an* ‘one by one’ (Hoffner & Melchert 2008: 320). As

²¹ Recent studies entirely devoted to the individual suffixes are Cambi 2007 on *-ske/a-* and Pisaniello 2016 on *-anna-* and *-ss(a)-*, to which I refer for extensive discussion of previous scholarship; for Anatolian cognates see also Melchert 2003 on Luwian *-zza-* and *-s(s)a-* and Serangeli 2018 on Lycian *s-*verbs).

observed by Josephson (2008: 138), this picture points towards a relatively lower degree of grammaticalization of aspectual distinctions in Hittite as compared to other ancient IE languages.

In this work, I follow a different approach, firstly proposed by Dressler (1968) and further elaborated by Inglese & Mattiola (2018), according to which the suffix *-ske/a-* (but similar observations might easily be extended to *-anna-* and *-ss(a)-*) can be analyzed as a marker of verbal plurality, or better, *pluractionality*. Pluractionality is a complex notion that can be cross-linguistically defined as “a morphological modification of the verb (or a pair of semantically related verbs) that primarily conveys a plurality of situations that involves a repetition through time, space and/or participants” (Mattiola *forthc.*). The polyfunctionality of Hittite *-ske/a-* can be rightfully described in terms of pluractionality, and the functions of performed by the suffix are compatible with the conceptual space of pluractional constructions set up by Mattiola (2017; see Inglese & Mattiola 2018 for details). This approach has the advantage that it allows for a consistent account of the various functions associated with the suffix, without the need to describe it primarily in terms of either aspect or actionality. Rather, based on the interplay of the context and the semantic features of the base verbs, the suffix can be understood as triggering different types of aspectual construals of the verbal event (cf. Croft 2012), which may differ from the default aspectual construal of the base verb.

1.5.2. The Hittite participle: syntax and semantics

As is well known, Hittite features a single participle formation. The participle, which is equally available to all verbs irrespective of their inflectional class (Frotscher 2013: 153), is built with the suffix *-ant-* and regularly follows the declension of *-nt-* nouns (cf. Hoffner & Melchert 2008: 123; see Frotscher 2013: 104-201 for a thorough discussion of the morphology of participial forms). Historically, the suffix is can be formally equated to the participial suffix **-e/ont-* attested in several other IE languages (Kloekhorst 2008: 184), even though there exist a number of functional discrepancies (on the prehistory of the Hittite *-ant-* participle see also Melchert 2017d and Fellner & Grestenberger 2018 with further references).

There is a general consensus that the meaning of the *-ant-* participle is determined by at least two factors: transitivity and, at least as far as intransitive verbs are concerned, actionality, i.e. default aspectual construal (cf. Luraghi 1997: 29, Hoffner & Melchert 2008: 339, Frotscher 2013, Dardano 2014a).

Irrespective of the actionality of the base verb, participles of transitive verbs are P-resultative, i.e. they indicate the state of the Patient (P) participant (Nedjalkov 2001: 928). Compare *walhant-* ‘struck’, based on the transitive telic verb *walh-^{zi}* ‘strike’, and *hānt-* ‘trusted’ (and not ‘trusting’),

based on atelic *ḫā-ⁱ* ‘trust’.²² Intransitive verbs offer a more complex picture, in which the verbs’ default aspectual construal plays a key role. Participle of telic intransitive verbs show S-resultative semantics, as in *akkant-* ‘died/dead’ from *akk-ⁱ* ‘die’ (Frotscher 2013: 202-222). By contrast, participles of atelic verbs indicate ongoing processes or states. This is the case of both stative verbs, as in e.g. *arant-* ‘standing’ from *ar-^{ta(ri)}* ‘stand’, and activity verbs, as in *iyant-* ‘marching’ from *iyē/a-^{ta(ri)}* ‘go, march’. Such distribution shows that the semantics of the participle of intransitive verbs constitutes an important diagnostic to establish the default aspectual construal of such verbs, as I discuss in Part Two.

The syntax of the Hittite participle has received comparatively less attention. As discussed by Frotscher (2013: Chap. 4, sec. 4.3), beside nominalized forms of the type ^{LÚ}*huyant-* ‘fugitive’ from *huwai-ⁱ* ‘run’ (on which see also Dardano 2014a: 59, Rieken 2017b: 401), participles can occur in adverbial, attributive, and predicative use.

The adverbial use is typical of ancient IE languages such as Ancient Greek, where it goes under the name of *participium coniunctum*. In this case, the participle basically functions as a means of encoding a subordinate clause of the adverbial type, as it provides some accessory information about the event encoded by the main verb. In Hittite, adverbial participles are uncommon, partly ensuing from the stative/resultative semantics of the participle (see Frotscher 2013: 274-286). As an example, consider the use of the participle *lēlaniyanza* ‘angry’ in (12), which provides a specification as to the mental state of the God Telipinu at the moment of his arrival (note that this use is called *depictive* by Rieken 2017b).

- (12) ^{DINGIR}*Telipinus* ***lēlaniyanza*** *uit*
T.NOM be.angry.PTPC.NOM come.PST.3SG
‘The god Telipinu came angry.’ (KUB 17.10 ii 33, OH/NS)

In the second place, participles can be used attributively, in which case they basically function as adjectives and modify a nominal head (cf. Frantíkova 2015). As Rieken (2017b) points out, attributive participles can be further distinguished based on whether they are restrictive, i.e. they contribute to

²² A few exceptions to this pattern have been detected. For example, the participle of *sākk-* ‘know, recognize’, *sākkanza*, generally means ‘known’, but when used as an attribute of the Sumerogram ZI ‘mind’ it has the non-resultative meaning ‘intentionally, knowingly’ (Frotscher 2013: 226-229, Dardano 2014a). Similarly, the participles of verbs of consumption *ad-* ‘eat’ and *aku-* ‘drink’ can be variously interpreted. On the one hand, they can mean ‘eating’ or ‘drinking’, hence patterning with atelic predicates, but the participle *adant-* can also be P-resultative ‘eaten’, or even A-resultative ‘who has eaten’ (see Neu 1968b: 117, Frotscher 2013: 224-226).

the identification of an individual entity, or appositive, i.e. they provide further information about an already identifiable referent (whereas adjectives usually precede their head noun, attributive participles tend to follow them, cf. Hoffner & Melchert 2008: 339; see Frantikova 2015 and Rieken 2017b for discussion with further references).

Finally, the participle can be used predicatively in a periphrastic construction with the verbs *hark-* ‘have’ and *es-* ‘be’ (Hoffner & Melchert 2008: 310). These constructions have long sparked the scholars’ interest, especially in light of their similarity with HAVE- and BE-perfects of Germanic and Romance languages, and different accounts have been proposed in the literature. Since the discussion of the properties of periphrastic constructions is not the focus of this work, I only summarize here the main points concerning their use in Hittite, and refer the reader to the treatment in Inglese & Luraghi (forthc.) for a thorough discussion of controversial points with extensive references to previous scholarship.

Formally, in constructions with *es-* ‘be’ the participle agrees with the subject, whereas when *hark-* occurs, the participle is always inflected in the nominative-accusative neuter singular and fails to show agreement with the core arguments of the verb. Normally, in periphrastic constructions the combination of participle and the verbs *hark-* and *es-* is never interrupted by items that normally occupy the immediate preverbal position such as preverbs or the negation, with the only exception of indefinite pronouns and the subordinator *kuit* ‘because’ (cf. Huggard 2015).

Building upon previous works (cf. e.g. Boley 1989, Cotticelli-Kurras 1991, Dardano 2005, and Frotscher 2013 among others), Inglese & Luraghi (forthc.) argue that the occurrence of *hark-* and *es-* with the participle instantiates three different constructions: the stative, the perfect, and the passive construction.

In the stative construction, which is possibly the oldest one, the combination of the participle and the finite verb indicates permanence and/or maintenance of a state, either permanent or resulting from a change-of-state event. The meaning of the stative construction is compositional, and *hark-* and *es-* can be regarded as *semi-auxiliaries* at best (moreover, there is evidence that at least in stative constructions *hark-* and *es-* can freely occur with the same intransitive verb, see Inglese & Luraghi forthc. fn. 7). Stative constructions often occur in the imperative mood, the imperative being incompatible with a perfect interpretation, as exemplified in (13) and (14).

- (13) *nu=wa* *karussiyān* *harak*
 CONN=QUOT be.silent.PTCP.N/A.N have.IMP.2SG
 “Keep (being) silent!” (KUB 14.4 iv 11, NH/NS)

- (14) GAM-*an* *kaninanza* *ēšdu*

under crouch.PCTP.NOM be.IMP.3SG

“Let him be crouched down.” (VBoT 120 ii 17-18, MH/NS)

By contrast, perfect constructions function as anteriors, i.e. they indicate “that the situation occurs prior to reference time and is relevant to the situation at reference time” (Bybee *et al.* 1994: 54), thus functioning like the English present perfect. Perfect constructions can be regarded as *auxiliary verb constructions* in the sense of Anderson (2006: 7). The semantics of perfect constructions is not entirely compositional: the participle contributes with the lexical content, whereas the verbs *hark-* and *es-* functions as auxiliaries and provide grammatical information such as tense and person marking. Notably, in perfect constructions the choice of *hark-* or *es-* as auxiliary is driven by the semantics of the participle: participles of transitive and unergative verbs require *hark-*, whereas participle of unaccusative verbs require *es-* (cf. Garrett 1996; see further below sec. 1.5.4). Examples of periphrastic construction with anterior reading are given in (15) and (16), where an anterior interpretation is further suggested by the occurrence of the adverb *karū* (cf. Bertinetto & Cambi 2006).

- (15) *nu=wa=za karū 30 É^{TUM} asesan harzi*
 CONN=QUOT=REFL already 30 house(ACC) settle.PTCP.N/A.N have.PRS.3SG
 “(Pihinakki is occupying the town of Lipisira) and he has already settled 30 houses.” (HMK 10 rev. 6, MH/MS)

- (16) *n=as mān karū pānza*
 CONN=3SG.NOM if already go.PTCP.NOM
 “And if he has already/formerly gone.” (HKM 75, 23-24, MH/MS)

The periphrastic passive also constitutes a type of *auxiliary verb construction*. It is made up by the participle of a transitive verb and the auxiliary *es-* (on the relationship between the periphrastic passive and the middle voice see Chap. 2 sec. 2.2.2.6). As Hoffner & Melchert (2008: 304) remark, distinguishing stative constructions from truly passive ones, i.e. constructions profiling an event from the perspective of the Patient (cf. sec. 1.3.1.2), is not an easy task, and only the context can provide disambiguation. A likely example of a periphrastic passive construction is given in (17), in which a passive interpretation is further supported by the occurrence of the instrumental Agent *siunit* ‘by the gods’.

- (17) *GĪŠTUKUL^{HLA}-is=wa=tta siunit piyantes*
 weapon.NOM.PL=QUOT=2SG.DAT god.INST give.PTCP.NOM.P

“The weapons are given to you by the Gods.” (KBo 22.6+ i 25 OH²/NS)

The ambiguity between a stative-resultative and a passive interpretation of the Hittite periphrastic *es*-construction is unsurprising, as it instantiates a cross-linguistic widespread pattern (cf. e.g. Cennamo 2006: 315-316 on Latin and early Romance varieties). Historically, this polysemy can be explained by the recurrent grammaticalization of stative/resultative markers into passive markers (cf. Haspelmath 1990). Such development is licensed by the semantic affinity between the two functions, which both focus on the Patient as the undergoer of a one-participant event (cf. Bybee *et al.* 1994: 54, Dixon & Aikhenvald 2000: 8).

1.5.3. Alignment and the encoding of grammatical relationships: an overview

As acknowledged in most reference work, when used in opposition to the active, the Hittite middle voice functions as a means of encoding various valency reducing operations, such as anticausative and passive (see Chap. 2 for a detailed description). In order to understand how operations on verbal valency work in Hittite, in this section I briefly illustrate the typology of argument marking in Hittite.

As most ancient IE languages, Hittite displays a nominative-accusative alignment. Subjects of transitive and intransitive verbs receive the same case marking, i.e. the nominative, as opposed to the object of transitive verbs, which takes the accusative. This is particularly clear in the case of common gender nouns, which have different case endings for the nominative and the accusative.²³ As an example, consider the pattern of case marking of the common gender noun *hassu-* ‘king’ (spelled with the Sumerogram LUGAL) in (18). The noun takes the same case form, i.e. the nominative LUGAL-*us*, both when used as the subject of the transitive verb *allappahhi* ‘spits’ in (18)a and of the intransitive verb *esa* ‘sits’ in (18)b. By contrast, when occurring in object position, as in (18)c, the noun takes a different case ending, i.e. the accusative LUGAL-*un*. As I discuss in sec. 1.5.4, pronouns basically display nominative-accusative alignment as well.

- (18) a. TRANSITIVE SUBJECT
- | | | | |
|------------------|---------------------------------|---------|---------------------|
| LUGAL- <i>us</i> | ERÍN ^{MEŠ} - <i>an</i> | 3-Š[U | <i>alla</i>]ppahhi |
| king:NOM | troop(PL):ACC | 3.times | spit:PRS.3SG |

²³ The Hittite nominal system features two genders, which are sometimes referred to as *common* and *neuter* or *animate* and *inanimate* (cf. Hoffner & Melchert 2008: 64-66). The use of *animate* to refer to *common* gender is however misleading, since the class of common gender nouns include both animate and inanimate referents. To put it differently, gender assignment in Hittite does not entirely depend upon animacy (see discussion in Goedegebuure 2012).

“The king spits three times on the troop.” (KBo 17.1+ i 36, OH/OS)

b. INTRANSITIVE SUBJECT

LUGAL-*us=san* ^{GIŠ}*hulug[anni]* *esa*

king.NOM=PTC carriage.DAT sit.PRS.3SG.MID

“The king sits down in the carriage.” (IBoT 1.36 ii 16-17, MH/MS)

c. LUGAL-*un* MUNUS.LUGAL-*ann=a asaskiz[zi]*

king.ACC queen.ACC=CONJ sit-IMP-PRS.3SG

“He makes the king and the queen sit.” (KBo 17.1 i 6, OH/OS)

Whereas the system can be characterized as predominantly nominative-accusative, this is not the entire picture, as other marginal means of encoding grammatical relationships should be taken into account. These include the system of split-ergativity with neuter nouns, the non-canonical marking of core arguments, and the system of split-intransitivity in the syntax of clitic subject pronouns. I discuss the first two in the remainder of this section, and devote sec. 1.5.4 to discussing the syntax of clitic pronouns, since the latter has major implications for the understanding of the syntax of middle verbs.

Whether Hittite displays a gender-based system of split ergativity constitutes a long-debated issue among specialists. The pattern was famously identified by Laroche (1962), who observed that when occurring as subjects of transitive verbs, neuter nouns required a special ending *-ants* (pl. *-antes*). As an example, consider the pattern of case marking of neuter *uddar* ‘word’ in (19): when occurring as subject of the intransitive verb *mazzazzi* ‘resists’ and as object of the transitive verb *tarhhun* ‘I conquered’, the noun appears in the same case form, i.e. *uddār*. By contrast, when occurring as subject of the transitive verb *tarhuēr* ‘they conquered’, the noun takes the special case ending *uddan-āntes*.

(19) *tarhhun=at=za* UH₇-*nas* *uddār* [*ammel*] *uddār*
conquer=3PL.ACC.N=REFL sorcery.GEN word(N).ACC.PL 1SG.GEN word(N).NOM.PL
[*mazz*]*azzi* *n=at=za* *ammel* *uddanāntes* *tar[hu]ēr*
resist.PST.3SG CONN=3PL.ACC.N=REFL 1SG.GEN word(N).ERG.PL conquer.PST.3PL

“I have conquered them, the words (P) of sorcery. My words (S) endure, my words (A) have conquered them,” (KUB 17.27 ii 8-9, MH/NS, from Goedegebuure 2012: 25)

Comparing case marking of common gender LUGAL-*u-* ‘king’ in (18) and neuter gender *uddar* ‘word’ in (19), a clear pattern emerges, whereby common gender nouns show the same case marking

for A and S function as distinct from P, whereas neuter nouns group together P and S and show a dedicated case marking for A.

Table 4: Coding of A, S, and P with common and neuter nouns

	LUGAL-<i>u-</i> ‘king (c.)’	<i>uddar</i> ‘word (n.)’
A	LUGAL- <i>us</i>	<i>uddanāntes</i>
S	LUGAL- <i>us</i>	<i>uddār</i>
P	LUGAL- <i>un</i>	<i>uddār</i>

The existence of the pattern, as shown in Table 4 is undisputed, but widely different analyses have been proposed as to its synchronic interpretation and historical origin (I refer to Goedegebuure 2012, *forthc.* for comprehensive critical reviews of earlier scholarship on the matter). In the first place, scholars disagree on the synchronic status of the *-ants* element. Laroche (1962) himself suggested analyzing *-ants* as the combination of a derivational suffix *-ant-* plus a nominative ending *-s*. In his view, the suffix had the function to transfer neuter noun to common gender when occurring in A position, this position being otherwise unavailable to neuter nouns. The derivational approach was rejected e.g. by Garrett (1990a), who argued that *-ants*, originally an ablative case marker, constitutes a full-fledged ergative case marker: its restriction to neuter noun should be interpreted as the existence of a gender-based system of split ergativity. The issue has been recently resumed by Goedegebuure in a number of recent publications (Goedegebuure 2012, *forthc.*). Goedegebuure argues that a correct understanding of the status of *-ant-* can only come from an accurate survey of its use in the history of the Hittite language. She rejects Garrett’s (1990a) hypothesis that the *-ant* item was originally an ablative case ending, and instead suggests that *-ant-* originally was a derivational morpheme, whose function was connected to individuation of (predominantly neuter) mass nouns. A derivational status of *-ant-* is still clearly visible in OH. However, starting from MH onwards, the suffix eventually turned into a true ergative case marker, as shown by patterns of agreement with adjectives and resumptive pronouns.

Non-canonical argument marking can be broadly characterized as the phenomenon whereby core arguments of a sub-class of predicates receive a different encoding, in terms of case marking, agreement pattern, and word order (cf. Onishi 2001), as compared the prototypical pattern of argument marking in the language. Research on the non-canonical marking of arguments in IE languages has received renovated attention in recent years, especially thanks the works of Barðdal on non-canonical ‘oblique’ subjects (e.g. Barðdal & Eythórsson 2009; recent works on non-canonical argument marking in ancient IE languages include also Dahl & Fedriani 2012, Seržant 2013, and Viti

2017). As rightly pointed out by Viti (2015a: Chap. 3), when discussing non-canonical argument marking in ancient IE languages, it should be kept in mind that one is not dealing with a uniform phenomenon. Different motivations can be individuated for the occurrence of non-canonical argument marking in specific constructions in the individual languages. Possible factors include the occurrence of the negation, as in Baltic, or the NPs' definiteness and individuation, as in e.g. Ancient Greek. Alternatively, non-canonical marking can be connected with specific argument structure constructions that involve a semantically consistent class of predicates, such as experiencer or modal verbs (see Viti 2015a for an overview).

As compared to other IE languages, non-canonical argument marking in Hittite appears to be less widespread, and mostly concerns non-canonical subjects.²⁴ Consider the example in (20):

- (20) *mān=mu* *istarkzi* *kuwapi*
 when=1SG.ACC become.ill.PRS.3SG whereve
 “Whenever illness befalls me (sick as I was I looked on it as the goddess’ providence).”
 (KUB 1.1 i 44, NH/NS, transl. van den Hout 1997: 200)

In (20), the experiencer predicate *istar(k)-zi* ‘become ill’ occurs in 3rd person singular, and its Experiencer is encoded by means of an accusative pronoun =*mu* (in principle, the 1st person pronoun could be interpreted also as a dative, but consistent use of accusative 3rd person pronouns suggests interpreting =*mu* as accusative as well, cf. Part Two for discussion). Traditionally, the construction (20) has been interpreted as an impersonal construction (cf. Friedrich 1960, Neu 1968a), featuring a verb in the default 3rd person singular and lacking a grammatical subject. However, comparison with similar constructions in other IE languages has prompted a new analysis of Hittite constructions such as (20) as featuring a non-canonical Experiencer subject (cf. Zeilfelder 2004, Patri 2007, Luraghi 2010b, Dardano 2017, 2018). The reason why Experiencer subjects display a different morphosyntactic behavior as compared to canonical nominative subjects lies in their semantic features: Experiencers are not prototypical Agents, as they lack volition and control, and may undergo change-of-state events as Patients (Luraghi 2010b).

²⁴ Non-canonical objects have not been reported for Hittite. An isolated example has been pointed out by Garrett (1996: 100), who argues that accusative direct objects can be occasionally ‘demoted’ to the dative case to indicate partial Patient affectedness. As an example, Garrett quotes the non-canonical construction of the transitive verb *walh-zi* with a dative, instead of the canonical accusative, direct object, i.e. =*si*... GUL-*ahzi* ‘he attacked at the army.DAT’ (DŠ fr. 28 A ii 2, NS).

Widening the observation to verbs other than *istar(k)^{-zi}*, one finds that non-canonical subjects do occur with a small number of predicates, and also include non-canonical dative subjects, but they are restricted to the encoding of experiential situations, chiefly negative ones, such as verbs of illness and *verba timendi* (see discussion in Viti 2017: 384-485). To put it differently, the distribution of non-canonical subjects in Hittite is primarily driven by the predicate’s semantics.

1.5.4. (In)transitivity, unaccusativity, and the syntax of clitic pronouns

As common to most ancient IE languages, Hittite features a complex system of personal pronouns (see Hoffner & Melchert 2008: chap. 5, 277-283 for an overview). For the first and the second person, one finds independent accented pronouns that inflect for case and number and show suppletive stems, e.g. nominative *ūk* ‘I’ vs. accusative *ammuk* ‘me’. These coexist alongside a series of unaccented clitic pronouns, which can be used either in accusative or in dative function, and display stem suppletion as well, e.g. *=mu* ‘to me/me’ vs. *=nas* ‘to us/us’. Generally speaking, the difference between accented and clitic pronouns is described as one of ‘emphasis’, i.e. pragmatic markedness, with accented pronouns being favored in specific discourse contexts, such as when they are in focus or are used as contrastive topics (cf. Goedegebuure 2014), whereas clitic pronouns are used as markers of non-emphatic participant continuity. The third person offers a slightly different picture. Accented third person pronouns do not exist, and demonstrative pronouns, chiefly *kās-* ‘this’ and *apā-* ‘that’, are used instead (on the use of demonstratives see Goedegebuure 2014). More complex is the system of unaccented third person pronouns. As shown in Table 5, Hittite features a 3rd person clitic pronoun that inflects for gender, number, and case. Notably, unlike 1st and 2nd person clitic pronouns, the 3rd person pronoun has distinct forms for the accusative and the dative, and also has a dedicated form for the nominative.

Table 5: 3rd person enclitic pronouns (from Hoffner & Melchert 2008: 135)

	Singular	Plural
Nominative (common)	<i>=as</i>	<i>=e</i> (OH/MH), <i>=at</i> (MH/NH)
Accusative (common)	<i>=an</i>	<i>=us</i> (OH/MH), <i>=as</i> (MH/NH)
Nom.-Acc. (neuter)	<i>=at</i>	<i>=e</i> (OH/MH), <i>=at</i> (MH/NH)
Dative	<i>=se</i> (OH), <i>=si</i> (MH/NH)	<i>=smas</i>

It has long been observed that nominative and accusative 3rd person clitic pronouns stand in complementary distribution, and that their use correlates with transitivity (see among others Watkins

1968-96, Garrett 1990b, 1996, Hoffner & Melchert 2008, Luraghi 2010a, 2017b with further references).

Accusative clitic pronouns are used as a means to anaphorically refer to definite direct objects. As an example of their use, consider the passage in (21), in which the accusative common gender pronoun =*an* is used to refer to the previously mentioned referent GU₄.MAḪ in object position.

- (21) *takku* **GU₄.MAḪ_i** *kuiski* *wemiezzi* *t=an_i* *parkunuzi*
 if bull INDF.NOM find.PRS.3SG CONN=3SG.ACC purify.PRS.3SG
 ‘‘If anyone finds a bull and castrates it’’ (KBo 6.2 iii 33, OH/OS).

In OH, accusative clitic pronouns were not yet obligatory, as the language still allowed for definite referential null objects to occur under specific syntactic and pragmatic conditions, possibly as a trait inherited from PIE (see among others Luraghi 1990, Viti 2016, and Inglese *et al.* forthc.). Starting from MH, clitic pronouns, which were already quantitatively prominent in OH (see data in Inglese *et al.* forthc.), started replacing null direct objects in all environments and became virtually obligatory to express definite referential direct objects of transitive verbs in absence of full object NPs.

Nominative 3rd person clitic subject pronouns are peculiar to Anatolian and constitute a *unicum* among ancient IE languages. Even though their origin is still unclear, subject clitic pronouns occur in Hittite as well as in Palaic, Luwian, and possibly Lydian (see Melchert 2011), pointing to their status as a common Anatolian innovation.²⁵ The occurrence of subject clitic pronouns in Hittite was first observed by Watkins (1968-69: 93), and has been later fully investigated by Garrett (1990b, 1996). According to the ‘‘Watkins-Garrett’’ hypothesis, the use of clitic subject pronouns is restricted to (a group of) intransitive verbs (see also Hoffner & Melchert 2017 for the use of clitic subjects with the so-called ‘‘supine’’ construction). In other words, whereas Hittite can be largely characterized as a pro-drop language, in which subjects are omitted when already accessible from the previous context, a sub-set of intransitive verbs require the subject to be expressed by a clitic pronoun in case there is no overt 3rd person subject. As such, clitic subjects stand in complementary distribution with accusative object clitic pronouns, which can only occur with transitive verbs. To illustrate this pattern,

²⁵ Viti (2016) cursorily observes that the spread of clitic pronouns in Hittite might also be attributed to language contact with neighboring non-Indo-European languages of Anatolia, such as Akkadian and Ugaritic, which made extensive use of clitic pronouns. Teffeteller (2015) suggests that clitic subject pronouns were created on analogy of object pronouns, and they primarily functioned as a means of explicitly marking non-agentive intransitive subjects (cf. already Luraghi 1990, 2010a).

compare the lack of clitic subject pronoun with the transitive verb *parkunuzi* ‘purifies’ in (21) and with the intransitive verb *nuntarnut* ‘hurried’ in (22) with the occurrence of the common gender nominative pronoun =*as* with the intransitive verb *aki* ‘dies’ in (23). It should also be added that nominative clitic pronouns are only used to refer to definite referential subjects. As a result, they never appear with verbs that lack referential subjects, including weather verbs such as *lukk-^{ta}* ‘it dawns’ and expressions such as *ŪL kisari* ‘it is not possible’ (cf. Hoffner & Melchert 2008: 282).

(22) *sarā=wa=kan* *nepisas* ^dUTU-*us* *uit* *nu=wa=ssi*
 upwards=QUOT=PTC sky.GEN Sun.god.NOM come.PST.3SG CONN=QUOT=3SG.DAT
 EGIR-*an* *nuntarnut*
 hurry.PST.3SG back

“The Sungod of Heaven came up, and hurried after him.” (KUB 12.26 ii 14-15, NS)

(23) [*takku* ARAD-*an*₁ *nasma* GÉME-*an*₁ *kuis*]*ki* *walhazi*
 if male.slave.ACC or female.slave.ACC INDF.NOM hit.PRS.3SG
*n=as*₁ *aki*
 CONN=3SG.NOM die.PRS.3SG

“[If anyone] strikes [a male or female slave] so that he dies.” (KBo 6.2 i 1, OH/OS)

As comparison between (22) and (23) shows, intransitive verbs display a contrast between those verbs that require subject clitic pronouns and those that never allow them. The reason for this distinction has been thoroughly explored by Garrett (1990b, 1996), who convincingly argues that the distribution of clitic pronouns ultimately relates to the semantics of intransitive verbs. Clitic subjects are required by those verbs that indicate change-of-state events, states, psychological events, motion verbs, as well as by intransitive middle verbs with oppositional functions (Garrett mentions decausative and reflexive; to these, passive and reciprocal middles can be added, as I discuss in Chap. 2). By contrast, clitic subjects never occur with transitive verbs used intransitively without a direct object (see also Luraghi 1990: 38), as well as with a number of miscellaneous verbs. Garrett goes further and points out that the split in intransitive verbs as evidenced by the distribution of subject clitic pronouns is also confirmed by their behavior in periphrastic perfect constructions (see sec. 1.4.2): those intransitive verbs that consistently take clitic subject select *es-* ‘be’ as auxiliary in the periphrastic perfect construction, whereas those that do not take clitic pronouns select *hark-* ‘have’ instead. To sum up, Garrett argues that intransitive verbs display a split and can be formally distinguished in two classes, based on their distinct behavioral properties, i.e. the distribution of clitic subjects and auxiliary selection. A closer look at the semantics of these verbs reveals that the two classes display

a certain degree of internal consistency: intransitive verbs that require clitic subjects largely correspond to unaccusative verbs, whereas intransitive verbs that do not take clitic subjects can be equated with unergative verbs. Therefore, clitic subject pronouns and auxiliary selection can be considered as reliable diagnostics for unaccusative syntax in Hittite.

The synchronic picture concerning the behavior of clitic subject pronouns as established by Garrett has been further enriched by diachronic considerations. As discussed by Goedegebuure (1999) and Luraghi (2010a), a more careful analysis of OH texts shows that in the older phase of the language a number of verbs occur both with and without subject clitic pronouns, thereby partly contradicting Garrett’s hypothesis. A closer look at these verb reveals that these are mostly motion verbs, such as *pai-ⁱ* ‘go’, and verbs that indicate change in body posture, such as *es-^{a(ri)}* ‘sit down’ and *nē-^{a(ri)}* ‘turn (intr.)’ (see Part Two for discussion of the syntax o these verbs). According to Luraghi (2010a), this distribution hints at an ongoing process of extension of unaccusative syntax in Hittite. The core of unaccusative verbs was constituted by state and spontaneous change-of-state events, i.e. uncontrolled events, which consistently required clitic subjects since OH. From these verbs, unaccusative syntax was progressively extended to directional motion verbs and then to manner of motion verbs, which denote more controlled events. In other words, verbs of motion were partly treated as unergative in OH, and when unaccusative syntax arose, they were the last ones to acquire it, possibly ensuing from the non-prototypical semantic role of their subject. In fact, on the one hand subjects of motion verbs undergo a change of location, and thus sharing the semantic property of affectedness with Patient participants of core unaccusative verbs, but also intentionally initiate the motion event, thus partly showing the feature of control typical of the Agent participant of unergative verbs (Luraghi 2010a: 140).

1.5.5. The ‘reflexive’ particle =za

It is a well-known fact that Hittite makes extensive use of sentential clitics that occur in Wackernagel position, i.e. after the first constituent of the clause or a sentence initial connective (cf. sec. 1.5.1.3). These clitics include: the quotative particle =*war*, various enclitic personal pronouns (see further sec. 1.5.4 on clitic subject and object pronouns), the reflexive particle =*za*, and the so-called local particles, such as =*kan* (see further sec. 1.5.1.3 on these). Sentential clitics show a strong tendency to occur in a fixed order, as shown in Figure 11, and there are a number of rules that govern their possible co-occurrence (cf. Luraghi 1998, Hoffner & Melchert 2008: 410ff.).

Host	1	2	3	4	5	6
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Accented word (+ =(y)a/(m)a) <i>nu, su, ta</i>	= <i>war</i>	= <i>nas</i> = <i>smas</i>	= <i>a-</i>	= <i>mu</i> = <i>ta/du</i> = <i>se/i</i>	= <i>za</i>	= <i>an</i> = <i>apa</i> = <i>asta</i> = <i>kan</i> = <i>san</i>
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Figure 11: *The position of sentential clitics*

Slot 5 is allotted to the particle =*za*, most likely phonetically realized as /ts/ (Hoffner & Melchert 2008: 357; Kloekhorst 2008 *s.v.* observes that the OS spelling is mostly =*z* with the spelling =*za* being generalized in post OS times). The particle is commonly referred to in reference work as the ‘reflexive particle’. However, already since Goetze’s (1933) seminal treatment, it has become clear that defining =*za* as ‘reflexive’ is partly reductive, as the particle clearly displays a much wider use than the encoding of reflexivity alone. Starting from Goetze, the particle has ever since sparked the interest of various scholars (see Puddu 2005: 174-179 and Cotticelli-Kurras & Rizza 2011, 2013 for useful overviews of previous scholarship). Important contributions have been made by Hoffner (1969), who observed the peculiar behavior of the particle in nominal sentences, and by Carruba (1969), who provided a comparison with its likely cognates in other Anatolian languages. The first attempt to systematically describe the behavior of the particle is Boley’s monograph on the topic (1993). Drawing from a selected corpus of Hittite texts, the author seeks to establish how the particle interacts with particular verbs’ meanings, and how its use changes over time. Despite featuring several insightful remarks, Boley’s book leaves a number of question unsettled, and remains difficult to consult due to the organization of the material (see e.g. also the harsh review by Hoffner 1996). Moreover, a serious shortcoming of Boley’s book is that it is not systematically grounded on a clear definition of complex linguistic notions such as middle and reflexive, so that her interpretations remain at times unconvincing.

Despite the large amount of earlier works devoted to the subject, the exact function of =*za* has proven hard to pin down. To begin with, one observes that the particle apparently shows no preference for either voice or transitivity, as it occurs both with transitive and intransitive predicates in the active or in the middle voice. Concerning its categorial status, unlike full reflexive anaphors such as Latin *sē*, there is a general agreement that =*za*, being underspecified for the inflectional features of gender, person, and case, does not behave as an anaphoric pronoun and should not be equated with an accusative direct object, as the fact that it can co-occur with enclitic pronouns confirms (thus Boley 1993: 182 ff., Cotticelli-Kurras & Rizza 2011: 125 ff.). To put it differently, being underspecified for person and number, Hittite =*za* can be classified as a ‘generic reflexive’ in Petit’s (2001: 18) terms.

Generalizing over the various contexts in which the particle occurs, scholars have detected three basic distinct functional domains for the usage of =za (Hoffner & Melchert 2008: 357 ff., Cotticelli-Kurras & Rizza 2011, 2013).²⁶

In the first place, the particle covers a range of meanings connected with reflexivity, reciprocity, and self-beneficent (cf. also Luraghi 2012: 14), and can thus be partly regarded as a valency changing device. To begin with, the particle occurs in reflexive contexts proper. Consider examples (24)a and (24)b:

(24) a. REFLEXIVE

nu=za 6-ŠU *walhanzi*
 CONN=REFL six.times hit.PRS.3PL

“(Afterwards the two priests of the God Zilipuri come) they beat themselves six times.”
 (KUB 1.14 ii 8, NS)

b. INDIRECT REFLEXIVE

NINDA-*an=za* *wemiyanun*
 bread.ACC=REFL find.PST.1SG

“I found bread for myself.” (KUB 30.10 obv. 16, OH/MS)

In (24)a, the transitive active verb *walhanzi* ‘they hit’ occurs without a direct object, and the particle =za signals coreference between the Agent and the Patient, i.e. direct reflexivity. By contrast, (24)b the transitive active verb *wemiyanun* ‘I found’ occurs with the direct object NINDA-*an* ‘bread’, and the particle =za signals coreference between the Agent and the Recipient, i.e. indirect reflexivity. Related to the reflexive function is the possessive one, whereby the occurrence of the particle identifies the possessor of a NP with the subject of the clause, as in (25):

(25) *nu=zza* DUMU.MUNUS^{MEŠ=ŠA} ANA DUMU.NITA^{MEŠ=ŠA} *pais*
 CONN=REFL daughter(PL)=3SG.POSS to son(PL)=3SG.POSS give.PST.3SG

²⁶ Notably, in some cases the particle can be optionally substituted by the plural dative enclitic pronouns =*nas* and =*smas* in the 1st and 2nd person, this being likely the reflex of Luwian influence from MH times onward (Yakubovich 2006: 93). Moreover, Lorenz & Widmer (forthc.) have observed that the particle only rarely co-occurs with the reflexive dative pronoun =*si*, thus suggesting that the two might overlap in their functional domain. Since these issues lie beyond the scope of this work, I will not further pursue them here.

“(The queen) gave her own daughters to her own sons (in marriage)” (KBo 22.2 obv. 17, OH/OS)²⁷

Moreover, the particle can also be used to derive intransitive reciprocal verbs out of two-place predicates, as in example (26), in which intransitivity of the reciprocal verb *idalawessanzi* ‘quarrel’ is also evidenced by the occurrence of the clitic subject pronoun =*e* ‘they’. Diachronically, it is safe to assume that the reciprocal function arose out of the reflexive one, following a recurrent grammaticalization path from reflexive to reciprocal (cf. Heine & Miyashita 2008; see Inglese 2017 for a discussion).

- (26) *man=e=za idalawessanzi*
if=3PL.NOM=REFL become.evil.PRS.3PL
“If they have a falling out (lit. become evil at each other).” (KBo 6.2 iii 8-11)

There is no evidence that the particle alone could encode other valency reducing derivations, such as the anticausative and the passive (Cotticelli Kurras & Rizza 2013: 18). Further exploration on the distribution of =*za* is needed to assess the extent to which the particle encodes reflexivity proper as opposed to other closely related domains.

In the second place, as first observed by Hoffner (1969), since MH the particle is used in nominal sentences when the subject is a 1st or 2nd person, and never in the 3rd person (with Hoffner & Melchert 2008: 363, *pace* Nowicki 2000 and Josephson 2003), and this distribution becomes the norm in NH texts. This usage is exemplified in (27), featuring the nominal predicate TUR-*as esun* ‘I was a child’ and the particle =*za*.

- (27) [*amm*]uk=*ma=za nūwa TUR-as esun*
1SG.NOM=PTC=REFL still child.NOM be.PST.1SG
“But I was still a child.” (KUB 19.29 i 10, NH)

Finally, the combination of the particle with some verbs appears to be lexicalized, inasmuch as the meaning of the combination of the particle with the verb does not fall into any of the previous classes and is partly unpredictable, as in e.g. *iya-* ‘make’ vs. =*za iya-* ‘celebrate a festival, worship a god’.

²⁷ The dating of KBo 22.2 is admittedly disputed, as the tablet “has a mixture of early and somewhat later sign forms” (Holland & Zorman 2007: 14). In the *HPM* the manuscript is dated to MS.

Among such idiomatic usages, Hoffner & Melchert (2008: 361-362) list two major groups: (i) ‘transitivity toggle’, whereby an intransitive verb only occurs in a transitive construction when accompanied by *=za*, as in e.g. *tarh-* ‘be superior’ vs. *=za tarh-* ‘overcome, subject’; (ii) ‘transformative’, whereby the particle co-occurs with verbs denoting a telic event to underscore the change-of-state component, as in e.g. *=za kis-^{a(ri)}* ‘become’. In addition, as already pointed out by Friedrich (1960: 133), the particle is lexically associated with inherently reflexive predicates (see further Swiggers 2004), i.e. verbs that fall within the middle situation types established by Kemmer (1993), such as *=za ilaliye/a-* ‘desire (for oneself)’.

As this cursory overview of the usages of *=za* has shown, the particle is attested in a wide range of contexts, and its behavior is not easily captured by synchronic generalizations. As Cotticelli Kurras & Rizza (2011: 120) observe, the particle is not restricted to any specific construction, nor is it confined to valency changing operations such as reflexive and reciprocal. Nevertheless, its association with reflexivity on the one hand, and with predicates that largely fall into Kemmer’s (1993) middle situation types on the other, has led scholars to associate its range of meanings to that of the typological middle voice domain, and to variously describe its core meaning in terms of subject involvement/affectedness (cf. Josephson 2003, Luraghi 2010a, 2012, Cotticelli Kurras & Rizza 2011, 2013). In this respect, it is worth stressing that in Hittite the middle inflection and the particle *=za* partly overlap in the encoding of the middle voice domain as described by Kemmer. Further research on the particle *=za* is needed to fully investigate the extent of this relationship and its evolution through time.

The prehistory of the particle is also a matter of dispute, as its etymology is still debated (see also Puddu 2005: 66-67 for references). This is clearly a crucial point, as establishing the particle’s original function may provide a key element to understanding how the puzzling synchronic situation emerged in diachronic terms. The received view, expressed in Kloekhorst (2008 *s.v.*), is that the particle must go back to a pre-form **ti*, as suggested by comparison with other Anatolian cognates such as Pal. *=ti*, CLuw. *=ti*, HLuw. *=ti/ri*, Lyc. *=ti* (see further Josephson 2003: 229 for possible non-Anatolian cognates), possibly connected with the anaphoric pronominal stem **to-* (cf. Schmidt 1978 and Dunkel 2014: 782).²⁸ A slightly different scenario is offered by Yakubovich (2006, 2010), who focuses his attention on reflexive pronouns in Luwian. Building upon Rieken’s (2004: 183) previous observation

²⁸ According to Lehmann (2016 [1995]: 49), Hittite *=za* goes back to the PIE reflexive **swe* and therefore attests to the last phase of the grammaticalization process whereby an independent reflexive anaphor loses its independent word status and turns into clitic verbal reflexive. This scenario is however untenable, as Hittite *=za* is not etymologically related to PIE **swe*, which generally does not appear in Anatolian (cf. Yakubovich 2006: 85).

that both Hittite *=za* and Luw. *=di* reflect PIE **=toi* ‘thee’, Yakubovich argues that since the expected outcome of PIE **=toi* in Hittite should be ***=te* (cf. 3rd person dative singular PIE **soi* > Hitt. *=se* ‘him’), a viable solution is to assume that Hittite borrowed **=ti* from Luwian, where instead **toi* yields *=ti* via regular sound laws. I do not wish to go any further into the details of either reconstructions. It suffices here to stress that the particle is of clear Anatolian background and possibly originated out of a (reflexive) pronominal form.

To sum up, whereas there is a general agreement that the particle shows a number of meanings that are recurrently associated with reflexive and middle morphemes cross-linguistically, a comprehensive description based on a thorough corpus analysis is still missing. In addition, besides a few remarks in Boley (1993), a systematic diachronic analysis of how the various functions are to be diachronically related and how the use of the particle changes over time is yet to be provided. Clearly, a new corpus-based description of the particle *=za* lies beyond the scope of the present study, so I will not pursue it further (see Smith in prep.).

Chapter 2: The Hittite middle voice: a synchronic description

2.1. Introduction

In this chapter, I provide a comprehensive and structured description of the behavior of the middle voice in Hittite, with the goal to offer a thorough description of the individual functions of the Hittite middle, and to give an accurate picture of the complexity of its functional domain. The description in this chapter adopts a purely synchronic, or better panchronic, perspective: data from OH, MH, and NH are discussed together, and no attention is given to possible differences and diachronic developments, which are investigated in Chap. 3. Data from this chapter comes from the detailed analysis of occurrences of middle verbs in original Hittite texts. An in-depth description of each verb can be found in Part Two.

The chapter is organized as follows. In the remainder of the Introduction, I give an overview of the material on which the study is based (sec. 2.1.1), discuss the status of *hapax legomena* (sec. 2.1.2), and address the issues raised by the individuation of *media tantum* (sec. 2.1.3). Section 2.2 is devoted to a description of the functions associated with the middle voice in synchrony. I start by discussing the distribution of the middle voice with *media tantum* (sec. 2.2.1.1), including transitive deponent verbs (sec. 2.2.1.2). Then, I describe the various functions associated with oppositional middle verbs (sec. 2.2.2): anticausative, passive, reflexive, and reciprocal. I end by illustrating the possible patterns of polyfunctionality (sec. 2.2.2.5) and show possible constraints on the occurrence of the functions individuated. In Section 2.3, I take into account the role of derivational morphology and further elaborate on the distribution of the middle voice with individual classes of derived verbs, i.e. thematic *-iye/a-* verbs, causative verbs in *-nu-*, factitive verbs in *-ahh-*, and imperfective verbs in *-ske/a-*. In Section 2.4, I briefly discuss the role of lability in the encoding of different valency changing operations. Section 2.5 offers a summary of the findings of this chapter and tackles the issue whether a unified description of the middle voice in synchronic terms can be successfully achieved.

2.1.1. Overview of the material

The corpus investigated (see Chap. 1) attests to a total of 105 verbs that show at least one occurrence in the middle voice in original texts, for a total of 1669 tokens of middle verbs analyzed (see Part Two for the extensive treatment of these verbs). As I discuss in Chap. 3, the distribution across the diachronic subcorpora is largely unbalanced, with most of the material, in terms of type and token frequency, coming from NH/NS texts.

Notably, only 14 verbs are attested in all the three stages of the language in original texts, and this fact limits greatly the possibility to perform detailed diachronic analyses (cf. Chap. 3). These verbs are: *ar*-^{ta(ri)} ‘stand’, *es*-^{a(ri)} ‘sit’, *hai(n)k*-^{ta(ri)}/*hink*-^{a(ri)} ‘bow’, *halzai*-ⁱ/*halzi*-^{a(ri)} ‘call’, *hantae*-^{zi}/*handae*-^{ta(ri)} ‘align, determine’, *happ*-^{zi} ‘join, work out’, *ye/a*-^{ta(ri)} ‘go, march’, *kīs*-^{a(ri)}, *kikkis*-^{ta(ri)} ‘become, happen’, *ki*-^{ta(ri)} ‘lie’, *lazziye/a*-^{ta(ri)} ‘be(come) good, be favorable’, *lukk*-^{ta} ‘dawn’, *nai*-ⁱ/*nē*-^{a(ri)} ‘turn (intr.)’, *pars(i)*-^{a(ri)} ‘break’, and *weh*-^{zi} ‘turn (intr.)’.

Turning to the frequency of individual verbs, it is important to observe that the relative high token frequency of some verbs is most likely biased by the corpus selection. Consider the data in Table 6, which shows the 12 most frequent verbs in all stages of the language (more than 20 tokens).¹

Table 6: Most frequent verbs in the OH/MH/NH corpus

Verb	Token frequency
<i>lazziye/a</i> - ^{ta(ri)} ‘be(come) good, be favorable’	220
<i>hantae</i> - ^{zi} / <i>handae</i> - ^{ta(ri)} ‘align, determine’	211
<i>ki</i> - ^{ta(ri)} ‘lie’	189
<i>kīs</i> - ^{a(ri)} , <i>kikkis</i> - ^{ta(ri)} ‘become, happen’	186
<i>ar</i> - ^{ta(ri)} ‘stand’	123
<i>ye/a</i> - ^{ta(ri)} ‘go, march’	97
<i>es</i> - ^{a(ri)} ‘sit’	82
<i>pahs</i> - ⁱ ‘protect’	77
<i>pars(i)</i> - ^{a(ri)} ‘break’	74
<i>nai</i> - ⁱ / <i>nē</i> - ^{a(ri)} ‘turn (intr.)’	39
<i>zahhiye/a</i> - ^{zi} ‘fight’	21
<i>akkiske/a</i> - ^{ta(ri)} ‘die (iter.)’	20

What stands out from the data in Table 6 is that in the corpus some verbs have a significantly higher token frequency as compared to all other verbs: *lazziye/a*-^{ta(ri)} ‘be(come) good, favorable’, *handae*-^{ta(ri)} ‘align, be determined’, *ki*-^{ta(ri)} ‘lie’, and *kīs*-^{a(ri)} ‘happen, become’. The reason for this peculiar distribution must be sought in the corpus’ composition. The verbs *lazziye/a*-^{ta(ri)} and *handae*-^{ta(ri)} mostly occur in the forms SIG₅-*ru* ‘let (the oracle) be favorable’ and SIXSÁ-*at* ‘is determined (by oracle)’ respectively, and these constitute fixed idioms that are extremely frequent in NH oracular

¹ Unless otherwise noted, frequencies of verbs given in this chapter always refer to middle forms only, and not to active ones.

texts. Similarly, high frequency of the verb *ki-tta^(ri)* can be explained because it often occurs in the form *GAR-ru* ‘let it lie (under oath)’, which is a formula typically found in NH treaties. As for *kīs-a^(ri)*, this verb frequently occurs in historical texts and treaties in the expression ‘become a god’, a euphemism employed to indicate a sovereign’s death. Similar considerations hold for verbs with lower frequency as well. For instance, the relatively high token frequency of *pahs-i* is a by-product of its frequent use in the imperative as a greeting formula in MH epistolary texts. High frequency of *pars(i)-a^(ri)* ‘break’ is a consequence of its use in ritual texts, and similarly, impersonal forms of *akkiske/a-tta^(ri)* all occur in Mursili’s prayers against the plague.

A final caveat is in order regarding the material employed: as discussed in Chap. 1, data for this study comes from original texts only. It follows that the analysis presented in this and in the following chapter is based on less than half of the entire material available, since only 105 middle verbs are attested in original manuscripts vs. 145 verbs attested only in copies (data mostly from Neu 1968a, to which a small group of other verbs have been added from Kloekhorst 2008). Despite this limitation, a cursory look at the 145 verbs from copies reveals that they by and large display a similar behavior to the verbs attested in originals as far as the function of the middle voice is concerned. Moreover, most of these verbs are either *hapax* (see below) or have only a handful of attestations, so that their interpretation is often difficult. For this reason, a good understanding of the various functions of the middle voice can be achieved even without taking these verbs systematically into consideration. For completeness’ sake, in the following sections, after discussing the functions of the middle voice based on the analysis of verbs attested in original texts, I occasionally refer to the distribution of these functions among verbs attested in copies as well. A list of occurrences in original texts of the verbs discussed in this chapter can be found in Appendix I, while for occurrences in copies I refer to the data collected by Neu (1968a).

2.1.2. *Hapax legomena*

A common issue at stake in the analysis of languages that are only attested in limited written records is represented by the occurrence of *hapax legomena*, i.e. items that occur only once in the corpus. In our case, these are verbs that occur only once in the entire Hittite corpus, be it either in original or in copied texts. Clearly, for these verbs the evidence is often not enough to determine their behavior with respect to voice selection. Overall, my corpus includes a total of 36 *hapax legomena* in original texts. Within this group, it is important to draw some distinctions, as not all verbs should be treated equally. In the first place, 19 of these verbs are only apparently *hapax*. These are verbs for which only one occurrence exists in original manuscripts, but that are otherwise well attested in later copies.

A case in point is $zē^{-a(ri)}$ ‘cook (intr.)’ which occurs only once in a OS manuscript (KBo 17.36+ ii 20), but is also well attested in post-OS copies.

The remaining verbs can be taken as true *hapax*, as there are no other occurrences even in copies of original manuscripts. Of these, 12 verbs are easily interpretable and fit our general understanding of the middle voice, and these include *media tantum* and oppositional middles. For instance, even though the verb $kistanziye/a^{-tta(ri)}$ ‘be(come) hungry’ occurs only once in OS (KBo 3.22 rev. 46), its syntactic and semantic behavior is similar to other better preserved *-iye/a-* experiencer predicates, such as e.g. $lazziye/a^{-tta(ri)}$ ‘be(come) good’. Finally, 4 verbs show only one token in the middle voice, whose interpretation is unclear, as in the case of the isolated middle form of $mema^{-i}$ ‘speak’, i.e. *me-mi-ya-ah-ha-at* (KBo 4.12 obv. 27 NH/NS). The list of true *hapax*, including both those which are easily interpretable and those of difficult interpretation, is given in Table 7. Note that I count here as *hapax* verbs that display only one attestation in the middle voice. In fact, some of the verbs in Table 7 are also well attested in the active voice, as in the case of e.g. $istamass^{-zi}$ ‘hear’ and $aruwae^{-zi}$ ‘bow down’.

Table 7: Middle *hapax legomena*

<i>Hapax legomena</i> consistent with the other middle verbs	<i>Hapax legomena</i> of difficult interpretation
NON-OPPOSITIONAL	$aruwae^{-zi}$ ‘bow down’
$asiwantēss^{-zi}$ ‘become poor’	$ispānt^{-i}$ / $ispant-$ ‘libate’
$hiswai^{-tta(ri)?}$ ‘(be) open’	$mēma^{-i}$ ‘speak, tell’
$idalawesske/a^{-tta(ri)}$ ‘become bad’	$mummiye/a^{-zi}$ ‘keep falling, crumble (?)’
$kariye/a^{-tta(ri)}$ ‘be(come) gracious’	
$kallaress^{-zi}$ ‘be inauspicious’	
$kistanziye/a^{-tta(ri)}$ ‘be(come) hungry’	
OPPOSITIONAL	
$istamass^{-zi}$ ‘hear’	
$istāp^{-i}$ / $istapp-$ ‘plug up, block’	
$istarni(n)ik^{-zi}$ ‘afflict’	
$punuss^{-zi}$ ‘ask, consult’	
$das(sa)nu^{-zi}$ ‘make strong’	
$zaluknu^{-zi}$ ‘postpone, delay’	

Summing up, true *hapax legomena* of difficult interpretation boil down to only 4 verbs, so that the occurrence of *hapax* does not constitute a major problem for a more general analysis of the function of the middle voice in Hittite.

Unsurprisingly, the number of *hapax legomena* sharply rises if one takes into consideration verbs attested in copies. Data from Neu (1968a) shows that 55 verbs occur only once in the entire Hittite corpus. Again, for the majority of these comparison with the active voice or with similar predicates can help shed light on their function, as in the case of e.g. *istalkiyattari* ‘(the field) is flattened’ attested once in KUB 4.3 obv. 10 and clearly a passive to active transitive *istalkiye/a-^{zi}* ‘flatten’. Still, a fairly large group of verbs remains whose interpretation is purely tentative (see Neu 1968b: 66, 81-83 for a list of these verbs with discussion).² Consider for example the two forms *la-la-at-ta-ru* and *wa-at-ta-it-ta-ru*. These verbs are attested in a NS magical ritual (KBo 12.96 i 14), and various more or less convincing readings have been proposed: most likely, they mean ‘speak the language of Lalanda/Wattarwa’ (e.g. Neu 1968a: 105-106, 194; see Francia 2016 for a similar conclusion and a thorough discussion of alternative interpretations). In addition, some verbs remain of obscure interpretation even though they are attested more than once. For instance, the verb *kammarasniye/a-^{ta(ri)}* occurs three times but always in passages that are too fragmentarily preserved to allow a reliable interpretation (see Neu 1968a: 79). In the remainder of this chapter, since the interpretation of these verbs is highly speculative if not impossible to achieve, they will be left out of the general discussion (combining data from Neu 1968a and Kloekhorst 2008, there are at least 28 such verbs).

2.1.3. *Media tantum*: how to individuate them?

In order to achieve a proper understanding of the function of the middle voice in Hittite, it is crucial to set up a distinction between oppositional and non-oppositional middle verbs. As already discussed in Chap. 1, the former are verbs for which active forms exist alongside middle ones, i.e. verbs that display active vs. middle voice alternation, whereas the latter are verbs that occur either in the active or in the middle voice only throughout the history of Hittite (cf. Neu 1968b: 52-54). Traditionally, non-oppositional verbs are also labelled *activa* and *media tantum*, the latter also including the subclass of *deponent* verbs, i.e. non-oppositional middle verbs with transitive syntax (cf. Chap. 1. sec. 1.3.2 and below sec. 2.2.1.2). Whereas with oppositional verbs voice alternation can be linked to

² Some of these might not even be middle verbs at all. Consider the form read by Neu (1968a: 127) *ne-[ku]-ma-an-ta-ri* ‘and he dresses (that one)’ (KBo 13.119 iii 16), which should instead be read as active *ne-k[u-u]m-an-ta-ri-[ya-an-zi]* (see discussion in the *CHD* under *nekumandariya*-).

various functions, e.g. anticausative, reciprocal, or passive, with non-oppositional ones the middle inflection is generally understood as being lexically determined.

It follows that the correct identification of the original OH *media tantum* is of paramount importance to understand the older patterns of voice distribution, also in a comparative perspective. A close inspection of the corpus reveals that 25 *media tantum* are attested in original texts, as reported in Table 8 (the dating in brackets refers to the first attestation of these verbs).³

Table 8: Hittite *media tantum* in original texts

Verb	Token frequency
BASE	
<i>ar</i> - ^{ta(ri)} ‘stand’	123 (OH)
<i>es</i> - ^{a(ri)} ‘sit down’	82 (OH)
<i>hiswai</i> - ^{ta(ri)?} ‘(be) open’	1 (MH)
<i>istu</i> - ^{ā(ri)} ‘get out, become known’	1 (MH)
<i>ki</i> - ^{ta(ri)} ‘lie, be laid’	189 (OH)
<i>kīs</i> - ^{a(ri)} , <i>kikkis</i> - ^{ta(ri)} ‘become, happen’	186 (OH)
<i>kist</i> - ^{ā(ri)} ‘perish’	2 (OH)
<i>tarra</i> - ^{ta(ri)} ‘be able, can (+ inf.)’	3 (NH)
<i>tukk</i> - ^{āri} ‘be visible, be important’	7 (MH)
<i>ur</i> - ^{āri} , <i>war</i> - ^{āri} ‘burn’	2 (OH)
<i>wakk</i> - ^{āri} ‘be lacking’	3 (MH)
<i>ye/a</i> - ^{ta(ri)} ‘go, march’	95 (OH)
<i>zē</i> - ^{a(ri)} ‘cook (intr.)’	1 (OH)
DERIVED	
<i>asiwantēske/a</i> - ^{ta(ri)} ‘become poor’	1 (NH)
<i>irmaliye/a</i> - ^{ta(ri)} , <i>armaniye/a</i> -, <i>ermaniye/a</i> - ‘be(come) ill’	8 (OH)
<i>kariye/a</i> - ^{(tt)a(ri)} ‘be(come) gracious towards’	1 (NH)
<i>kistanziye/a</i> - ^{ta(ri)} ‘be(come) hungry’	1 (OH)
<i>lēlaniye/a</i> - ^{ta(ri)} ‘be(come) furious’	1 (OH)

³ It is unclear to what extent the verb *es*-^{a(ri)} ‘sit down’, and perhaps *ar*-^{ta(ri)}, can be grouped together with the *media tantum*, since they coexist alongside the active verbs *es*-^{zi} ‘be seated’ and *ar*-ⁱ ‘arrive’ from their earliest attestation. Keeping in line with the traditional classification of these verbs, I group them here together with the other *media tantum* and refer to Part Two under the individual lemma for a more detailed discussion of the issue.

<i>teshaniye/a-tta(ri)</i> ‘appear in a dream’	5 (NH)
<i>uwaske/a-tta(ri)</i> ‘come’	3 (MH)
<i>wesiye/a-tta(ri)</i> ‘graze’	4 (OH)

Based on their stem formation, the verbs in Table 8 can be split up between underived and derived *media tantum*. As I discuss in sec. 2.2.1.1, there are good reasons to keep the two classes distinct: whereas with the former group voice selection can be investigated with respect to the semantic features of the verbal base only, with the latter group the semantics of the derivational suffixes may partly influence the verbs’ voice selection (see sec. 2.3). Derived verbs include verbs in *-iye/a-*, as *irmaliye/a-tta(ri)* ‘be(come) ill’, *kariye/a-(tt)a(ri)* ‘be(come) gracious towards’, *kistanziye/a-tta(ri)* ‘be(come) hungry’, *lēlaniye/a-tta(ri)* ‘be(come) furious’, *teshaniye/a-tta(ri)* ‘appear in a dream’, *wesiye/a-tta(ri)* ‘graze’, and verbs in *-ske/a-* built on active intransitive verbs, either simple, e.g. *uwaske/a-tta(ri)* ‘come’, or fientive *-ess-* verbs, e.g. *asiwantēske/a-tta(ri)* ‘become poor’.

It is important to stress that the individuation of the original *media tantum* constitutes a non-trivial task for various reasons. The first caveat is that, in the case of *hapax legomena*, there is simply insufficient evidence to assign a given verb to the class of *media tantum*. This is the case of e.g. *hiswai-tta(ri)* ‘be open’, which is treated as a possible *medium tantum* by Neu (1968b: 94), but occurs only once in the entire Hittite corpus. Clearly, evidence from such predicates is less compelling than evidence from verbs that are robustly attested, such as e.g. *ar-ta(ri)* ‘stand’ or *kis-a(ri)* ‘become, happen’.

More problematic is the case of verbs that are attested only in the middle voice in original OH/OS texts, but show active inflection in post-OH. These verbs are reported in Table 9.

Table 9: Verbs showing active inflection in post-OS only

Verb	OH token frequency
BASE	
<i>ark-a(ri)</i> ‘mount’	2
<i>hai(n)k-tta(ri)</i> ‘bow (intr.)’	8
<i>happ-zi</i> ‘join (intr.)’	1
<i>harp-tta(ri)</i> ‘re-associate oneself (intr.)’	2
<i>huett(i)-tta(ri)</i> ‘draw’	4
<i>lukk-tta</i> ‘get light, dawn’	7
<i>pars(i)-a(ri)</i> ‘break’	46
<i>salik-a(ri)</i> ‘approach’	4

<i>tith</i> ^{-a} ‘thunder’	3
<i>tuhs</i> ^{-a(ri)} ‘cut’	4
<i>zahh</i> ⁻ⁱ ‘hit’	2
DERIVED	
<i>lazziye/a</i> ^{-tta(ri)} ‘be(come) good’	2
<i>marriye/a</i> ^{-tta(ri)} ‘melt’	1
<i>paiske/a</i> ^{-tta(ri)} ‘go’	2
<i>usneske/a</i> ^{-tta(ri)} ‘put up for sale’	3

The original voice of these verbs is difficult to determine, and there are two alternative scenarios. Either these verbs were originally *media tantum* and active inflection was a later post-OH innovation, or active inflection is equally old but it is accidentally unattested in OS. Even though neither of the two scenarios can be ultimately proved correct due to the lack of sufficient data, some considerations might help in deciding whether a verb originally belonged to the *media tantum*. Among useful diagnostics, one can observe asymmetries in token frequency between active and middle forms, semantic differences between active and middle verbs, and morphological features such as the patterns of stem formation.

Among the verbs in Table 9, post-OH active forms of *ark*^{-a(ri)}, *huett(i)*^{-a(ri)}, *lukk*^{-tta}, *paiske/a*^{-tta(ri)}, *pars(i)*^{-a(ri)}, *salik*^{-a(ri)}, *tith*^{-a}, and *tuhs*^{-a(ri)} display the same syntax and semantics as OH middle forms, suggesting that these verbs were originally *media tantum* and were later partly transferred to active inflection, bringing about the picture whereby active and middle forms of these verbs freely alternate in post-OH times without any functional distinction. Quantitative data can be used to back up this argument: whereas middle forms of *lukk*^{-tta} are rather frequent since OH times, active forms are restricted to a handful of NH texts (see *CHD* s.v. for occurrences).

That for these verbs the active voice constitutes a later development is in some cases supported by morphological evidence. For instance, active forms of *tith*^{-a} in NH are based on a renewed stem *titha*-, which results from the reanalysis of the 3 sg. middle form *titha* as a stem base. Similar considerations hold for verbs such as *hatt*^{-a(ri)}, which in post-OH shows *hi*-inflecting forms based on an enlarged stem *hatta*- issued from the reanalysis of the 3 sg. ending *-a* as part of the stem. The verb *hatt*^{-a(ri)} is also interesting in another respect. This verb shows active and middle inflection since OH, without any noticeable difference in syntax and semantics between the two. However, whereas middle forms are mostly based on the stem *hatt*-, active forms are consistently based on the enlarged stem *hazziye/a*-, showing that middle inflection was most likely original (this pattern is also attested on other verbs,

i.e. *huett(i)-* vs. *huettiye/a-* ‘draw, pull’, *wess-* vs. *wassiyē/a-* ‘wear’, *wars-* vs. *warsiyē/a-* ‘lift up, relieve’, and *park-* vs. *parkiyē/a-* ‘raise’). Finally, in the case of *paiske/a-^{ttā(ri)}* the middle voice is likely to be original, as it patterns with the behavior of intransitive *-ske/a-* verbs built on unaccusative intransitive active verbs (cf. section 3.3.4.).

By contrast, post-OS active forms of *hai(n)k-^{ttā(ri)}*, *happ-^{zī}*, *harp-^{ttā(ri)}*, *lazziye/a-^{ttā(ri)}*, *mariyye/a-^{ttā(ri)}*, and *zahh-^ī* stand in functional opposition with middle forms. It is still unclear to what extent these verbs were originally *media tantum* and later acquired a functionally motivated voice alternation, or whether voice alternation is old but the active forms are simply unattested in OH. Each case should be judged on his own, and I refer to the discussion of each lemma in Part Two. The first scenario is most likely instantiated by *lazziye/a-^{ttā(ri)}*: this verb is consistently inflected in the middle voice in OH and MH, with only three occurrences of active forms in later texts (NS). It is therefore safer to assume that the verb originated as *medium tantum* and only marginally developed voice alternation with anticausative function in later times. By contrast, the verb *zahh-^ī* shows the reverse pattern. Even though the verb is attested only in the middle voice in OH/OS, active forms of the verb are quantitatively predominant in post-OH times. More importantly, as discussed in Part Two, active vs. middle voice alternation with *zahh-^ī* in OH seems limited to reciprocal derivation, thus suggesting that the middle verb must be based on its active counterpart. It follows that the lack of active inflection of *zahh-^ī* in OH/OS texts should be attributed to chance, and the verb should not be grouped together with the original *media tantum*.

Among the verbs listed by Neu (1968a), several verbs attested in copies display middle inflection only, and can therefore be tentatively included among the *media tantum*. The list of the verb as well as their token frequency can be found in Table 10. As observed above, within this group one finds both base and derived *media tantum*, as well as a number of *hapax* whose classification should be taken with due care. Note that some of these verbs suspiciously look like oppositional middles for which the lack of an active counterpart may be simply accidental. Consider e.g. the *hapax* verb *puppussa-^{ttā(ri)}*, which is commonly translated as ‘be pounded’ (cf. *CHD s.v.*), hence as an oppositional passive to a non-attested active base. Similarly, the verb *lam-[?]* ‘mix (intr.)’ is reminiscent of lexical reciprocal spatial verbs of the type *(anda) immiye/a-^{zī/ttā(ri)}* ‘mix (tr./intr.)’ that attest to voice alternation in anticausative/passive function (see sec. 2.2.2.1, 2.2.2.4). Finally, the verbs *nakkiyahh-^{ttā(ri)}* ‘become difficult, important’, *dammiummahh-^{ttā(ri)}* ‘change (intr.)’, and *siunniyahh-^{ttā(ri)}* ‘be hit by a disease (through a god)’ are also not likely *media tantum*, as *-ahh-* factitive derived verbs are usually active, and can marginally show a motivated active vs. middle voice alternation with different functions (see sec. 2.3.3).

Table 10: *Media tantum* in copies

Verb	Token frequency
BASE	
<i>ā(i)-^{a(ri)}</i> ‘be(come) hot’	10
<i>arpai-^{tta(ri)}</i> ‘be(come) unfavorable’	1
<i>arpuwa-^{tta(ri)}</i> ‘be(come) unfavorable’	1
<i>āss-^{a(ri)}</i> , <i>āssiye/a-^{tta(ri)}</i> ‘be dear, be loved’	5
<i>enuma-[?]</i> ‘be refreshed (?)’	1
<i>isharish-^{a(ri)}</i> ‘get the Inara disease?’ ⁴	3
<i>hinik-^{ta(ri)}</i> ‘pour (?)’	
<i>lam-[?]</i> ‘mix (intr.)’	3
^{NA} <i>peruluwa-^{a(ri)}</i> ‘free from stones (tr.)’	1
<i>pipeda-[?]</i> ‘carry on (?)’	1
<i>pukk-^{(tt)a(ri)}</i> ‘be hateful, be repulsive’	4
<i>puppussa-^{tari}</i> ‘be pounded’	1
<i>putkiye/a-^{tta(ri)}</i> ‘swell (intr.)’	2
<i>salla-^{tta(ri)}</i> , <i>salliye/a-^{tta(ri)}</i> ‘melt down (intr.)’	7
<i>tapanniye/a-^{tta(ri)}</i> ‘itch (intr.) (?)’	2
<i>uwai-^{tta(ri)}</i> ‘become sorrow to someone’	5
<i>:was-^{(t)a(ri)}</i> ‘be pleasant’	3
DERIVED	
<i>huntariye/a-^{tta(ri)}</i> ‘fart’	1
<i>hursakniye/a-^{tta(ri)}</i> ‘stew (intr.)’	2
<i>iksaiske/a-^{tta(ri)}</i> ? ⁵	1
<i>ishahruwe/a-^{tta(ri)}</i> ‘weep’	1

⁴ Most forms of the verb belong to the derived *-ske/a-* stem (e.g. *is-ha-ri-is-kat-ta-ri* KBo 22.114). The only simple form is *is-ha-ri-is-ha-ri* (KUB 30.26 i 2), whose morphological interpretation is however doubtful (see discussion in *HED* II: 396-397).

⁵ Neu (1968a: 69) gives the form *ik-sa-a-i-is-ki-it-ta* (KUB 36.44 iv 10), without attempting a translation due to the fragmentary context (thus also the online edition (ed.), hethiter.net/: CTH 323.1 (TX 2009-08-26, TRde 2009-08-26), where different possible translations are discussed). As Melchert (p.c.) observes, given the context of the sun falling into various places, the verb could be emended as *ik-ta-a-i-is-ke-et-ta*, which can be interpreted as a *-ske/a-* oppositional passive to a verb *iktāi-* ‘catch in a hunting net’ (thus Hoffner 1990: 27).

<i>ishanallēss-^{tari}</i> ‘become a murderer’	2
<i>karpīye/a-^{tta(ri)}</i> ‘become angry’ ⁶	1
<i>marlaiske-^{tta(ri)}</i> ‘be(come) mad, stupefy (intr.)’ ⁷	5
<i>nakkiyahh-^{tta(ri)}</i> ‘become difficult, important’	1
<i>palhesske/a-^{tta(ri)}</i> ‘become wide’	3
<i>pangariye/a-^{tta(ri)}</i> ‘become common, widespread’	2
<i>pargaweske/a-^{tta(ri)}</i> ‘become tall’	2
<i>parkesske/a-^{tta(ri)}</i> ‘become tall’	2
<i>siunniyahh-^{tta(ri)}</i> ‘be hit by disease (through a god)’	4
<i>dammiummahh-^{tta(ri)}</i> ‘change (intr.)’ ⁸	4
<i>tepawēsske/a-^{tta(ri)}</i> ‘become small, less’	1
<i>ulliske/a-^{tta(ri)}</i> ⁹	1
<i>uliliyeske/a-^{tta(ri)}</i> ‘grow’	1

Finally, one finds a significant number of verbs that synchronically inflect both in the active and in the middle voice without there being any noticeable semantic or syntactic difference. Overall, this pattern covers 34 verbs in original texts, reported in Table 11, and 18 verbs in copies, reported in Table 12.

Table 11: Verbs showing functionally identical active and middle forms in originals

BASE	DERIVED
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⁶ The status of this verb is disputed. According to Puhvel (*HED* K: 98 ff.), followed by Kloekhorst (2008 s.v.), the verb shows an alternating *karp-* vs. *karpīye/a-* stem. However, the only occurrence of the verb with the stem *karp-* can also be interpreted as a middle form of the verb *karp(iye/a)-^{zi}* ‘raise, pluck (tr.)’. See Part Two, fn. 51 for discussion.

⁷ All forms of the verb *marlaiske-^{tta(ri)}* are attested on a single manuscript KBo 26.136, which is dated to OS in the *CHD* and by Kloekhorst (2008 s.v.) but is regarded as MS in the *HPM*.

⁸ Kloekhorst (2008 s.v.) glosses *dammiummahh-^{tta(ri)}* as ‘change (trans.)’, but there is no evidence for transitive syntax of this verb. In the few passages in which it occurs, the verb can more easily be interpreted as intransitive (cf. Neu 1968a: 165), in line with the general tendency of middle forms of derived *ahh-*verbs.

⁹ According to Tischler (*HEG* s. *ulai-*), the form read by Neu (1968a: 183) as *ú-ul-li-is-kat-ta-ri* (KUB 50.30 rev. 2) should be instead read as *hu-ul-li-is-kat-ta-ri*, i.e. as a middle form of the *-ske/a-* stem of *hulle-^{zi}* ‘fight’ (thus also *HW²* s. *hulla/e-*). The ambiguity rests upon the difficult reading of the first sign as either *Ú* or *HU* (see also Marcuson 2016: 471 fn. 64). Note that in any case, Tischler’s treatment of the form *hulliskattari* as transitive ‘fights’ is unwarranted. Rather, the form is better interpreted as passive ‘is defeated’ (Marcuson 2016: 472), consistently with the behavior of passive middle forms of *hulle-^{zi}* with passive function elsewhere (Neu 1968a: 58-59).

<i>āk-/akk⁻ⁱ</i> ‘die’	<i>akkiske/a^{-tta(ri)}</i> ‘die’
<i>āss^{-zi}</i> ‘remain’	<i>aruwae^{-zi}</i> ‘bow down, prostrate oneself’
<i>haliye/a^{-zi}</i> ‘kneel down’	<i>*hassuezziye/a^{-tta(ri)}</i> ‘be(come) king’
<i>hanna⁻ⁱ</i> ‘sue, judge, contest’	<i>idalawēsske/a^{-tta(ri)}</i>
<i>huwai⁻ⁱ</i> ‘run’	<i>kallarēsske/a^{-tta(ri)}</i> ‘be inauspicious’
<i>ishuwai⁻ⁱ</i> ‘throw, scatter, pour’	<i>kardimiye/a^{-tta(ri)}</i> ‘be(come) angry’
<i>ispānt⁻ⁱ / ispant⁻</i> ‘libate’	<i>karūss(iye/a)^{-zi}</i> ‘be(come) silent’
<i>istar(k)^{-zi}</i> ‘be(come) ill’	<i>nahsariye/a^{-zi}</i> ‘be(come) afraid’
<i>mai⁻ⁱ / mi⁻</i> ‘grow’	<i>nakkēs(ske/a)^{-zi}</i> ‘become important, become troublesome to’
<i>mēma⁻ⁱ</i> ‘speak, tell’	<i>zahhiye/a^{-zi}</i> ‘fight’
<i>mau⁻ⁱ, mauss^{-zi}</i> ‘fall’	
<i>mer^{-zi}</i> ‘disappear, to vanish’	
<i>mummiye/a^{-zi}</i> ‘keep falling, crumble (?)’	
<i>nē^{-a(ri)}</i> ‘turn (intr.)’	
<i>neku^{-zi}</i> ‘become evening’	
<i>pahs⁻ⁱ</i> ‘protect’	
<i>parh^{-zi}</i> ‘chase, hunt’	
<i>sanna⁻ⁱ</i> ‘hide, conceal’	
<i>sārr⁻ⁱ</i> ‘transgress’	
<i>sup^{-(tt)a(ri)}</i> ‘fall asleep’	
<i>tame(n)k^{-zi}</i> ‘affix, attach, join (intr.)’	
<i>watku^{-zi}</i> ‘jump, flee’	
<i>weh^{-zi}</i> ‘turn’	

Table 12: *Verbs showing functionally identical active and middle forms in copies*

Verb	Middle tokens
BASE	
<i>halihla⁻ⁱ</i> ‘genuflect’	2
<i>hark^{-zi}</i> ‘perish’	3

<i>hassikk-^{zi}</i> ‘satisfy oneself’	2 ¹⁰
<i>hāt-ⁱ</i> ‘dry up, become parched’	1
<i>iskalla-ⁱ</i> ‘split, tear (tr.)’	3
<i>ni(n)k-^{zi}</i> ‘quench one’s thirst’	1
<i>pasku-^{zi}</i> ‘ignore, neglect, remove (tr.)’	2
<i>ses-^{zi}</i> ‘sleep’	4
<i>dākk-ⁱ</i> ‘resemble’	1
<i>tiye/a-^{zi}</i> ‘step, set in’	2
<i>tusk(iye/a)-^{zi}</i> ‘rejoice (in)’ (with =za) ¹¹	11
<i>ulae-^{zi}</i> ‘hide’	1
<i>ūpp-^{zi}</i> ‘rise (of the sun)’	1
DERIVED	
<i>āppa-ⁱ</i> ‘finish’	1
<i>egae-^{zi}</i> ‘cool down’	5
<i>irhae-^{zi}</i> , <i>arhae-^{zi}</i> ‘make the rounds, finish (intr.), enumerate (tr.)’	11
<i>lahlahiye/a-^{zi}</i> ‘worry’	2
<i>makkesske/a-^{ta(ri)}</i> ‘become much’	1
<i>paprē-^{zi}</i> ‘be proven guilty’	1
<i>sarhiye/a-^{zi}</i> ‘attack (?)’	1
<i>suppariye/a-^{zi}</i> ‘sleep’	1
<i>tuhhae-^{zi}</i> ‘produce smoke’	3
<i>zappiye/a-^{zi}</i> ‘drop, leak’ ¹²	4

¹⁰ The form *hassiskatta* (KBo 12.3 iv 11) is interpreted by Neu (1968a: 50) as a 3rd person singular present middle, but it can also be taken as an active preterite (thus Kloelkhorst 2008 *s.v.*). Middle inflection is however assured in the 2nd preterite plural form *hassikkidumat* (Neu 1968a: 50).

¹¹ The verb *dusk-* occurs both in the active and in the middle voice, and displays an interesting connection with transitivity. Whereas middle forms seem confined to an intransitive construction (see Neu 1968a: 181), active forms can also take an accusative direct object. However, such transitive occurrences do not give rise to an anticausative interpretation, as they do not mean ‘entertain someone’ but rather ‘rejoice in someone/something’, as discussed at length by Cammarosano (2014).

¹² According to Tischler (*HEG s. zappi-, zappiya-*), *contra* Neu (1968a: 205-206), active forms of the stem *zappiye/a-* do not belong to the verb *zappiye/a-^{ta(ri)}* ‘drop, leak’, but should be considered as a separate lemma meaning ‘damage’. Tischler’s interpretation of the latter rests upon comparison with the noun *zappiyan* ‘death’. Note however that all active forms based on *zappiye/a-^{zi}* occur in contexts that are not particularly revealing as to the meaning of the verb, so that

Establishing the original voice of the verbs in Tables 11 and 12 proves a challenging task, but as discussed above some reasonable hypotheses can be formulated. For the verbs in Table 11, I refer to the detailed discussion of the individual lemma in Part Two, and limit myself here to the summary of the most common patterns. Diachronic aspects of the distribution of verbal voice with these predicates will be discussed in Chap. 3.

In the first place, there are verbs that mostly display active inflection and are attested in the middle voice only once, as in the case of *āk-/akk-ⁱ* ‘die’ and *aruwae-^{zi}* ‘bow down’. In both cases, middle inflection seems a sporadic trait and is not probative for the use of middle voice with these verbs. This is particularly true for the form [*akka*]ndari, which has been restored by the editor of the text, and is therefore highly unreliable. Moreover, middle inflection of *aruwae-^{zi}* ‘bow down’ is clearly secondary, as the verb belong to the *hatrae*-class, which includes only denominal verbs that inflect as *activa tantum* and follow *mi*-inflection. In most of these cases, the diachronic distribution of the forms is also revealing and suggests a secondary status of middle forms: for instance, the verb *mēma-ⁱ* ‘speak, tell’ is abundantly attested in the active voice since OH/OS, whereas the only middle inflection comes from a NH/NS text.

In the second place, in many cases the morphology of the verbs can be of help: the verb *nakkēss-^{zi}* ‘become important’ occurs in both active and middle forms, but active inflection is more likely to be original, since derivative fientive verbs in *-ēss-* are systematically *activa tantum* (see section 2.3.4). For some verbs, the situation is more complex: a case in point is *sarr-ⁱ*, which shows active and middle forms identical in syntax and semantics with the meaning ‘transgress’, but a functionally motivated voice alternation with the spatial reciprocal meaning ‘split’. Finally, the partial functional overlap of active and middle forms of some verb can be seen as the outcome of the development of labile syntax in NH times (see sec. 2.4). For instance, the verb *nai-ⁱ* ‘turn’ mostly shows voice alternation with anticausative function, i.e. *nai-ⁱ* ‘turn (tr.)’ vs. *nē-^{a(ri)}* ‘turn (intr.)’, but labile active forms with intransitive syntax, equivalent to middle forms, are marginally attested in NH.

There is still a number of verbs for which one simply cannot assess the original inflection, and all interpretations remain somewhat speculative. The case of *neku-^{zi}* ‘become evening’ is instructive in this respect. As discussed in Part Two, the verb *neku-^{zi}* freely alternates between active and middle forms, without any detectable functional difference (Neu 1968b: 79). According to Kloekhorst (2008

Tischler’s interpretation remains somewhat speculative. In addition, one finds active forms of the derived *-ske/a-* stem *zappiske/a-^{zi}* identical in syntax and semantics to middle forms of *zappiye/a-^{ta(ri)}* ‘drop, leak’. Therefore, I see no compelling evidence for establishing a two distinct lemma *zappiye/a-^{ta(ri)}* ‘drop, leak’ vs. *zappiye/a-^{zi}* ‘damage’.

s.v.), active inflection is original, and the verb was partly transferred to middle inflection in analogy to *lukk-^{ta}* ‘dawn’ (thus also Melchert 2017b: 480). However, the verb could as well be an original *medium tantum*, and later sporadically acquired active inflection analogically to other active impersonal weather verbs (cf. Neu 1968b: 98-99). The main problem in assessing the original inflection of *neku-^{zi}* is that active and middle forms coexist alongside since MS texts, and the occurrences are so scarce to detect any significant pattern of distribution, so that both interpretations remain equally plausible.

Similar considerations by and large apply to the verbs attested only in copies and reported in Table 12. Only in a handful of cases can morphological factors be of help in determining the original inflection of a given verb. For instance, active voice is possibly original for verbs that belong to the *hatrae*-class such as *egae-^{zi}* ‘cool down’, whereas middle voice is likely original for *makkesske/a-^{ta(ri)}* ‘become much’, as *-ske/a-* forms of *-ēss-* verbs tend to inflect in the middle voice only (cf. sec. 2.3.4). The original inflection of base verbs is more difficult to determine. I do not discuss these verbs any further here, since their interpretation remains highly tentative.

2.2. The function(s) of the middle voice in Hittite

In this section, I discuss the functions of the middle voice in Hittite from a synchronic standpoint. In doing so, I first describe *media tantum* (sec. 2.2.1), and then proceed to illustrate the various functions of oppositional middles (sec. 2.2.2). The reason to keep the two classes distinct is that different explanations have been proposed for the association of the middle voice with these verb classes, as discussed in Chap. 1. Whereas the distribution of *media tantum* is commonly thought to be determined by lexical factors, oppositional middle forms can be understood as performing various valency reducing functions and hence rather belong to the pole of grammar.¹³

However, such distinction ultimately relies on one’s assumption about the division of labor between lexicon and grammar, and keeping the two groups distinct, though surely allowing for a greater accuracy and consistency in the description of the two classes, greatly overshadows the fact that the two groups share a significant number of common properties. For this reason, after discussing the two groups separately, I attempt a unified synchronic account of the Hittite middle as a whole in sec. 2.5.

¹³ Moreover, in IE studies, the distinction between the two classes has also been supported in light of diachronic considerations. According to various scholars, the middle voice is conceived as being originally lexically distributed among *media tantum* and only later became fully grammaticalized as an inflectional category in opposition with the active voice (see *inter al.* Lazzeroni 1990, Bendetti 2002, Romagno 2010). I return to this issue in Chap. 3.

2.2.1. Non-oppositional middles

As anticipated in sec. 2.1.3, non-oppositional middle verbs can be defined as verbs that only occur in the middle voice throughout the history of Hittite. After a description of the general properties of underived *media tantum*, I focus on two interesting sub-classes of verbs, i.e. deponents and weather verbs.

In describing the Hittite *media tantum*, one should carefully distinguish between derived and underived ones. The reason to treat underived *media tantum* separately from derived ones lies in the fact that in the case of derived verbs, their middle inflection may be partly determined by the properties of the derivational suffixes (see below and sec. 2.3). As a consequence, these verbs might not be particularly instructive about the original distribution of the middle voice.

Since with underived *media tantum* the middle voice does not operate as functional marker in opposition to the active voice, the middle inflection is best regarded as idiosyncratic. As such, OH *media tantum* are extremely revealing about the possible original distribution of the middle voice, and the study of *media tantum* in OH is also of primary interest for comparative purposes.

2.2.1.1. Underived *media tantum*

In the scholarship on *media tantum*, both in Hittite as well as in other IE languages, different approaches have been proposed to account for the association of these predicates with the middle inflection, as discussed in Chap. 1 sec. 1.3.2. According to some authors, *media tantum* merely constitute a historical residue and their distribution is not motivated by any functional factor. This is the approach traditionally adopted for example in the study of Latin *media tantum*, as evidence by this particularly explicit quote from Baldi, who states that *media tantum* “constitute a category of morphological and semantic relics which can only be understood in a purely historical context” (Baldi 1999: 395; see Gianollo 2005, 2010 and Pinzin 2017 for a critical discussion of the Latin data). This is not however the only possible approach. As a matter of fact, many scholars have tried to determine underlying factors that can explain why specific predicates are consistently associated with the middle inflection, and have proposed different motivations for it. In the remainder of this section, I describe different possible motivations for the existence of *media tantum*.

The older approach to the discussion on the distribution of *media tantum* focuses on the role of lexical aspect as the semantic factor underlying the distribution of *activa* vs. *media tantum*. With regards to Hittite, this approach is best exemplified by Neu’s (1968b: 52) thorough treatment of the issue. According to Neu (1968b: 52), the ‘original’ *media tantum* include the following 13 verbs: $\bar{a}(i)$ -^{a(ri)} ‘be warm’, ar -^{ta(ri)} ‘stand’, es -^{a(ri)} ‘sit (down)’, ye/a -^{tta(ri)} ‘march’, $istu$ -^{\bar{a}(ri)} ‘appear’, ki -^{tta(ri)}

‘lie’, *kis*-^{a(ri)} ‘become’, *kist*-^{ā(ri)} ‘perish’, *pukk*-^{(tt)a(ri)} ‘be hated’, *tarra*-^{ttā(ri)} ‘be powerful’, *tukk*-^{ā(ri)} ‘be visible’, *ur*-^{ā(ri)} ‘burn’, *zē*-^{a(ri)} ‘cook’ (note that this is the inventory of *media tantum* offered by Neu, which partly differs from mine, as discussed below). Neu points out that these verbs are all intransitive, and most of them encode a state. In support of this claim, he observes that these verbs mostly fail to show *-ske/a-* derived forms, and their *-ant-* participles do not have resultative semantics (Neu 1968b: 117-119; this is not entirely true, for instance the (telic) verb *es*-^{a(ri)} ‘sit down’ shows *-ske/a-* forms since OH [KBo 3.34 iii 15, OH/NS] and has a resultative participle *esant-* ‘seated’). That these verbs are intransitive is also suggested by the fact that transitive counterparts are created through the derivational causative suffix *-nu-*, as in e.g. *ā(i)*-^{a(ri)} ‘be warm’ vs. *enu-/inu*-^{zi} ‘make warm’. Overall, Neu’s position seems to favor an interpretation of the middle voice as originally being lexically restricted to verbs denoting states. This position is largely compatible, and also possibly biased, with the widely shared assumption that the PIE middle voice was strongly associated with stativity (see e.g. Lazzeroni 1990 and Sausa 2016: 232 with references; see also discussion in Chap. 3).

As already remarked by Luraghi (2012: 14-16), Neu’s interpretation is partly unwarranted. A closer look at Neu’s ‘original’ *media tantum* shows that only 5 out of 13 verbs are purely stative: *ar*-^{ta(ri)} ‘stand’, *ki*-^{ttā(ri)} ‘lie’, *pukk*-^{(tt)a(ri)} ‘be hated’, *tarra*-^{ttā(ri)} ‘be powerful’, *tukk*-^{ā(ri)} ‘be visible’. Other verbs, such as *ye/a*-^{ttā(ri)} ‘march’, *ur*-^{ā(ri)} ‘burn’, and *zē*-^{a(ri)} ‘cook’, even though they can also be construed as atelic, are not strictly speaking stative, as they indicate dynamic activity events. Moreover, the rest of the verb can be construed also as indicating a change-of-state event (see the discussion under the individual lemma in Part Two; for *ā(i)*-^{a(ri)} ‘be(come) warm’ see Luraghi 2012: 16 and references therein).

Similar considerations by and large hold for the *media tantum* detected in my own corpus, as shown in Table 8. Out of 12 underived *media tantum*, only 6 are purely stative: *ar*-^{ta(ri)} ‘stand’, *hiswai*-^{ttā(ri)?} (be) open’, *ki*-^{ttā(ri)} ‘lie’, *tarra*-^{ttā(ri)} ‘be able’, *tukk*-^{āri} ‘be visible, be important’, *wakk*-^{āri} ‘be lacking’. The other verbs are either atelic but not stative, e.g. *ye/a*-^{ttā(ri)} ‘go, march’, or indicate a change-of-state event, e.g. *istu*-^{ā(ri)} ‘get out, become known’ and *es*-^{a(ri)} ‘sit down’. Notably, if one broadens the view to other possible OH *media tantum* (see sec. 2.1.3), such as *lukk*-^{ttā} ‘get light, dawn’, *tith*-^a ‘thunder’, stativity turns out to play an even more marginal role. Finally, as rightly pointed out by Grestenberger (2016: 101), stativity is clearly not at play with deponent verbs, such as *ark*-^{a(ri)} ‘mount’, *pars(i)*-^{a(ri)} ‘break’, *salik*-^{a(ri)} ‘approach’, and *tuhs*-^{a(ri)} ‘cut’, which invariantly encode dynamic and telic events.

Underived *media tantum* attested in copies comply with this general picture (cf. Table 10). Out of 17 verbs, only 5 apparently display a default aspectual construal of transitory states, i.e. *āss*-^{a(ri)},

āssiye/a-tta(ri) ‘be dear, be loved’, *enuma-?* ‘be refreshed (?)’, *pukk-(tt)a(ri)* ‘be hateful, be repulsive’, *tapanniye/a-tta(ri)* ‘itch (intr.) (?)’, and *:was-(tt)a(ri)* ‘be pleasant’. The other verbs are not primarily stative. In the first place, there is a small group of verbs that indicate either a state or a change-of-state event, i.e. *ā(i)-a(ri)* ‘be(come) hot’ and *arpuwa-tta(ri)* ‘be unfavorable, turn out unluckily’. In the second place, there are verbs that indicate dynamic atelic activity events, i.e. *ishahruwe/a-tta(ri)* ‘weep’, and possibly *pipeda-?* ‘carry on (?)’. The majority of verbs indicate change-of-state events, either degree verbs such as *putkiye/a-tta(ri)* ‘swell (intr.)’ and *salla-tta(ri)*, *salliye/a-tta(ri)* ‘melt down (intr.)’ or achievement verbs such as *isharish-a(ri)* ‘get the Inara disease?’ and *uwai-tta(ri)* ‘become sorrow to someone’.

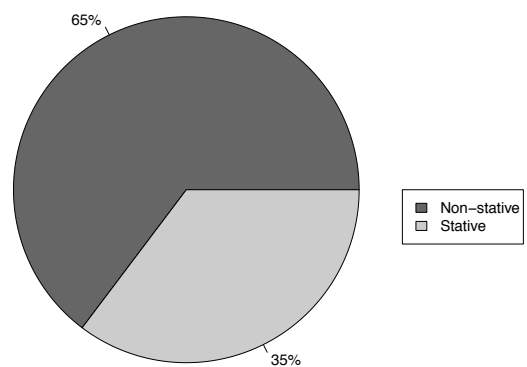
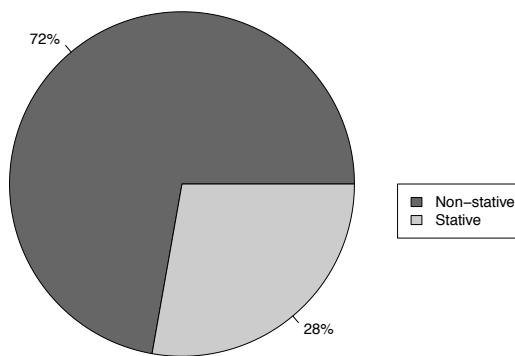


Figure 12: *Aspectual construal of media tantum in original texts* Figure 13: *Aspectual construal of media tantum in copies*

To sum up, a closer investigation of the default aspectual construal of *media tantum* in original texts and in copies shows that a connection of the middle voice with stativity is tenuous at best (cf. Inglese forthc.), and that Neu’s ‘aspectual hypothesis’ has a weak explanatory power in motivating the distribution of *media tantum*. Indeed, as the charts in Fig. 12 and 13 show, whereas it is certainly true that *media tantum* include a number of truly stative verbs, the majority of the verbs has only, or also license, a non-stative construal. Moreover, it should be noted that stativity is not even a feature of oppositional middle forms. Specifically, there is no evidence that when used in opposition to active verbs the middle voice has a ‘stativizing’ function, as most cases of oppositional middle forms interpreted by Neu (1968b: 93-95) as stative, grouped under the label of *Zustandsmedium*, are better viewed as canonical passives, in which stativity is a contextual by-product of the P-orientation of

passive forms (e.g. *handai-ta(ri)* ‘be determined’), or more generally as telic verb that indicate a change-of-state and also profile the attained resulting state (e.g. *zinna-ta(ri)* ‘finish (intr.)’).

Leaving the ‘stative hypothesis’ aside, the distribution of *media tantum* can be approached in terms of situation types. At least since Kemmer (1993), it has been acknowledged that languages displaying active vs. middle voice alternation also tend to feature a class of non-oppositional middle verbs. Even though these verbs are often considered as a marginal feature of middle marking languages, as they do not enter any productive synchronic pattern of voice alternation, it has been shown that “cross-linguistically they generally fall into [...] specific semantically-defined verb classes” (Kemmer 1993: 22). In Kemmer’s approach, the distribution of *media tantum* is therefore not considered as entirely arbitrary. As discussed in Chap. 1, semantic classes typologically associated with *media tantum* include verbs denoting translational, non-translational motion, and change in body posture, grooming verbs, verbs of emotion and cognition, and naturally reciprocal verbs.

This approach is not entirely new to Indo-European studies. As discussed in Chap. 1 sec. 1.2.2, already Delbrück (1897: 417-425) pointed out that *media tantum* in ancient IE languages, chiefly Indo-Aryan and Ancient Greek, can be grouped in specific semantic classes, including positional stative verbs, verbs indicating spontaneous change-of-state events, verbs that denote events connected to the human body, verbs of motion, and verbs of emotion. More recently, investigations of the middle voice in individual IE languages has shown that *media tantum* by and large comply with the semantic classes established by Kemmer (1993) for example in Ancient Greek (Allan 2003) and Latin (Gianollo 2005, 2010; see also the treatment in Xu *et al.* 2007 and Pinzin 2017, who also reach the conclusion that the middle voice in Latin *media tantum* is not randomly distributed but follows specific syntactic/semantic constraints), and the same approach has been pursued by Meiser (2010) in the reconstruction of *media tantum* in PIE.

A closer look at our data shows that Hittite *media tantum* in original texts largely fall into the classes described by Kemmer (1993). As shown in Table 13, one finds one verb that denotes a change in body posture, i.e. *es-a(ri)* ‘sit down’, positional verbs such as *ar-ta(ri)* ‘stand’, verbs that indicate translational motion, i.e. *ark-a(ri)* ‘mount’, and naturally reciprocal events such as *zahhiye/a-ta(ri)* ‘fight’. The largest class is represented by spontaneous events, which are of various types (based on the checklist in Kemmer 1993: 269-270): verbs that indicate a state of an inanimate participant, i.e. *hiswai-ta(ri)?* ‘(be) open’, verbs that indicate an existential change, i.e. *kīs-a(ri)*, *kikkis-ta(ri)* ‘become, happen’ and *kist-ā(ri)* ‘perish’, verbs of emission, e.g. *tith-a* ‘thunder’, and verbs that indicate a physio-chemical change, e.g. *ur-āri*, *war-āri* ‘burn’. One verb, namely *tarra-ta(ri)* ‘be able, can (+ inf.)’, does not seemingly fit any of Kemmer’s classes, but considering that the verb originally meant ‘be strong, be powerful’ it can be grouped with verbs that express a condition of a human subject. Verbs that

entirely fall out of Kemmer’s classification are deponent transitive verbs such as *pars(i)-^{a(ri)}* ‘break’. Since these verbs indicate highly transitive two-participant events, their middle morphology is entirely unexpected, and one has to find *ad hoc* solutions to fit them into the system (see sec. 2.2.1.2).

Media tantum in copies display a comparable distribution, and one predominantly finds verbs that indicate spontaneous events, e.g. *ā(i)-^{a(ri)}* ‘be(come) hot’.

Table 13: Semantic classification of *media tantum* in originals

CHANGE IN BODY POSTURE
<i>es-^{a(ri)}</i> ‘sit down’
POSITIONAL VERBS
<i>ar-^{ta(ri)}</i> ‘stand’
<i>ki-^{ttā(ri)}</i> ‘lie, be laid’
TRANSLATIONAL MOTION
<i>ark-^{a(ri)}</i> ‘mount’
<i>ye/a-^{ttā(ri)}</i> ‘go, march’
<i>salik-^{a(ri)}</i> ‘mount, climb onto’
SPONTANEOUS EVENT
<i>hiswai-^{ttā(ri)?}</i> ‘(be) open’
<i>istu-^{ā(ri)}</i> ‘get out, become known’
<i>kīs-^{a(ri)}</i> , <i>kikkis-^{ta(ri)}</i> ‘become, happen’
<i>kist-^{ā(ri)}</i> ‘perish’
<i>lukk-^{ttā}</i> ‘get light, dawn’
<i>tith-^a</i> ‘thunder’
<i>tukk-^{āri}</i> ‘be visible, be important’
<i>ur-^{āri}</i> , <i>war-^{āri}</i> ‘burn’
<i>wakk-^{āri}</i> ‘be lacking’
<i>zē-^{a(ri)}</i> ‘cook (intr.)’
NATURALLY RECIPROCAL EVENTS
<i>zahhiye/a-^{ttā(ri)}</i> ‘fight’
TWO-PARTICIPANT EVENTS
<i>pars(i)-^{a(ri)}</i> ‘break’
<i>tuhs-^{a(ri)}</i> ‘cut’
OTHER

<i>tarra-</i> ^{ta(ri)} ‘be able, can (+ inf.)’

A further problem is raised by the classification of some derived *media tantum*. Consider for instance the verb *lēlaniye/a-*^{ta(ri)} ‘be(come) furious’. If one classifies *lēlaniye/a-*^{ta(ri)} based on its lexical semantics, then the verb should be grouped together with emotion middles, following Kemmer’s guidelines. However, this classification would obscure the fact that the verb patterns with other denominal *-iye/a-* verbs that indicate a change of state, not necessarily of the emotional type. Therefore, verbs such as *lēlaniye/a-*^{ta(ri)} ‘be(come) furious’ do not provide strong evidence for the association of the middle voice with emotional predicates, but rather point towards the role of the derivational suffix in the selection of the verb’s voice (see sec. 2.3.1 for details).

It is worth mentioning that the distribution of *media tantum* in Hittite partly differs other ancient IE languages. In particular, the domain of speech, emotion, and perception predicates, as well as grooming verbs and indirect middle verbs is largely underrepresented in Hittite, while these classes feature a sizable amount of verbs in e.g. Ancient Greek (Allan 2003) and Latin (Gianollo 2010: 41-42). Whereas this picture might be partly biased by the limited nature of the Hittite corpus as compared to Latin and Ancient Greek, it seems reasonably safe to assume that the core of Hittite *media tantum* is represented by verbs that indicate a spontaneous change of state. Note also that verbs of speech, emotion, and perception are attested in Hittite but they take active endings, e.g. *mema-*ⁱ ‘speak’, *nāh-*ⁱ ‘fear’, and *au-*ⁱ ‘see’ (interestingly, these verbs often show *hi*-inflection, which has been regarded as the outcome of the PIE ‘protomiddle’, cf. e.g. Rose 2006 and Jasanoff 2018 with references for different approaches to the issue).

Finally, the distribution of *media tantum* can also be approached from a syntactic perspective. As Neu (1968b: 52) has already pointed out, original *media tantum* mostly display intransitive syntax, with the marginal exception of deponents (see Section 3.2.1.2). A synchronic connection between the middle voice and intransitivity is however weakened by the fact that, whereas it is certainly true that a connection between *media tantum* and intransitivity exists, the reverse is not true, as since Old Hittite one finds a wealth of intransitive verbs that systematically take active endings and do so throughout the history of the language.

In recent studies on the syntax and semantics of *media tantum* in PIE and in IE languages, it has been proposed that not only are these verbs mostly intransitive, but that they specifically belong to the group of lexically unaccusative verbs (cf. Benedetti 2002, see discussion in Chap 1. sec. 1.2.2). Whatever the situation for PIE was, the Hittite data does not straightforwardly point in this direction. In Hittite, unaccusativity is rather connected with the occurrence of 3rd person clitic pronouns (Chap. 1 sec. 1.5.4). This is not to say that middle verbs are not unaccusative. As a matter of fact, with the

exception of deponent verbs and impersonal verbs that indicate weather events (sec. 2.2.1.3), most Hittite intransitive *media tantum* in my corpus indeed occur with clitic subject pronouns.¹⁴ However, one finds that the vast majority of Hittite verbs that lexically select unaccusative syntax are rather *activa tantum* since their oldest attestation (see the verb list in Garrett 1996). To sum up, even if one accepts that intransitive PIE *media tantum* were originally restricted to unaccusative verbs, the Hittite system points to a different situation, in which “[the] middle voice in itself does not seem to be a manifestation of unaccusativity” (Luraghi 2010a: 134).

Overall, lexical and syntactic considerations do not suffice to provide a synchronically consistent motivation for the distribution of *media tantum* in Hittite as opposed to *activa tantum*, as all approaches discussed in this section present a number of shortcomings and do not account for the entirety of the data. Nevertheless, combining insights from the distribution of *media tantum* across aspectual and lexical classes and their syntax, a clear general trend emerges, whereby Hittite *media tantum* are predominantly associated with the encoding of spontaneous one-participant events, in which an entity is described as either being in a given state or more frequently as undergoing a (spontaneous) change of state, and are syntactically intransitives of the unaccusative type.¹⁵

2.2.1.2. Deponent verbs

As discussed in Chap. 1 sec. 1.3.2., the term *deponent* refers to those middle verbs that display transitive syntax and indicate two-participant events involving a causing and controlling Agent and a totally affected Patient, i.e. “verb[s] with an agent subject which appears in a syntactically active context and is morphologically non-active” (Grestenberger 2016: 107). As such, these forms are considered as featuring a “mismatch between form and function” (Baerman *et al.* 2007: 2). Semantically, unlike most intransitive *media tantum* and oppositional middles, these verbs rank high on the scale of semantic transitivity (cf. Hopper & Thompson 1980, Tsunoda 1985, 2015). A striking case is the verb *pars(i)-^{a(ri)}* ‘break’, whose meaning is the one that ranks highest in most typological scales of transitivity (cf. Aldai & Wichmann 2018) and constitutes the cross-linguistic prototypical transitive event (Haspelmath 2015).

¹⁴ Two of them, i.e. *es-^{a(ri)}* ‘sit down’ and *salik-^{a(ri)}* ‘approach’ also occur without subject clitics, in line with the general trend of verbs of motion to acquire unaccusative syntax at a later stage only. In addition, the verb *tukk-^{āri}* ‘be visible, be important’ never shows clitic subject pronouns, hence it should be grouped with unergative verbs.

¹⁵ Morphological restrictions exist as to the semantics of *media tantum*. As pointed out by Oettinger (forthc.), verbs that take the *-āri* ending, and reflect zero root formations with accent on the ending (see Chap. 1), are consistently intransitive *media tantum* that indicate states or change-of-state events.

In languages that show active vs. middle voice alternation, deponents are commonly regarded as a marginal non-canonical category, as their occurrence does not easily fit in the common patterns of voice distribution, and their middle morphology cannot be synchronically predicted based on the distribution of middle markers in other contexts. Yet, deponent verbs are a recurrent feature of ancient IE languages (see also Grestenberger 2014: 12-15 for an overview of deponents in non-IE languages). Deponents are attested for example in Latin, e.g. *hortor* ‘incite’, Greek, e.g. *τίνωμαι* ‘punish’, Vedic, e.g. *त्रायते* ‘protect’ (see Grestenberger 2014 for a thorough description of deponent verbs in these branches of the IE family; transitive *media tantum* exists also in Tocharian, cf. Schmidt 1974: 497, and Old Irish, cf. e.g. Cowgill 1983).

Deponent verbs exist in Hittite as well, as observed already by Neu, who provides a full list of middle verbs that display transitive syntax (1968b: 54-66, see also Hoffner & Melchert 2008: 303, Grestenberger 2014: 103-105; transitive *media tantum* are also attested elsewhere in Anatolian, as in e.g. Lydian, cf. Oettinger forthc.).¹⁶ Morphologically, as pointed out by Oettinger (forthc.), a striking feature of deponent verbs is that they consistently reflect Narten type formations, with accent on the root, as evidenced by the fact that they never take the *-āri* (< **-ó-ri*) ending. Moreover, they tend to show *-a* endings, with only a few showing a strong preference for the *-tta* type, i.e. *sarra-tta(ri)*, *zahhiye/a-tta(ri)*, *wesiye/a-tta(ri)*, and *wess-tta(ri)*.

The individuation of deponent verbs is not however entirely unproblematic. The only assured deponent verb in OH are *pars(i)-a(ri)* ‘break’ and *huett(i)-a(ri)* ‘pull, draw’. Transitive syntax of *pars(i)-a(ri)* ‘break’ is exemplified in (1), where the verb occurs with the direct object NINDA.KUR₄.RA ‘bread’.

- (1) LÚŠILA.ŠU.DU₈ LUGAL-*i* NINDA.KUR₄.RA *parsiya*
 cup.bearer king.DAT bread break.PRS.3SG.MID
 “The cup bearer breaks bread for the king.” (KBo 25.61 ii 10, OH/OS)

To this, a number of other possible original deponents can be added, whose individuation is however complicated by the fact that these verbs show active inflection since their earliest occurrence (sec. 2.1.3; see also Grestenberger 2014: 265-276). Among the verb discussed in Part Two, possible

¹⁶ Note that Neu’s list includes all middle verbs that are attested at least once in a transitive construction. Not all of these verbs are real deponents, as for some of these, e.g. *nē-(a)ri* ‘turn’, *kars(iye/a)-zi* ‘cut’ and *tamass-zi* ‘oppress’, the transitive syntax is either a later marginal development, or is the outcome of a misinterpretation of specific ambiguous occurrences. See Part Two for a discussion of these problematic cases.

original deponents include *ark*-^{a(ri)} ‘mount’, *hatt*-^{a(ri)} ‘hit, pierce’, *hanna*-ⁱ ‘sue, contend’, *pahs*-ⁱ ‘protect’, *sārr*-ⁱ ‘transgress’, *tuhs*-^{a(ri)} ‘cut’, *wess*-^{ta(ri)} ‘wear’, *wesiye/a*-^{ta(ri)} ‘pasture’. As discussed in sec. 2.1.3, evidence that these verbs originally belonged to the middle inflection, in spite of the existence of active forms, partly comes from morphological clues such as the existence of an opposition between a simple middle stem vs. a derived active stem, as in the case of *wess*-^{ta(ri)} vs. *wassiye/a*-^{zi/ta(ri)}, and the fact that some of these verbs take the less productive *-a(ri)* ending, as e.g. *ark*-^{a(ri)} and *hatt*-^{a(ri)}. More problematic is the assessment of the original inflection of transitive verbs that display both voices and occur only in copies, such as *iskalla*- ‘tear, split’ (with active and middle forms freely alternating in OH/NS texts, cf. Kloekhorst 2008 s.v.), *pasku*- ‘neglect’ (predominantly active in MH and NH, but with one middle occurrence, cf. Kloekhorst 2008 s.v.), and *sarhiye/a*-^{zi} ‘attack (?)’.

As observed in most Hittite grammars, the inflection of deponent verbs is idiosyncratic, as one synchronically fails to detect a semantic and/or syntactic motivation for the occurrence of the middle voice. As extensively discussed by Grestenberger (2014, 2016), a more promising approach is trying to motivate the unexpected middle inflection of these verbs in diachronic terms. On the one hand, some Hittite deponents continue PIE verbs whose middle inflection was semantically motivated in the proto-language. Later on, these verbs underwent specific semantic shifts and acquired transitive syntax, thus loosening their connection with the middle voice and becoming deponents from a synchronic standpoint. Such an explanation accounts for the synchronic deponent status of e. g. *parh*- ‘chase’ and *zahhiye/a*- ‘fight’, that were possibly lexical reciprocal verbs in origin, and for *ark*-, that was originally a motion verb and later on specialized in the meaning ‘climb onto, have a sexual intercourse with’ with a direct object (see Grestenberger 2016: 129-132 and the discussion of the individual lemma in Part Two).

On the other hand, in some cases in which a motivation cannot be detected even in diachrony, one can still observe that the middle inflection of these verbs is inherited from PIE, as comparison with cognate deponents in other IE languages show (cf. Grestenberger 2016). A case in point is *wess*-^{ta(ri)} ‘wear’, which can be compared to Gr. *eítai* ‘wear’. One objection to this line of reasoning is that one simply pushes the problem of these verbs’ association with the middle voice further back in time, so that the middle inflection of these verbs still remains ultimately unexplained. However, this approach has at least the advantage that it makes clear that these verbs do not constitute an isolated oddity of Hittite, but should be understood in the wider context of the reconstruction of the voice system of the proto-language.

To sum up, following Grestenberger’s approach, deponent middle verbs can be seen as a residual category in Hittite, whose inflection is not motivated by any synchronic pattern of the language. In

this respect, this further supports Luraghi’s (2012: 19) observation that the existence of deponent verb cannot be taken as counterevidence for establishing the synchronic function of the middle voice as being connected with intransitivity and the encoding of uncontrolled events.

The fact that middle marking of transitive verbs does not constitute a synchronically productive pattern is also suggested by the fact that deponents show an increasing tendency to be transferred to active inflection in the history of Hittite (cf. Chap. 3 sec. 4.2.3).

2.2.1.3. Weather verbs

Weather verbs display a number of syntactic and semantic peculiarities that are worth a separate discussion. Recent research has shown that meteorological events are subject to a great degree of variation in their syntactic encoding, both language-internally and cross-linguistically. This variation in formal encoding reflects various ways in which weather conditions can be conceptualized by human beings (Eriksen *et al.* 2010). IE languages attest to a rather heterogeneous picture concerning the encoding of meteorological expressions. As observed by Bauer (2000: 98), not only do the IE languages express weather conditions by means of different lexemes (e.g. Lat. *pluit* vs. Skt. *várṣati* ‘it rains’), but the same root is also used to denote different conditions across languages (Lat. *nives* ‘snow’ vs. OIr. *snigid* ‘it is raining’). When weather conditions are encoded through dedicated predicates, these tend to show common syntactic features, chiefly the lack of a referential subject (already Brugmann 1904: 625; see also Bauer 2000: 98-109, Viti 2015a: 181-184).

Three Hittite verbs discussed in Part Two belong to the group of weather verbs: *lukk-^{ta}* ‘dawn’, *neku-^{zi}* ‘become evening’, and *tith-^a* ‘thunder’.¹⁷ The first two verbs refer to atmospheric light conditions, whereas the latter belongs to the class of precipitation events (cf. Eriksen *et al.*).

As discussed under the individual lemma, Hittite middle weather verbs are all used in an impersonal construction: the verb is in the default 3rd person singular and never requires a clitic subject, as in examples (2) to (4):

(2) *mān lukkatta=ma nu LÚ.A.ZU ūkk=a paiwani*
 when dawn.PRS.3SG.MID=PTC CONN physician 1SG.NOM=CONJ go.PRS.1PL
 “When it dawns, the physician and I go.” (KBo 17.11+ iv 7, OH/OS)

(3) *mahhan=ma nekuttat*
 when=PTC become.evening.PST.3SG.MID

¹⁷The verbs *ā(i)-^{a(ri)}* ‘be(come) warm’, *enumai-^{ta(ri)}?* ‘become warm (?)’ and *hāt-^{a(ri)}* ‘dry up’, which are only attested in copies, do not belong to this group, as they are never used to describe a meteorological and/or climatic state of affairs.

“When the evening came”. (KBo 5.8 iii 19-21, NH/NS)

(4) *nu tētha*

CONN thunder.PRS.3SG.MID

“It thunders.” (KUB 32.135 i 3, OH/MS)

This syntactic behavior is hardly surprising: since meteorological events lack distinguishable and salient internal participants, they are often encoded as impersonal verbs (Bauer 2000: 100, Eriksen *et al.* 2010: 567- 570, 2015: 8). Specifically, within the typology of meteorological expression worked out by Eriksen *et al.* (2010), the Hittite verbs can be classified as instantiating the *atransitive* predicate type: the predicate itself is responsible for denoting the meteorological event and does not require a syntactic subject (van Valin & LaPolla 1997: 150). Interestingly, in this respect weather verbs differ from other impersonal predicates: whereas most impersonal verbs in Hittite are expressed in the 3rd person plural, meteorological verbs always take as default agreement morphology the 3rd person singular.

In addition to being used in impersonal constructions, Hittite weather verbs can also be used with a nominative subject encoding either a divine entity, as in (5), or a meteorological entity, e.g. ‘day, night’, as marginally the case of *lukk-^{tt(a)}* ‘get bright’ in (6).

(5) [*mān*^dIM-*as* *ti]tha* DUMU.É.GAL *piddāi*

when Stormgod.NOM thunder.PRS.3SG.MID palace.attendant come.PRS.3SG

“When the Stormgod thunders, the palace attendant comes in.” (KBo 17.11+ i 1, OH/OS)

(6) *mahhan=ma* GE₆-*anza* *lukzi*

when=PTC night.NOM dawn.PRS.3SG

“But when the night grows brighter.” (KBo 9.15 ii 16-20, NS, transl. after CHD)

Moreover, with the verb *tith-^a*, which refers to a precipitation event, NPs in the instrumental can occur to specify the entity involved in the precipitation, as in example (7), where the ablative *uwantiwantaz* ‘with lightning bolts’ occurs. This syntactic pattern is also attested elsewhere in IE languages, as in the case of Lat. *pluit sanguine* ‘it rains blood.INST’.

(7) *uwantiwantaz tithiskitta*

lightning.ABL thunder-IPFV-PRS.3SG.MID

“(Telipinu came raging), and he is thundering with lightning bolts.” (KUB 17.10 ii 34 OH/MS)

The syntactic behavior outlined so far is common to weather verbs in different IE languages. As Bauer remarks (2000: 101; see further Viti 2015a: 172-176), the use of nominative subjects is attested in most IE languages, in texts belonging to different genres and ages. Nouns used as nominative subjects of weather verbs belong to two classes: deity names, conceived as Agents that bring about the weather condition, as in Lat. *Iupiter fulgurat* ‘Jupiter lightnings (lit.)’, and common nouns, which are not straightforwardly conceived as Agent, as in Lat. *dies illucescit* ‘the day grows brighter’. The two patterns should be kept distinct. The use of divine nouns as subject of weather verbs is a typologically rare pattern: it is culturally motivated and reflects the belief that weather conditions can be controlled by divine entities (Eriksen *et al.* 2010: 570). On the other hand, the use of nouns referring to generic weather entities such as ‘day’, ‘climate’, ‘atmosphere’ as subjects of weather verbs is a typologically more common pattern (Eriksen *et al.* 2010: 575-577). Concerning the relationship between the two constructions, Bauer (2000: 106, also Viti 2015a: 172-176) maintains that in the IE languages the subjectless construction was possibly the older one, and that personal constructions developed at a later stage. Note that Hittite provides conflicting evidence in this respect, with the verb *lukk-^{ta}* always used impersonally in OS, and the verb *tith-^a* always used personally.

Interestingly, there seems to be no principled way to determine the voice of weather verbs. The verbs *lukk-^{ta}* and *tith-^a* belong to the *media tantum*, *neku-^{zi}* shows both active and middle forms, and *hewai-^{zi}* ‘rain’ is an *activum tantum*. It is interesting to observe that according to Kemmer (1993) weather events do not cross-linguistically constitute a typical middle situation type. This is hardly surprising. In her view, the semantic core of the middle voice is to indicate a lesser degree of distinguishability of the participants involved in an event, but since weather events do not involve any specific participants altogether, they are less prone to be marked as middle. Synchronically, the connection between middle voice and weather verbs in Hittite should be possibly sought in the fact that weather events can be grouped with spontaneous change-of-state events.

2.2.2. Oppositional middles

In this section, I discuss the features of those verbs that show a meaningful and regular alternation between active and middle inflection, i.e. canonical oppositional middle verbs. As I discuss, with these verbs voice alternation is functionally motivated, and the middle voice functions as a valency reducing device. Therefore, the oppositional functions of the middle voice can be understood in the wider context of valency changing operations introduced in Chap. 1 sec. 1.3.1. As it will become clear, the middle voice is a highly polyfunctional marker, as it can have anticausative, reflexive, reciprocal, and passive function.

2.2.2.1. Anticausative

As discussed in Chap. 1, the term *anticausative* is used to refer to “the intransitive use of a transitive verb where the original inanimate object/P argument, the Undergoer, occurs as subject” (Cennamo *et al.* 2015: 679).

The role of the active vs. middle voice alternation in encoding the anticausative alternation in Hittite has been first explored by Luraghi (2010a, 2012). As Luraghi (2012) observes, the middle voice remains a relatively restricted means of encoding the anticausative alternation, which is more systematically associated with transitivizing strategies such as the use of the causative suffixes *-nu-* and *-ahh-*. When the anticausative alternation is expressed via voice alternation, the active verb encodes the induced event and displays transitive syntax, whereas the middle voice encodes the plain event and shows intransitive syntax. Intransitivity of middle forms with anticausative function is also shown by their occurrence with 3rd person subject clitic pronouns. As an example of this pattern, let us consider the behavior of the verb *zinni-^{zi}* ‘finish’ in (8) and (9).

- (8) *maniyahinn=a* *tuk* *zinnit*
administration.ACC=CONJ 2SG.DAT finish.PST.3SG
“He brought the administration to completion for you.” (KBo 3-21 ii 1, OH/NS)
- (9) [*kui*] *tman=ma* *gimmanza* *nāwi* *zinnat[tat]*
until=PTC winter.NOM not.yet finish.PRS.3SG.MID
“‘And before winter is over.’” (KBo 2.5 iv 11, NH/NS)

Example (8) features the active form *zinnit* ‘he finished’, which occurs in a transitive construction with the accusative direct object *maniyahin* ‘administration’. Semantically, this predicate encodes an externally induced change of state in the inanimate (abstract) Patient participant. By contrast, the middle form *zinnattat* in (9) is used intransitively and encodes a plain change-of-state event undergone by the Patient participant. Since anticausative verbs conceptualize the event as arising spontaneously, they cannot occur with an Agent expression.

In my corpus, the middle voice is exclusively attested as an anticausative marker with the verbs in Table 14: .

Table 14: Anticausative verbs

Active voice: induced event	Middle voice: plain event
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<i>happ</i> ^{-zi} ‘join (tr.)’	<i>happ</i> ^{-ta(ri)} ‘join (intr.)’
<i>harp</i> ^{-zi} ‘join, pile up (tr.)’	<i>harp</i> ^{-tta(ri)} ‘join (intr.)’
ARAD-(n) <i>ahh</i> ⁻ⁱ ‘enslave’	ARAD-(n) <i>ahh</i> ^{-ta(ri)} ‘become a servant’
<i>istarni(n)ik</i> ^{-zi} ‘afflict’	<i>istarni(n)ik</i> ^{-ta(ri)} ‘fall ill’
<i>karp(iye/a)</i> ^{-zi} ‘raise (tr.), complete’	<i>karp(iye/a)</i> ^{-ta(ri)} ‘rise (intr.), come to an end’
<i>lāk</i> ⁻ⁱ ‘knock out’	<i>lag</i> ^{-ā(ri)} ‘fall’
<i>lazziye/a</i> ^{-zi} ‘set straight’	<i>lazziye/a</i> ^{-tta(ri)} ‘be(come) good’
<i>mehuwandahh</i> ⁻ⁱ ‘make old’	<i>mehuwandahh</i> ^{-ta(ri)} ‘age (mid.)’
<i>nai</i> ⁻ⁱ ‘turn (intr.)’	<i>nē</i> ^{-a(ri)} ‘turn (intr.)’
<i>nini(n)k</i> ^{-zi} ‘set in motion’	<i>nini(n)k</i> ^{-ta(ri)} ‘mobilize’
<i>wassiyē/a</i> ^{-zi} ‘dress’	<i>wess</i> ^{-tta} ‘wear’ (cf. fn. 20)
<i>zinni</i> ^{-zi} ‘bring to an end’	<i>zinna</i> ^{-tta(ri)} ‘end’

To these, one can add verbs for which an anticausative interpretation competes with a passive one, reported in Table 15. With these verbs, one finds occurrences with either anticausative or passive meaning, the difference between the two being grounded on contextual cues, as in the case of *hantae*^{-zi} ‘align, determine’ vs. *handae*^{-tta(ri)} ‘align (antic.), be determined (pass.)’ (see further sec. 2.2.2.5 on this polysemy pattern). The chief linguistic diagnostic to distinguish between the two functions is the occurrence of overt agent expressions, which are only compatible with a passive reading (see Chap. 1 sec. 1.3.1.5, tests other than the occurrence of agents cannot be applied do to scarcity of the data). For some verbs, the textual evidence is so scanty that it is impossible to decide which of the two readings is more appropriate, and all occurrences are systematically ambiguous between the two meanings, as in the case of *uwa*^{-tta(ri)} ‘appear, be seen’.

Table 15: Anticausative/passive verbs

Active voice: induced event	Middle voice: plain event/passive
<i>au</i> ⁻ⁱ ‘see’	<i>uwa</i> ^{-tta(ri)} ‘appear, be seen’
<i>hantae</i> ^{-zi} ‘align (tr.), determine’	<i>handae</i> ^{-tta(ri)} ‘align (intr.), be determined’
<i>harra</i> ⁻ⁱ ‘grind, destroy’	<i>harra</i> ^{-tta(ri)} ‘be destroyed, go to waste’
<i>isiyahh</i> ⁻ⁱ ‘reveal’	<i>isiyahh</i> ^{-ta(ri)} ‘appear, be seen’
<i>istāp</i> ⁻ⁱ ‘close (tr.)’	<i>istāp</i> ^{-ta(ri)} ‘close (intr.), be closed’
<i>kars(iye/a)</i> ^{-zi} ‘cut off’	<i>kars(iye/a)</i> ^{-ta(ri)} ‘stop, be cut’

<i>sārr-</i> ⁱ ‘divide (tr.)’	<i>sārra-</i> ^{ta(ri)} ‘split up (intr.), be split’
<i>tarupp-</i> ^{zi} ‘gather (tr.)’	<i>tarupp-</i> ^{ta(ri)} ‘gather (intr.), be gathered’
<i>warsiye/a-</i> ^{zi} ‘lift up (tr.)’	<i>wars-</i> ^{ta(ri)} , <i>warsiye/a-</i> ^{ta(ri)} ‘lift up (intr.), be lifted’

The picture outlined so far is broadly confirmed by verbs attested in copies, among which one finds verbs involved in the anticausative alternation (Table 16), as well as anticausative/passive ambiguous verbs (Table 17).

Table 16: Anticausative verbs in copies¹⁸

Active voice: induced event	Middle voice: plain event
<i>arae-</i> ^{zi} ‘stop (tr.)’	<i>arae-</i> ^{zi} ‘stop (intr.)’
<i>arsiye/a-</i> ^{zi} ‘plant, nurture’	<i>arsiye/a-</i> ^{ta(ri)} ‘succeed’
<i>impai-</i> ^{zi} ‘beset, worry’	<i>impai-</i> ^{ta(ri)} ‘be(come) depressed’ (only <i>-ske/a-</i>)
<i>innarahh-</i> ⁱ ‘make strong’	<i>innarahh-</i> ^{ta(ri)} ‘be(come) strong’
<i>inu-</i> ^{zi} ‘make hot’	<i>inu-</i> ^{ta(ri)} ‘become strong (?)’ (only <i>-ske/a-</i>)
<i>kunk-</i> ^{zi} ‘shake (tr.)’	<i>kunk-</i> ^{ta(ri)} ‘shake (intr.)’ (only <i>-ske/a-</i>)
<i>kurkuriye/a-</i> ^{zi} ‘scare’	<i>kurkuriye/a-</i> ^{ta(ri)} ‘be scared’ (only <i>-ske/a-</i>)
<i>luluwai-</i> ^{zi} ‘sustain’	<i>luluwai-</i> ^{ta(ri)} ‘survive’
<i>munnae-</i> ^{zi} ‘hide (tr.)’	<i>munnae-</i> ^{ta(ri)} ‘hide (intr.), disappear’
(unattested)	<i>nakkiyahh-</i> ^{ta(ri)} ‘become difficult’
<i>parip(pa)rai-</i> ⁱ ‘blow (a horn/pipe)’	<i>parip(pa)rai-</i> ^{ta(ri)} ‘be flatulent’ (only <i>-ske/a-</i>)
<i>parkuiye/a-</i> ^{zi} ‘make clean, clean up’	<i>parkuiye/a-</i> ^{ta(ri)} ‘be(come) pure’
<i>parkiye/a-</i> ^{zi} ‘raise (tr.)’	<i>park-</i> ^{ta(ri)} ‘raise (intr.)’ ¹⁹
(unattested)	<i>dammiummahh-</i> ^{ta(ri)} ‘change (intr.)’
<i>sai-</i> ⁱ , <i>siye/a-</i> ^{zi} ‘impress, throw’	<i>siye/a-</i> ^{a(ri)} ‘squirt (intr.), spring out’
<i>samesiye/a-</i> ^{zi} ‘burn for fumigation (tr.)’	<i>samesiye/a-</i> ^{ta(ri)} ‘burn for fumigation (intr.)’

¹⁸ For some oppositional verbs discussed in this chapter, middle forms are attested only for the derived *-ske/a-* stems and not for the base stem. This fact is merely coincidental and due to scarcity of attestations.

¹⁹ The pattern of voice alternation of this verb is blurred by the fact that both active and middle forms exhibit a certain degree of lability (see sec. 2.4). It is however clear that the verb was originally an intransitive *medium tantum*, i.e. *park-*^{ta(ri)} ‘raise (intr.)’, based on which the morphologically more complex active counterpart *parkiye/a-*^{zi} was created, thereby establishing a pattern of anticausative alternation (see Kloekhorst 2008 *s.v.* for a detailed etymological description; the same morphological pattern is attested in the case of e.g. *huett(i)-*^{a(ri)} vs. *huittiye/a-*^{zi}).

<i>suwe/a</i> ^{-zi} ‘fill (tr.)’	<i>suwe/a</i> ^{-tta(ri)} ‘become full’
<i>taks</i> ^{-zi} ‘put together’	<i>taks</i> ^{-ta(ri)} ‘mingle (intr.)’
<i>duwarni</i> ^{-zi} ‘break (tr.)’	<i>duwarni</i> ^{-tta(ri)} ‘break (intr.)’

Table 17: Anticausative/passive verbs in copies

Active voice: induced event	Middle voice: plain event/passive voice
<i>immiya</i> ^{-zi} ‘mix (tr.)’	<i>immiya</i> ^{-tta(ri)} ‘mingle (intr.), be mixed’
<i>kānk</i> ^{-zi} ‘hang (tr.)’	<i>kānk</i> ^{-ta(ri)} ‘hung (intr.), be hung’
<i>lāhu</i> ⁻ⁱ ‘pour (tr.)’	<i>lāhu</i> ^{-a(ri)} ‘flow, be poured’
<i>sāh</i> ⁻ⁱ ‘clog, fill in’	<i>sāh</i> ^{-a(ri)} ‘fill (intr.), be clogged’
<i>sakkuriya</i> ^{-ʔ} ‘overpower’	<i>sakkuriya</i> ^{-tta(ri)} ‘fall, be overpowered’
<i>sallanu</i> ^{-zi} ‘raise up (tr.)’	<i>sallanu</i> ^{-tta(ri)} ‘raise (intr.)/ be raised’
<i>taksatniye/a</i> ^{-zi} ‘flatten (tr.)’ (only <i>-ske/a</i>)	<i>taksatniye/a</i> ^{-tta(ri)} ‘flatten (intr.), be flattened’

Anticausative middle verbs semantically belong to different groups. In the first place, a sizable number of verbs belong to the class of spatial lexical reciprocal verbs, with which the middle voice operates as an anticausative marker, as in the case of *sārr*⁻ⁱ ‘divide (tr.)’ and *sārra*^{-tta(ri)} ‘split up (intr.)’ (see further sec. 2.2.2.4). It is not clear whether the non-oppositional verb *lam*^{-ʔ} ‘mix (intr.)’ also belongs to this group, as the lack of its active causative counterpart might well be accidental. One also finds verbs indicating spontaneous vs. induced motion, as e.g. *lāk*⁻ⁱ ‘knock out’ vs. *lag*^{-ā(ri)} ‘fall’, verbs indicating completion and/or destruction, as e.g. *zinni*^{-zi} ‘bring to an end’ vs. *zinna*^{-tta(ri)} ‘end’, and verbs referring to change of state of human participants, as e.g. *İR-(n)ahh*^{-ta(ri)} ‘become a servant’, *mehuwandahh*^{-ta(ri)} ‘age (mid.)’.

More specifically, verbs involved in the anticausative alternation can be further classified according to their semantic properties, chiefly animacy and control. The feature of control allows the distinction between decausative and autocausative verbs (see Chap. 1 sec. 1.3.1.1). Decausative verbs are those that denote a spontaneous event involving a non-controlling Patient. To this type belong *istarni(n)ik*^{-zi} ‘afflict’ vs. *istarni(n)ik*^{-ta(ri)} ‘fall ill’ with a human Patient, and also *zinni*^{-zi} ‘bring to an end’ vs. *zinna*^{-tta(ri)} ‘end’ with an inanimate Patient participant. This shows that an implicational relationship between control and animacy/agency exists, whereby control usually implies animacy, but the reverse is not true, as animate participants can well be involved in events that fall out of their control. Secondly, one finds verbs that belong to the autocausative or endoreflexive type, i.e. events in which the participant is conceived as agentively bringing about the event described by the

predicate. A case in point is *nini(n)k^{-zi}* ‘set in motion’ vs. *nini(n)k^{-ta(ri)}* ‘mobilize’. As discussed in Chap. 1, the distinction between de- and autocausative is not a strictly binary one, since there exist verbs whose lexical semantics is compatible with both controlling and non-controlling subjects, i.e. with an autocausative or a decausative construal. Consider the verb *nai⁻ⁱ* ‘turn’ vs. *nē^{-a(ri)}* ‘turn (intr.)’, whose middle forms can be used to refer to animate agentive and inanimate non-agentive participants, as in (10) and (11) respectively (see also *nini(n)k^{-ta(ri)}* ‘mobilize’ for a similar pattern).

- (10) *nu=kan* ^{LÚ}HUB.BÍ 1-ŠU *neya*
 CONN=PTC dancer once turn.PRS.3SG.MID
 “And the dancer turns once.” (KBo 4.9 ii 9-10, OH²/NS)
- (11) ŠÀ É^{TI}=KA=wa=ta=kkan *kuit* *neyattat*
 inside house=2SG.POSS=QUOT=2SG.DAT=PTC REL.NOM.N turn.PST.3SG.MID
 “(I will show you,) what has happened in your house.” (KUB 31.71 iii 6, NH/NS)

Besides control, another relevant parameter is animacy. In typological studies on the (anti)causative alternation, attention has been paid as to whether animate and inanimate verbs display different preferred patterns for the encoding of valency change. Following Nichols *et al.* (2004), animate verbs include predicates meaning e.g. ‘sit’ and ‘die’, and can be defined as verbs that “have a varying degree of agency and volition on the part of an animate S/O” (Nichols *et al.* 2004: 155), whereas inanimate verbs, including verbs’ meanings such as ‘boil’ and ‘break’, can be characterized as having “varying degrees of independence, resistance to force, etc. on the part of an inanimate S/O” (Nichols *et al.* 2004: 156). More generally, animate verbs are those that typically select an animate S/O participant, whereas inanimate ones show a preference towards inanimate S/O. This semantic distinction is relevant in that animate and inanimate verbs tend to show different preferred patterns of encoding the anticausative alternation, both cross-linguistically and language-internally (see Nichols *et al.* 2004: 172-175 for discussion). Specifically, languages display a tendency to treat animate anticausative verbs and inanimate causative ones as the basic forms in anticausative derivations. In this respect, a tendency of animate verbs to show a transitivity pattern can be detected (but see Haspelmath 2016 for a different approach).

As pointed out by Luraghi (2012), Hittite complies with this typological pattern, as most animate plain verbs derive their causative counterpart through suffixation, whereas active vs. middle voice alternation seems to be the preferred pattern for inanimate verbs (Luraghi 2012: 10; the same pattern applies to Homeric Greek as well, cf. Sausa 2016: 215).

A closer look at verbs in original texts confirms Luraghi's earlier findings. Active vs. middle voice alternation is used to encode anticausative alternation for a number of predicates that clearly only select an inanimate S/O. For instance, the verb *lag*-^{a(ri)} 'fall', which constitute the plain counterpart of induced *lāk*-ⁱ 'knock out', only occur in my corpus with inanimate subjects, and the same holds true for *isiyahh*-^{ta(ri)} 'appear', *istāp*-^{ta(ri)} 'close (intr.)', *kars(iye/a)*-^{ta(ri)} 'stop (intr.)', and *zinna*-^{ta(ri)} 'end'. It should be observed that the largest group of verb is constituted by verbs that can equally well occur with animate or inanimate subjects, as discussed for *nē*-^{a(ri)} 'turn' in (10) and (11) above. Verbs that show the same pattern are for example *nini(n)k*-^{ta(ri)} 'mobilize (intr.)', *karp(iye/a)*-^{ta(ri)} 'raise', and *lazziye/a*-^{ta(ri)} 'be(come) good, recover'. These verbs are thus better regarded as neutral with respect to the parameter of animacy. By contrast, verbs that can only occur with an animate subject are few in number. As an example, consider *İR-(n)ahh*-^{ta(ri)} 'become slave' and *harp*-^{ta(ri)} 'join (intr.)', that only occur with animate (mostly human) subjects in my corpus.

In spite of these semantic differences, all Hittite verbs that attest to voice alternation as the preferred valency change strategy show a common semantic trait, i.e. they are mostly construed as telic change-of-state events. As discussed by Cennamo (2012) and Cennamo *et al.* (2015), anticausative markers in ancient IE languages show different constraints with respect to the aspectual classes of verbs that they can apply to. Hittite data is extremely interesting in this respect. As data in Table 14 and 15 shows, verbs that are involved in anticausative alternation encoded by voice are mostly construed as *achievements* (e.g. *lāk*-ⁱ 'knock out') and *incremental accomplishments* (e.g. *zinni*-^{zi} 'bring to an end'), including verbs denoting gradable properties, i.e. *degree verbs* (e.g. *mehuwandahh*-^{ta(ri)} 'grow old').²⁰ If one broadens the observation to verbs attested on copies only (Tables 16 and 17), the correlation between the middle voice and change-of-state anticausative events remains quite robust. As a matter of fact, most of these verbs fall into the aspectual classes individuated above, with the marginal exception of some atelic predicates such as *luluwai*-^{zi} 'sustain' and *kunk*-^{zi} 'shake (tr.)'.

The middle voice in Hittite displays a distribution across aspectual classes comparable to what discussed for the mediopassive in Latin by Cennamo *et al.* (2015: 685-686). Similarly to Hittite, the Latin mediopassive *-r* form is found with achievement verbs like *frangere* 'break', accomplishments like *mutare* 'change', degree verbs like *minuere* 'decrease', but also activities such as *volvere* 'roll,

²⁰ The only exception to this pattern is the pair *wassiyē/a*-^{zi} 'dress' vs. *wess*-^{ta} 'wear', in which the middle voice encodes a stative event, whereas the active voice a change-of-state one. Notably, this verb also differs from the other in the fact that the middle forms refer to a two-participant event and occur in a transitive construction, whereas active forms refer to a three-participant event (see discussion in Part Two).

flow'. Moreover, also in Homeric Greek voice alternation is mostly confined to verbs that indicate a change-of-state event (Romagno 2010, Sausa 2016: 233). Thus, comparative evidence seems to point towards a situation whereby the middle voice originated as a marker of anticausative derivation with change-of-state predicates only, and was possibly extended to atelic and stative predicates only at a later stage in the individual languages, as outcome of a more general paradigmaticization of the active vs. middle voice alternation (see Luraghi forthc.b). I will return on this point more in detail in Chap. 3.

A final point is in order on the directionality of the anticausative alternation. As Luraghi (2012) argues, with respect to the individuation of the Hittite basic valency orientation, voice alternation can be formally classified as an indeterminate strategy, since it is synchronically unclear whether middle verbs are derived from active verbs or vice versa. Indeed, unlike languages such as Ancient Greek, in which the middle voice has been shown to be a marked member in the opposition with the active voice (see Allan 2003, Sausa 2016), in Hittite there is no compelling evidence to consider the active voice as morphologically more basic than the middle voice (see Luraghi 2012, forthc. for discussion). Indeed, active and middle sets of endings in Hittite are entirely unrelated, as neither can be said to be synchronically derived from the other, and the two sets of endings synchronically display a comparable degree of morphological complexity. This holds true especially for OH, where middle endings are not yet consistently enlarged by the *-ri* element (see Chap. 1 sec. 1.4.4.2).

Whereas it is certainly true that based on morphological considerations both voices can be considered equally basic, if one takes a closer look at some of the verbs, it becomes clear that either voice is historically older. Consider the verb *lazziye/a*-^{zi} 'set straight' vs. *lazziye/a*-^{ta(ri)} 'be(come) good'. Synchronically, with this verb voice alternation encodes anticausative alternation, with the middle voice associated with the plain event and the active voice to the induced counterpart, and there is no way to tell which of the two forms should be understood as more basic. If one however takes the diachrony of the attestations of this verb into consideration, it turns out that the verb occurs in OH as a *medium tantum* encoding a spontaneous change-of-state event, and that the anticausative alternation was created only later on, when sporadic active forms first appeared in NH times (see Part Two for discussion). By contrast, the synchronically alternating pair *kars(iye/a)*-^{zi} 'cut off' vs. *kars(iye/a)*-^{ta(ri)} 'stop' is outcome of the reverse diachronic process. As discussed in Part Two, the verb originally meant 'cut' and was as such unavailable to the anticausative alternation. As a consequence, its middle forms could only have passive meaning 'be cut'. Later on, through a process of reanalysis of occurrences of (impersonal) passive middle forms, the verb was associated with the meaning 'stop' and started to indicate a spontaneous event. In other words, anticausative alternation

with *kars(iye/a)-^{zi}* ‘cut off’ is the outcome of semantic shift of the verb from passive to anticausative (cf. Kulikov 2011).

2.2.2.2. Passive and ‘impersonal’

As discussed in Chap. 1, the passive voice can be cross-linguistically characterized as an Agent-defocusing strategy, whereby the Agent (subject) of a causative transitive event is backgrounded as compared to the Patient but is retained in the verb’s valency frame. Syntactically, the Patient is encoded as the subject of the intransitive verb, whereas the Agent is demoted to oblique or omitted altogether. Hence, passive verbs differ from anticausative ones in that the latter conceptualize the event as coming about spontaneously, whereas the former still indicate an induced event and also admit the oblique encoding of the Patient (on the passive/anticausative polysemy and its constraints see further sec. 2.2.2.5).

According to most scholars (Neu 1968b: 109-116, Hoffner & Melchert 2008: 303, Luraghi 2012: 20), Hittite middle forms are used only to a limited extent to encode passive voice in OH, with a rise of the passive function in NH (Melchert forthc.b; see Chap. 3). The passive function of the middle voice is exemplified in (12) and (13):

- (12) *kēz=at* *hingananza* *tama[(asta *kēz)=at]*
 DEM.ABL=3SG.ACC.N plague(N).ERG oppress.PST.3SG DEM.ABL=3SG.ACC.N
kururanza *tamasta*
 hostility(N).ERG oppress.PST.3SG*

“(O gods, again have pity on the land of Hatti.) On the one hand, the plague has oppressed it, and on the other hand, hostility has oppressed it.” (KUB 24.4 i 15-16, MH/MS)

- (13) *nu=wa* KUR^{URU} *Hatti* *hinganaz* *arumma mek[ki]* *tamastat*
 CONN=QUOT land *H.* plague.ABL very much oppress.PST.3SG.MID

“And the land of Hatti was severely oppressed by the plague.” (KUB 14.10 i 7, NH/NS)

In example (12) the verb *tamasta* ‘it oppressed’ is inflected in the active voice and indicates a two-participant event, in which the Agent and the Patient participants are encoded as the subject and direct object respectively, as evidenced by the case form, i.e. the ‘ergative’ on the neuter subject noun *hingananza* ‘plague’ and the accusative neuter clitic object pronoun =*at*. Example (13) describes the same state of affairs, but in this case the event is profiled from the perspective of the Patient, which occurs as the subject of the middle verb *tamastat* ‘was oppressed’, whereas the Agent noun is encoded in the ablative *hinganaz* ‘by the plague’.

As in the case of the anticausative alternation, in active vs. passive oppositional pairs the active verb encodes a two-participant event and shows transitive syntax, while the middle voice encodes a one-participant intransitive event. Passivization in Hittite is restricted to Patient participants, which constitute the direct object of the corresponding transitive verb. As discussed in Chap. 1, one of the hallmarks of passive constructions is their possibility of passive verbs to occur with an oblique Agent expression. In Hittite, the Agent is expressed either in the ablative or in the instrumental (see Hoffner & Melchert 2008: 264-270), or with a prepositional phrase involving the Akkadogram *IŠTU* or the Sumerogram TA (cf. Neu 1968b: 113-115). As recently pointed out by Melchert (2016a), even though the usage is not attested in assured OS compositions, post-OH evidence strongly suggests that the case of the oblique Agent was originally the instrumental. The use of the ablative in this function reflects an ongoing process of substitution whereby the ablative eventually replaced the instrumental in all functions in NH (see also Melchert 1977), and therefore cannot be taken as evidence for reconstructing the ablative as the case of the Agent of the passive in PIE.²¹ Note that putative occurrences with the dative encoding the Agent of the passive should be interpreted otherwise, so that there is no evidence for the dative Agent with finite forms of the verb (cf. Hoffner & Melchert 2008: 261; for a recent critical discussion about the dative Agent with non-finite forms of the verb in various IE languages and PIE see Luraghi 2016 and Danesi *et al.* 2017).

Concerning the occurrence of oblique Agent expressions with passive middles, a common observation is that they tend to be rather infrequent (cf. Luraghi 2012: 21). This claim is clearly borne out by data from my corpus, as shown in Table 18. The limited occurrence of explicit passive agents in Hittite is unsurprising, as it is consistent with a cross-linguistic trend for agentive passives to prefer implicit agents (cf. Siewierska & Bakker 2012: 160).

Table 18: Agent expressions with passive middles

	OH	MH	NH	Total
Oblique Agent NP	- -	Inanimate: - Animate: 1	Inanimate: 16 Animate: 8	25
Agent omitted	6	18	173	197

²¹ I do not discuss further here the issue of the reconstruction of the case of the passive agent in PIE, a matter over which scholars do not yet entirely agree (see Melchert 2016a for critical overview with references), partly because the possibility to reconstruct the encoding of the agent as one of the functions of the inherited instrumental case depends on whether one reconstructs a passive voice already in PIE, a matter on which there is still ongoing debate (cf. Chap. 3).

As the data in in Table 18 shows, out of 222 entirely readable sentences that feature passive middles, only 25 feature an overt agent expression, and most of these (24/25) come from NH texts. It should also be observed that some of these expressions refer to inanimate (or non-volitional non-human) entities, such as *apez* INIM-*za* ‘through/by this deed’ or *ariyasesnaza* ‘by/through the oracle’, that can also be interpreted as instruments/causers rather than as Agents proper, and are mostly confined to the verbs *lā*-^{tt(ri)} ‘be released, solved (through/by a deed)’ and *handai*-^{tt(ri)} ‘be determined (through/by an oracle)’ (see Part Two for discussion; on the encoding of the cause in Hittite see further Francia 2002b).

In my corpus, a sizable number of verbs for which the middle voice acts only as a passive marker is attested in original texts. These verbs are reported in Table 19: Passive verbs.

Table 19: Passive verbs

Active: transitive predicate	Middle: passive voice	Date
<i>ariye/a</i> - ^{zi} ‘determine by oracle’	<i>ariyeske/a</i> - ^{tt(ri)} ‘be determined’ (only - <i>ske/a</i> -)	NH
<i>as(sa)nu</i> - ^{zi} ‘take care of’	<i>as(sa)nu</i> - ^{tt(ri)} ‘be taken care of’	MH
<i>asās</i> - ⁱ ‘settle’	<i>aseske/a</i> - ^{tt(ri)} ‘be settled (?)’ (only - <i>ske/a</i> -)	NH
<i>ep</i> - ^{zi} ‘take’	<i>app</i> - ^{tt(ri)} ‘be taken’	NH
<i>halzai</i> - ⁱ ‘call’	<i>halzi</i> - ^{atta(ri)} ‘be called’	OH
<i>hulāliye/a</i> - ^{zi} ‘entwine, encircle’	<i>hulāliye/a</i> - ^{tt(ri)} ‘be encircled’	MH
<i>ispānt</i> - ⁱ ‘libate’	<i>ispānt</i> - ^{ta(ri)} ‘be offered (?)’	MH
<i>istamass</i> - ^{zi} ‘hear’	<i>istamass</i> - ^{ta(ri)} ‘be heard’	NH
<i>lā</i> - ⁱ ‘release, remove’	<i>la</i> - ^{tt(ri)} ‘be released, be removed’	NH
<i>markiye/a</i> - ^{zi} ‘reject, refuse’	<i>markiye/a</i> - ^{a(ri)} ‘be rejected’	OH
<i>nai</i> - ⁱ ‘send’	<i>nē</i> - ^{a(ri)} ‘be sent’	NH
<i>punuss</i> - ^{zi} ‘investigate’	<i>punuss</i> - ^{ta(ri)} ‘be investigated’	MH
<i>dā</i> - ⁱ ‘take’	<i>da</i> - ^{tt(ri)} ‘be taken’	NH
<i>tamāss</i> - ^{zi} ‘oppress’	<i>tamāss</i> - ^{ta(ri)} ‘be oppressed’	NH
<i>damme/ishae</i> - ^{zi} ‘damage’	<i>damme/ishae</i> - ^{ta(ri)} ‘be damaged’	MH
<i>tarna</i> - ⁱ ‘let go, allow’	<i>tarna</i> - ^{tt(ri)} ‘be released, be allowed’	MH
<i>wemiye/a</i> - ^{zi} ‘find’	<i>wemiye/a</i> - ^{tt(ri)} ‘be found’	NH
<i>zaluknu</i> - ^{zi} ‘postpone, delay’	<i>zaluknu</i> - ^{tt(ri)} ‘be delayed’	MH

To these, one should add the verbs reported in Table 15 and 17, which allow for either a passive or an anticausative reading. Moreover, a number of middle verbs attested on copies have a passive interpretation only, as reported in Table 20.

Table 20: Passive verbs in copies

Active: transitive predicate	Middle: passive voice
<i>alwanzahh</i> ⁻ⁱ ‘bewitch’	<i>alwanzahh</i> ^{-ta(ri)} ‘be enchanted’
<i>armizziye/a</i> ^{-zi} ‘bridge over’	<i>armizziye/a</i> ^{-tta(ri)} ‘be bridged over’
<i>esharwahh</i> ⁻ⁱ ‘make blood-dark’	<i>esharwahhiske/a</i> ^{-ta(ri)} ‘be made blood-dark’ (only <i>-ske/a-</i>)
<i>hahliliye/a</i> ^{-zi} ‘entwine, encircle’	<i>hahliliye/a</i> ^{-tta(ri)} ‘be encircled’
<i>hallanna</i> ⁻ⁱ ‘trample down, flatten’	<i>hallanniye/a</i> ^{-tta(ri)} ‘be flattened’
<i>hamank</i> ⁻ⁱ ‘tie’	<i>hame/ink</i> ^{-ta(ri)} ‘be tied’
<i>hapus(s)</i> ^{-zi} ‘bring after’	<i>hapus(s)</i> ^{-ta(ri)} ‘be brought after (?)’
<i>hattarae</i> ^{-zi} ‘prick’	<i>hattariye/a</i> ^{-tta(ri)} ‘be pricked’
<i>huek</i> ^{-zi} ‘slaughter’	<i>huek</i> ^{-ta(ri)?} ‘be slaughtered’
<i>hulle</i> ^{-zi} ‘hit’	<i>hulla</i> ^{-tta(ri)} ‘be hit’
<i>huni(n)k</i> ^{-zi} ‘batter, crash’	<i>huni(n)k</i> ^{-ta(ri)} ‘be crashed’
<i>ishai</i> ⁻ⁱ ‘bind’	<i>ishiske/a</i> ^{-ta(ri)} ‘be bound’ (only <i>-ske/a-</i>)
<i>istalk</i> ^{-zi} ‘flatten’	<i>istalkiye/a</i> ^{-tta(ri)} ‘be flattened’
<i>kariye/a</i> ^{-zi} ‘hide, cover’	<i>kariye/a</i> ^{-tta(ri)} ‘be covered’
<i>kinu</i> ^{-zi} ‘open’	<i>kinu</i> ^{-tta(ri)} ‘be open’
<i>less</i> ^{-zi} ‘pick, gather’	<i>liss</i> ^{-ta(ri)} ‘be gathered’
<i>mūgae</i> ^{-zi} ‘invoke’	<i>mūkieske/a</i> ^{-tta(ri)} ‘be invoked’
<i>padda</i> ⁻ⁱ ‘dig’	<i>padda</i> ^{-tta(ri)} ‘be dug’
<i>pippa</i> ⁻ⁱ ‘knock down’	<i>pippa</i> ^{-tta(ri)} ‘be knocked down’
<i>sakiyahh</i> ⁻ⁱ ‘give a sign’	<i>sakiyahh</i> ^{-ta(ri)} ‘be given as a sign’
<i>samnea</i> ^{-zi} ‘create’	<i>samniye/a</i> ^{-tta(ri)} ‘be created’
<i>dankuwahh</i> ⁻ⁱ ‘make black’	<i>dankuwahhiske/a</i> ^{-tta(ri)} ‘be made black’ (only <i>-ske/a-</i>)
<i>uye</i> ^{-zi} ‘send’	<i>ueske/a</i> ^{-tta(ri)} ‘be sent’ (only <i>-ske/a-</i>)
<i>walh</i> ^{-zi} ‘hit’	<i>walhiske/a</i> ^{-tta(ri)} ‘be hit’ (only <i>-ske/a-</i>)
<i>walluske/a</i> ^{-zi} ‘pray to’	<i>walluske/a</i> ^{-tta(ri)} ‘be prayed’ (only <i>-ske/a-</i>)
<i>warnu</i> ^{-zi} ‘burn (tr.)’	<i>warnu</i> ^{-tta(ri)} ‘be burned’

<i>wisuriya</i> - ^{zi} ‘press together (tr.), twist (tr.)’, ²²	<i>wisuriya</i> - ^{ta(ri)} ‘be pressed, be twisted’
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The data gathered in Table 19 and 20 shows two important facts concerning the distribution of passive forms. In the first place, concerning the aspectual construal of the base verbs, one observes a tendency for passive verbs to be built on telic predicates, but atelic predicates are possible as well, as in the case of e.g. *tamāss*-^{zi/ta(ri)} ‘oppress/be oppressed’ and *kariye/a*-^{zi/ttari} ‘cover/be covered’. This distribution complies with a well-known cross-linguistic tendency for languages that have passives based on stative verbs to also have passive forms for telic verbs (cf. Keenan & Dryer 2007: 331). In the second place, middle forms with passive meaning are only based on active transitive verbs, and not on intransitive ones. In this respect, it should be remarked that in Hittite the middle voice is not linked to the encoding of impersonal situations (including ones built on intransitive verbs), which is one of the functions of the middle voice in other ancient IE languages (e.g. Lat. *itur* ‘one goes’; on this pattern in Latin see Napoli 2013 and references therein), as well as cross-linguistically (Kemmer 1993).²³ Instead, in Hittite the preferred strategy to encode impersonal situations is the use of the 3rd person plural (cf. already Neu 1968b: 115, Luraghi 1990: 38-39; see Siewierska & Papastathi 2011 for this typological pattern). In addition, in Hittite one does not find any trace of the so-called facilitative function of the type *the book sells well*, which has been repeatedly argued to be a function of middle forms closely associated with the passive proper.

Let us now turn to discussing the discourse functions of passive forms. As discussed in Chap. 1, the occurrence of the passive is mainly driven by pragmatic considerations, and passive constructions cover a range of different but yet related discourse functions. As pointed out by Sansò (2006, 2010) passive constructions can express up to three different Agent-defocusing situation types, viz. *patient-oriented processes*, *bare happenings*, and *agentless generic events*. In the remainder of this section, I investigate to what extent this distinction applies to Hittite middle verbs with passive function.

In the first place, Hittite middle forms can express *patient-oriented processes*, that is, situations in which a definite and specific Patient is promoted to clausal subject because of its higher discourse saliency as compared to the demoted Agent. From a discourse perspective, these passives are chiefly used to establish topic chains.²⁴ Consider example (14), in which the clitic pronoun =*at* encodes the

²² As discussed at length by Melchert (2016b), there is no compelling evidence for the meaning ‘suffocate’ of this verb.

²³ The only possible counterexample is the form *akkiskettari* ‘dying happen, people die’ which is often referred to as impersonal; see however Part Two for an alternative explanation.

²⁴ According to Sansò (2006), passive forms can also serve the purpose of introducing a new topical referent in discourse. Hittite evidence for this function is rather scanty. A possible example might be ^m*Kuhseis markiyaru* ‘let Kuhseis be rejected’ (KBo 3.34 ii 41, OH/NS), in which the use of a proper noun is suggestive of this being the first mention of the

Patient subject of the passive verb *wemiyattaru*, and is used to establish topic continuity with the preceding relative clause.

- (14) *nu kwēzz(a) uddānaz_i akkiskettari n=at_i*
 CONN DEM.ABL matter.ABL die-IPFV-PRS.3SG.MID CONN=3SG.ACC.N
wemiya[t]taru
 find.PRS.3SG.MID
 “(And the reason for which people die,) it should be found out!” (KUB 14.10 iv 19, NH/NS)

In the second place, middle verbs with passive function can refer to *bare happenings*, i.e. they focus on the coming about of a new event, without assigning greater saliency to any of the participants. Consider example (15):

- (15) *nu wet KUR^{URU}Hatt[i AN]A PANI ABU ABI=[YA xxx]*
 CONN come.PST.3SG land *H.* to front father father=1SG.POSS
dammeshā[e]ttat
 damage.PST.3SG.MID
 “And it happened that under my grandfather the land of Hatti was struck (by plague).”
 (KUB 14.13+ i 28-29, NH/NS)

In example (15), the Patient of the verb *dammeshāettat* ‘was damaged’, i.e. *KUR^{URU}Hatti* ‘the land of Hatti’, is promoted to subject. However, the Patient does not have a particular topical force. Rather, the entire coming about of the event is focused, as also evidenced by the occurrence of the predicate in a construction with *uwa-* which highlights the novelty of the event (Luraghi forthc.a).

It should be observed that most alleged ‘impersonal’ usages of the middle voice can be better interpreted as passive forms encoding a *bare happening*. A case in point is the verb *hantae-^{zi}*. As discussed in Part Two, middle forms of this verb can either have an anticausative function ‘get in line, align (intr.)’ or a passive function ‘be determined’, the latter typical of NH/NS oracular texts. Notably, in the latter function, the verb can be either used with a nominative subject, including clitic

person in this text. However, since the sentence occurs in a rather poorly preserved passage, this example remains unconvincing.

subjects, as in (16), or without a subject, as in (17). In both cases, what is profiled is the coming about of the event in which the agent participant is not salient and is therefore not overtly encoded. The two however differ in that the former still features a specific and definite Patient participant, whereas the Patient of the latter is left out altogether.

- (16) *n=as katta asanna kuit SIXSÁ-at*
 CONN=3SG.NOM down sit.INF because align.PST.3SG.MID
 “And because she was determined to be dethroned.” (KBo 4.8 ii 10-11, NH/NS)

- (17) *hantaitat=wa*
 align.PST.3SG.MID=QUOT
 “(And the leader of the augurs speaks as follows:) the oracle has been performed (lit. it has been ascertained).” (KUB 5.11 i 25, NH/NS)

Agentless generic events, i.e. situations in which the Agent is left unprofiled and the event is conceived as generic, are not encoded by middle forms in my Hittite corpus. The only exception is provided by forms of *as(sa)nu-^{ta(ri)}* in hippological texts, as shown in example (18):

- (18) [*mahha*]n=ma=at=kan *asnuwantari* n=us IŠTU
 when=PTC=3PL.NOM=PTC take.care.PRS.3PL.MID CONN=3PL.ACC with
 Ì.UDU *iskanzi*
 sheep.grease anoint.PRS.3PL
 “And when they (i.e. the horses) are taken care of, one anoints them with sheep grease.”
 (KUB 29.40 ii 7, MH/MS)

Given the prescriptive nature of the text, the passive verb *asnuwantari* does not refer to an individuated event, but rather to an event which should be habitually performed in a given situation, i.e. to a generic event. As such, the verb can be rightfully interpreted as encoding an *agentless generic event*. Interestingly, this is confirmed by the fact that the middle verb *asnuwantari* displays the same discourse function of the following impersonal active verb *iskanzi* ‘they anoint’.

However, it should be noted that evidence from hippological texts should be taken with care, as the text is likely to have been written by a non-native speaker of Hittite and shows a sizable number of grammatical oddities (Hoffner & Melchert 2008: 283). Therefore, if one excludes the verb *as(sa)nu-^{ta(ri)}*, middle verbs with passive function are restricted to the encoding of *patient-oriented processes* and *bare happenings*. This distribution is fully compatible with the semantic map of agent

defocusing strategies proposed by Sansò (2010), as the Hittite middle covers two contiguous functions on the map.

2.2.2.3. Reflexive

As discussed in Chap. 1, (direct) reflexivity can be described as a valency reducing strategy, whereby the Agent and the Patient of a transitive two-place predicate are established as co-referent.

Most scholars agree in assigning a reflexive function to the Hittite middle, but the actual extent of this function is a matter of dispute. Neu (1968b: 104-106) provides a rather long list of reflexive middle verbs under the label of ‘activity middle’ (*Tätigkeitsmedium*). By contrast, Hoffner & Melchert (2008: 303) observe that middle verbs with reflexive meaning constitute a rather limited group. Luraghi (2010a: 149-150, 2012: 13-14; see further Melchert forthc.b: 4-5) goes further and points out that the middle voice in OH only marginally encodes direct reflexivity, with most middle-inflected reflexive verbs accompanied by the particle =*za*, and that the middle voice never encodes indirect reflexivity, i.e. self-benefactive, which is instead one of the core functions of the middle in other IE languages such as Ancient Greek. The encoding of reflexivity, both direct and indirect, is rather prominently associated with active verbs with the particle =*za*.

It should be observed that the discrepancies in the assessment of the usage of the middle voice as a reflexive marker partly owe to the difficulty in establishing a clear-cut difference between reflexive proper and anticausative events in the Hittitology literature (to my knowledge, this distinction has been so far systematically exploited in Melchert forthc.b only). The problem is not new: as Kulikov (2009: 81) points out in discussing the function of the middle voice in Sanskrit, “in many cases the term ‘reflexive’ is misleading. In fact, most occurrence of middle forms that are traditionally called ‘reflexives’ should rather be qualified as anticausatives.”. The same applies to Hittite: as observed under the discussion of the individual lemma in Part Two, most of the verbs classified by Neu as reflexive are better understood as involved in anticausative alternation with a human and (partly) volitional participant. The classification of these verbs as reflexive is often biased by German translations with involving the reflexive marker *sich*.²⁵ A case in point is *nai-i* ‘turn (tr.)’ vs. *nē-a(ri)* ‘turn (intr.)’, which is taken by Neu (1968b: 105, similarly Luraghi 2012: 17) as reflexive, but should be rather grouped with anticausative verbs (cf. Melchert forthc.b).

²⁵ Neu himself seems to be aware of the problem of using German as a guideline for classification, as shown by the following quote “Ich bin mir dabei bewußt, daß der Vergleich mit dem Deutschen als metodisches Prinzip nicht ganz unbedenklich ist” (1968b: 92 fn. 1).

If one excludes verbs which can be described as autocausative with animate participants, evidence for reflexive use of the middle voice boils down to an indeed limited number of verbs. In my corpus only two verbs synchronically attest to direct reflexive alternation encoded via voice alternation: *suppiyahh*⁻ⁱ ‘purify’ (cf. Luraghi 2012: 20) and *das(sa)nu*^{-zi} ‘make strong, fortify’, as in examples (19) and (20). As the pair (19)a-b shows, the active verb *suppiyahhi* ‘he purifies’ is used in a transitive construction with the accusative direct object LUGAL-*un* ‘the king’, whereas the middle verb *suppiyahhati* is used intransitively and has a reflexive interpretation. The same considerations also hold for the alternation between active *dassanumi* and middle *tassanuhhut* in (20)a-b.

- (19) a. *nu* LUGAL-*u*[(*n su*)]*p*[(*piya*)*hhi*]
 CONN king.ACC purify.PRS.1SG
 “And he purifies the king.” (KBo 17.11+ i 40, OH/OS)
- b. LUGAL-*us=za* *suppiyahhati*
 king.NOM=REFL purify.PRS.3SG.MID
 “The king has purified himself.” (KBo 25.112 ii 14, OH/OS)
- (20) a. *nu=war=an* *dassanumi*
 CONN=QUOT=3SG.ACC make.strong.PRS.1SG
 “I will make her (i.e. the daughter) important.” (KUB 21.36, 10, NH/NS)
- b. [*memi*]*steni* *tassanuhhut=wa=az*
 say.PRS.2PL make.strog.IMP.2SG.MID=QUOT=REFL
 “You say, strengthen yourself!” (KUB 13.27 obv. 46, NH/NS)

It should be observed that in both cases the verbs are often accompanied by the particle =*za*, and that this pattern is already attested in OH/OS. I return on this issue when discussing the relationship between the middle voice and the particle =*za* in Chap. 3.

Data from copies confirms that reflexivity remains a rather marginal function of the middle voice, as also remarked by Melchert (forthc.b). As reported in Table 21, only a few verbs display a reflexive interpretation when inflected in the middle voice. Notably, these verbs are also quite systematically associated with the particle =*za* (Neu 1968a: 11-12, 183-184, 190-191). To these, one can also add the middle verbs *munnae*^{-tta(ri)} ‘hide oneself’ and *arsiyē/a*^{-tta(ri)} ‘take care of oneself’. These two verbs normally encode spontaneous events of the anticausative type, i.e. ‘disappear’ and ‘succeed’ respectively, and can have a reflexive interpretation only when they occur with the particle =*za* (see Sec. 2.2.2.5).

Table 21: Reflexive verbs in copies

Active: transitive predicate	Middle: reflexive
$\bar{a}rr^{-i}$ ‘wash’	(=za) $arr^{-ta(ri)}$ ‘wash oneself’
$arsiyē/a^{-zi}$ ‘nurture’	(=za) $arsiyē/a^{-tta(ri)}$ ‘take care of oneself’
$munnae^{-zi}$ ‘hide’	(=za) $munnae^{-tta(ri)}$ ‘hide oneself’
unu^{-zi} ‘adorn, decorate’	(=za) $unu^{-ta(ri)}$ ‘adorn oneself’
$warp^{-zi}$ ‘wash, bathe’	(=za) $warp^{-ta(ri)}$ ‘wash oneself’

A final note is in order concerning the semantics of reflexive verbs discussed in this section. As a matter of fact, at least some of the verbs in Table 21, such as (=za) $unu^{-ta(ri)}$ ‘adorn oneself’, (=za) $warp^{-ta(ri)}$ and (=za) $arr^{-ta(ri)}$ ‘wash oneself’ semantically belong to the class of grooming verbs (Kemmer 1993). Based on this evidence, one could argue that the middle voice is only associated with grooming situation types, and is not employed as a marker of direct reflexive events, which are defined as those derived from prototypically two-place predicates. However, a direct reflexive function is undoubtedly at play with (at least) the verbs $munnae^{-zi}$ ‘hide’, $suppiyahh^{-i}$ ‘purify’, and $das(sa)nu^{-zi}$ ‘make strong, fortify’. These verbs predominantly occur in the active voice, and they indicate two-participants events in which the two participants are normally fully distinct. As a matter of fact, these verbs mostly occur in transitive constructions with two distinct fully specified arguments.²⁶ This is particularly clear for $suppiyahh^{-i}$ and $das(sa)nu^{-zi}$: being a factitive and a causative verb respectively (see sec. 2.3), these verbs cannot but indicate transitive two-place events in which the causer and the causee are fully distinct. To put it differently, with these verbs there is no expectation of coreference of the two participants, so that there is no reason to treat them as inherently reflexive.

2.2.2.4. Reciprocal

The Hittite middle voice is associated with reciprocity in at least three different ways (see Inglese 2017 for an overview): it operates as a marker of grammatical reciprocals, it is associated with lexical

²⁶ For example, based on the *CHD* data, the verb $munnae^{-zi}$ ‘hide’ occurs 34 times in the active voice in a transitive construction with the meaning ‘hide something’. Of the only 8 middle occurrences available, 7 are passives, and only one with =za has reflexive meaning ‘hide oneself’ (see further sec. 2.2.2.5). This distribution is strongly suggestive of the fact that the verb typically encodes an *extrovert* event (cf. König and Siemund 2000), so that its intransitive middle form can be rightfully regarded as instantiating a prototypical direct reflexive situation. Note that the picture is further complicated by the fact that active forms occasionally display labile syntax, as they are used intransitively to indicate the reflexive situation, but this use is limited to a few occurrences in a single NS text (IBoT 1.33).

reciprocal spatial events as an anticausative marker, and finally, it is idiosyncratically associated with a few lexical reciprocals.

In the first place, the middle voice can be used as a marker of canonical reciprocal situations (Neu 1968b: 108-109). This function is associated only to a single predicate in my corpus, that is the verb *zahh-i* ‘hit’, which is attested in OH/OS already, as shown in (21) and (22).

- (21) [...] ^{URU}*Tuhasunan* ***zahher***
 T.ACC hit.PST.3PL

“[...] they hit the town of Tuhasuna.” (KUB 17.21 iv 2, MH/MS)

- (22) *takku* LÚ^{MEŠ} ***zahhanda***
 if man(PL) hit.PRS.3PL.MID

“If (two) men strike each other (and one of them dies).” (KBo 6.26 ii 16, OH/OS)

In example (21), the active verb *zahher* indicates a two-participant event involving an Agent and a Patient, which are encoded as subject and direct object respectively. By contrast, its middle counterpart *zahhanda* in (22) encodes a reciprocal event whereby both participants perform the role of Agent and that of the Patient. In the latter case, the verb is intransitive, as the lack of the direct object shows. Notably, a reciprocal interpretation is generally available when the verb takes a plural subject only. In example (22), the middle voice behaves as a marker of grammatical reciprocal, as it enables a reciprocal reading of an otherwise non-reciprocal base predicate. Semantically, the reciprocal situation is one of *binary conjunctive reciprocity* (Maslova 2008), i.e. the event is construed as the sum of two symmetric and simultaneous sub-events. Syntactically, the middle voice encodes a subject-oriented reciprocal, as it establishes an inverse reciprocal relationship between the subject of the predicate and the direct object.

If one broadens the observation to verbs attested in copies, it turns out that the middle voice operates as a marker of subject-oriented grammatical reciprocals with two more verbs (see Inglese 2017 and Melchert forthc.b for details), i.e. *ep-zi* ‘take’ vs. *appandat* ‘take each other (by the hand)’ (KUB 33.87 + i 16) and *sāi-zi* ‘become angry’ vs. *sāntati* ‘become angry at each other’ (KUB 12.26 ii 1-3).

In the second place, the middle voice is strongly associated with lexical reciprocal spatial events. These are predicates that indicate a spatial reciprocal situation of ‘joining’ and ‘splitting’ (Knjazev 2007), i.e. inherently symmetrical predicates (Dimitriadis 2008). In the active voice, these verbs indicate an object-oriented reciprocal situation, as a reciprocal relationship of the spatial kind is

established between two entities syntactically expressed as the direct objects of the predicate. By contrast, in the middle voice these verbs encode the corresponding subject-oriented reciprocal event. In this case, the middle voice operates as a valency reducing device and forms *reciprocal anticausatives* (Nedjalkov 2007a: 91). It should be stressed that with these predicates reciprocity is already inherent in the base verb, and it is not encoded by the middle voice *per se*. As an example of this alternation, consider the behavior of the verb *tarupp-^{zi}* ‘gather’ in (23) and (24).

- (23) *nu* SÍG SA₅ *anda taruppanzi*
 CONN wool red in gather.PRS.3PL
 “And they collect red wool (and put it on the cloth).” (KBo 5.1 iv 1, NH/NS)
- (24) a. DINGIR^{MEŠ}=*ya hūmantas taruppantat*
 god(PL)=CONJ all.NOM.PL gather.PST.3PL.MID
 “The gods gathered all together.” (KUB 36.97 obv. 6, NS)
- b. [xxx] *QADU ERÍN^{MEŠ}=š[UN]U anda taruppantati*
 with troop(PL)=3PL.POSS in gather.PST.3PL.MID
 “They gathered with their troops.” (KUB 23.12 ii 20, MH/MS)

In example (23), the active verb *taruppanzi* indicates a spatial reciprocal situation of the ‘joining’ type established between the collective Patient participant ‘wool’ encoded as direct object. By contrast, in (24)a and (24)b middle forms of the verb encode the corresponding anticausative subject-oriented reciprocal event, in which a reciprocal spatial configuration is conceived as volitionally brought about by the participants themselves. Note that (24)a and (24)b display two distinct syntactic constructions. In the former, the two reciprocants are encoded with a plural subject in a simple reciprocal construction, whereas in the latter one participant is encoded as subject and the second one as a comitative oblique introduced by the Akkadian preposition *QADU* ‘with’ in a discontinuous construction. As in the case of reciprocal middle forms of *zahh-ⁱ* ‘hit’, anticausative spatial reciprocals semantically refer to simultaneous and symmetric events, i.e. events with reduced participants’ and sub-events’ distinguishability (Kemmer 1993).

Finally, the middle voice is associated with verbs that are compatible with a reciprocal interpretation, chiefly *parh-^{zi}* ‘chase’ and *zahhiye/a-^{ta(ri)}* ‘fight’. I refer to Part Two for the discussion of the individual lemmas. It suffices here to stress that with these predicates the middle voice cannot be synchronically interpreted as a marker of reciprocal derivation, since we are possibly dealing with lexical reciprocal verbs. Therefore, even if diachronic explanations for this state of affairs can be provided, the association of the middle voice with these predicates is best interpreted as idiosyncratic.

2.2.2.5. Polyfunctionality patterns: a summary

As it emerges from the discussion in the previous sections, the Hittite middle voice is a highly polysemous marker. When used in opposition to the active voice, the middle voice is synchronically associated with different functions, including anticausative, passive, reflexive, and reciprocal. A closer look at the data reveals that the middle voice can be more correctly described as a *polyfunctional* (Malchukov 2015: 116-117) or *verb-sensitive* valency changing marker (Levin 2015). Indeed, the distribution of the various functions is partly constrained by the lexical semantics of the predicates, along with contextual factors. As a result, despite the general polyfunctionality of the marker, some contexts and verb types turn out to strongly favor one interpretation over the others.

The main polysemy pattern worth commenting upon is the anticausative/passive polysemy, which is also the most prominent from a quantitative standpoint. As discussed in sections 2.2.2.1 and 2.2.2.2, Hittite attests to a number of verbs whose middle voice can be interpreted as either passive or anticausative in function. Consider the behavior of the verb *sārr-i* ‘divide’. As discussed in Part Two, the verb semantically belongs to the class of spatial lexical reciprocals. Active forms of the verb are used in a transitive construction with a direct object, as in (25). By contrast, middle forms of the verb are used intransitively. Depending on the context these forms can either indicate an externally induced passive event, from the perspective of the Patient, as in (26)a, or a spontaneous event, as in (26)b.

- (25) *n=an* *huiswandan* *sarranzi*
CONN=3SG.ACC live.PTCP.ACC divide.PRS.3PL
“(There remain, however, twelve oxen and 300 sheep), they divide them up (into groups) alive.” (KUB 9.3 iv 8-9, OH/MS)
- (26) a. *TU₇^{HL.A}* *taksan* *sarrattari*
stew(PL) in.half divide.PRS.3SG.MID
“The stews are divided in half.” (KUB 20.76 i 15, NS)
- b. *namma=as* *arḫa* *sarrattari*
again=3SG.NOM away divide.PRS.3SG.MID
“(The enemy arrives at night) and then splits up.” (KBo 5.6 i 22-23, NH/NS)

As the examples show, middle forms of *sārr-i* are can be potentially interpreted as either anticausative or passive, the correct reading being disambiguated only by the context. In this sense, one can rightfully describe this verb as being systematically polysemous between the two meanings (note however that, as discussed in Part Two, middle forms that occur with the particle =*za* only

license an anticausative reading, e.g. KBo 3.4 ii 52-53). Other verbs offer a slightly different picture, whereby the two readings are not only triggered by specific contexts, but they also depend upon the different meanings that the base verb can have. A case in point is the verb *nai*⁻ⁱ ‘turn (tr.)’. With this verb, the middle voice can be used in either anticausative or passive function, however, the anticausative function ‘turn (intr.)’ is only available for the basic meaning ‘turn’, whereas the passive function ‘be sent’ is only compatible with the secondary meaning ‘send’. Similarly, whereas middle forms of *kars(iye/a)*^{-zi} ‘cut’ can either have an anticausative or a passive reading, a closer look at the verb’s attestations shows that only the passive function ‘be cut’ is available for the basic meaning of the verb, whereas the anticausative function is limited to the secondary meaning ‘stop’. Verbs such as these show that the disambiguation between different functions of the middle voice may entirely rely on the semantics of the base verb.

A number of verbs allow for only one of the two readings. This distribution is ultimately due to two factors of different nature. In the first place, for some verbs the textual evidence is so scanty that lack of attestations of either function might be accidental. For instance, middle forms of the verb *nini(n)k*^{-zi} ‘mobilize (tr.)’ are attested only with the anticausative meaning ‘mobilize (intr.)’, but in principle a passive reading ‘be mobilized’ is well conceivable.

In the second place, the distribution of the passive and the anticausative function is also constrained by the lexical properties of the predicates (cf. Chap. 1 sec. 1.3.1.5). On the one hand, an anticausative interpretation is unavailable for all the verbs in Table 13 and 14. These are verbs like *tamāss*^{-zi} ‘oppress’ and *hamank*⁻ⁱ ‘tie’, which denote events that cannot be construed as coming about spontaneously without the intervention of a controlling agent, because they lexicalize *agent-oriented meaning components* (Haspelmath 1987: 12).

More complex is the situation of derived causative verbs, as I discuss in sections 2.3.2 and 2.3.3. Briefly, whereas deadjectival causative verbs allow for either a passive or an anticausative reading, the latter is normally not available to deverbal verbs based on intransitive change-of-state verbs.

Beside the anticausative/passive polysemy, other quantitatively minor polysemy patterns are attested. The anticausative/reflexive polysemy pattern is attested for a couple of verbs, which are only found in copies. As an example, consider the verb *arsiyē/a*^{-zi} ‘plant, nurture’. Active forms of the verb occur in a transitive construction with an accusative direct object, as in (27). Middle forms are used intransitively, and can have a reflexive interpretation ‘nurture oneself, take care of oneself’ as in (28)a, or an anticausative interpretation ‘thrive, succeed’ in (28)b. Interestingly, a reflexive interpretation is limited to contexts in which a human (agentive) participant occurs, and in this case the reflexive reading is supported by the reflexive particle =za. Conversely, an anticausative reading

is available when the verb occurs with (inanimate) participants that are conceived as undergoing a spontaneous change of state.

- (27) [a] *rsin* EGIR-*pa* ***arsāizzi***
 cultivation.ACC back plant.PRS.3SG
 “He replants the plantation.” (KBo 6.12 i 20, OH/NS)
- (28) a. *nu=za* ***arsiyahhut***
 CONN=REFL nurture.IMP.2SG.MID
 “(Eat two or three times a day), and take care of yourself.” (KUB 1.16 ii 30, OH/NS)
- b. *nu ANA DINGIR^{MEŠ} NINDA.KUR₄.RA^{HI.A} GEŠTIN ispanduzzi*
 CONN to god(PL) bread(PL) wine libation(N).NOM
arsiyattaru
 nurture.IMP.3SG.MID
 “May the libation of bread and wine to the gods succeed.” (KBo 7.28 obv. 16, OH/MS)

A similar polysemy pattern is offered by the verb *munnae^{-zi}* ‘hide’, as shown in (29) and (30).

- (29) *mān^{LÚ} pitteantan=ma kuiski munnaizzi*
 if fugitive.ACC=PTC INDF.NOM hide.PRS.3SG
 “If someone hides a fugitive.” (KUB 8.81 ii 13-14, MH/MS)
- (30) a. *n=as=za munnaittat*
 CONN=3SG.NOM=REFL hide.PST.3SG.MID
 “(When Anu finished talking, he went up to the sky,) and hid himself.” (KUB 33.120 i 38, MH/NS)
- b. *n=at munnandat*
 CONN=3PL.NOM hide.PST.3PL.MID
 “(The *u.*-birds went that way) and disappeared.” (KUB 18.5 i 38, NS)

The verb *munnae^{-zi}* can be used in the active voice in a transitive construction with an accusative direct object, in which case it indicates an induced event ‘hide (tr.)’, as in (29). Middle forms of the verb are used intransitively, as shown by the occurrence of the clitic subject pronouns =*as* in (30)a and =*at* in (30)b. The two forms however differ in their interpretation. In (30)a, the verb most likely indicates a reflexive situation, as what is profiled here is the fact that the deity Anu agentively hides himself from Kumarbi (see Pecchioli Daddi & Polvani 1990: 130 fn. 18 for the interpretation of this

passage; see also Josephson 2003: 221-222). A reflexive reading is further supported by the occurrence of the reflexive particle =*za*. Conversely, in (30)b the verb *munmandat* simply profiles the fact that as a result of their movement the birds disappear out of sight of the participant to the oracular inquiry. It is interesting to observe that with this verb a passive reading of middle forms ‘be hidden’ is in principle conceivable. Lack of passive function might be in this case accidental.

As the examples of *arsiyē/a^{-zi}* ‘plant (act.); take care of oneself, thrive (mid.)’ and *munnae^{-zi}* ‘hide (act.); hide oneself, disappear (mid.)’ show, different factors underlie the alternative reflexive/anticausative readings of these verbs. First, the animacy of the participants, or better, the possibility to construe the participants as willfully instigating the event at their own benefit. Second, the particle =*za* can be used to explicitly select a reflexive reading.

To conclude, the verb *epp^{-zi}* ‘take’ constitutes an isolated case of passive/reciprocal polysemy. Active forms of the verb occur in a transitive construction, as in (31). Middle forms of the verb occur in an intransitive construction, and can be interpreted as either passive, as in (32)a, or reciprocal, as in (32)b. Notably, a reciprocal interpretation is available only in the case that the verb takes a plural subject (see also Part Two fn. 43).

- (31) *n=an* *hantantan* *ìR=KA* *ᵀUTU-us* *kisarta*
 CONN=3SG.ACC trust.PTCP.ACC slave=2SG.POSS Sungod.NOM hand.INST
ep
 take.IMP.2SG

“Sungod, take him, your trusted servant, by the hand.” (KUB 31.127 i 51, OH/NS)

- (32) a. *kī* *kuit* *kūs* *MUŠEN* *HURRI* *kallaranni*
 DEM.NOM.N REL.NOM.N DEM.ACC.PL bird *h.* unfavorableness.DAT
arha appantat
 away take.PST.3PL.MID

“Concerning the fact that these *hurri*-birds were taken away in unfavorableness.” (KBo 2.2 i 22, NH/NS)

- b. [*n*]*u=smas=kan* *ᵀ10-as* *ᵀDasmisuss[=a]* *Š[U-z]a*
 CONN=3PL.DAT=PTC Stormgod.NOM T.NOM=CONJ hand.ABL
appandat
 take.PRS.3PL.MID

“The Stormgod and Tasmisu took each other by their hand.” (KUB 33.87 + i 16, NS)

2.2.2.6. Competing constructions and the productivity of the middle voice

When functioning as a marker of valency changing operations in opposition to transitive active verbs, the middle voice competes with other constructions dedicated to the encoding of similar functions. These include the use of transitivizing suffixes for the encoding of causative events, the particle =*za* in reflexive and reciprocal use, the periphrastic passive construction, and the use of reciprocal polyptotic constructions of the type *ara-...ara-* ‘each other (lit. fellow fellow)’. This situation is not uncommon in ancient IE languages (cf. Stempel 1996: 28-39 for a useful overview). For instance, in Vedic, the passive, reflexive, reciprocal, and anticausative functions, which can be to some extent encoded by verbs inflecting in the middle voice, are preferably encoded by a number of dedicated morphemes (see e.g. Kulikov 2012b for discussion; see also Chap. 3 sec. 3.3.3.).

In this section, I focus on how the middle voice competes with other means of encoding valency changing derivations. These constructions are often mentioned in reference grammars (cf. Hoffner & Melchert 2008 *passim*), but less attention has been paid to the detail of their interaction with the middle voice. I first illustrate the different properties of these constructions and their distribution with respect to the middle voice, and then discuss how this evidence is relevant to understanding the productivity of the middle voice as a marker of grammatical derivations in Hittite.

Let us begin with the anticausative function. As already remarked by Luraghi (2012), if one leaves out a few cases of marginal strategies, such as suppletion, as in e.g. *ak-ⁱ* ‘die’ vs. *kuen-^{zi}* ‘kill’, and reduplication, as in e.g. *es-^{a(ri)}* ‘sit down’ vs. *asās-ⁱ* ‘make sit, settle’, the anticausative alternation can be encoded by either transitivizing suffixes, i.e. *-nu-* or *-ahh-* (see sec. 2.3.2, 2.3.3) or by the middle voice. The two strategies are not however equally distributed. Not only are transitivizing suffixes more frequent in terms of type frequency than the middle voice (see data in Luraghi 2012), but they also display a wider distribution. In the first place, the middle voice acts as an anticausative marker mostly for telic change-of-state events featuring inanimate participants, such as e.g. *zinna-^{ta(ri)}* ‘end’. Transitivizing suffixes by contrast are not constrained by the default aspectual construal of the base verb, and apply to either stative (atelic, including adjectives), as e.g. *ses-* ‘sleep’ vs. *sas(sa)nu-* ‘put to sleep’, and dynamic bases, as e.g. *samen-* ‘disappear’ vs. *samenu-* ‘eliminate’ (Luraghi 2012: 16). In the second place, as pointed out in sec. 2.2.2.1, the middle voice is preferably employed as an anticausative marker for inanimate verbs, whereas transitivizing suffixes also apply to animate ones, as in e.g. *huis-^{zi}* ‘live’ vs. *huis-nu-^{zi}* ‘let live, heal, rescue’ (Luraghi 2010a: 10). More generally, one observes that the higher type frequency of transitivizing strategies relates to the preference accorded in Hittite to plain situations to be lexicalized through basic active intransitive verbs. With these, the middle voice cannot clearly operate as an anticausative marker, as middle forms are only liable to be opposed to active transitive verbs that encode induced situations. Therefore, the middle voice and

transitivizing suffixes cannot be regarded as competing construction, but as in complementary distribution, since the base verbs that they apply to are different.

Turning to the passive, beside middle forms with passive meaning, this function can also be encoded by a periphrastic construction involving the verb *es-* ‘be’ plus the *-ant-* participle (cf. Chap. 1 sec. 1.5.2). In addition, there is a small group of verbs for which the passive voice is encoded via suppletion, as in the case of the so-called lexical passives. As discussed in Part Two, a case in point is the pair *kuen^{-zi}* ‘kill’ and *ak⁻ⁱ* ‘die, be killed’ (Neu 1968b: 110, Luraghi 2012: 10; for this typological pattern see Haspelmath 1993: 106).

According to most authors (cf. Hoffner & Melchert 2008: 304), the periphrastic construction is the preferred way to encode the passive function. Unfortunately, we lack detailed quantitative data concerning the distribution of periphrastic formations to substantially back up this claim. As a matter of fact, a data in Cotticelli Kurras (1992) is suggestive that the periphrastic construction indeed might have at least a wider type frequency as compared to the middle voice in passive function. In fact, passive participles are attested for several transitive verbs that on the contrary lack oppositional middle forms. However, it must be remarked that many instances of periphrastic constructions involving the participle of a transitive verb can be interpreted as stative passives rather than eventive ones (see below), so that the precise extent to which the periphrastic construction is used in competition with the middle voice in the encoding of eventive passives is yet to be determined.

If one considers its distribution of periphrastic passive constructions and oppositional middle forms with passive meaning, it turns out that the two constructions show a certain degree of overlap with respect to the verbs that they apply to. The same transitive verb can form its passive counterpart either through a middle finite form or through a periphrastic construction. A case in point is the verb *nai⁻ⁱ* ‘send’, as shown in example (33), in which the finite form *niyaru* ‘let it be sent’ and the participle *neian* ‘are sent’ are functionally equivalent.

- (33) a. *nu=ta=k[kan] ammēl :kuwayatā parā niyaru*
 CONN=2SG.DAT=PTC 1SG.GEN fear.NOM. forth send.IMP.3SG.MID
 “Let (news of) my difficult situation be sent forth to you.” (KBo 4.14 ii 14, NH/NS)
- b. *n=asta tarhuilātar=tet hatugātar=tet DINGIR^{MEŠ}-as*
 CONN=PTC valor(N).NOM=2SG.POSS.N ferocity(N).NOM=2SG.POSS.N god.DAT.PL
parā kallaranni neian
 forth adversity.DAT send.PTCP.NOM.N
 “Your valor and ferocity are sent against the adversity of the gods.” (KBo 3.21 ii 14-15, MH/MS)

As comparison between (33)a and (33)b shows, one can hardly detect a functional rationale behind the use of the middle voice and the passive participle. Only a more fine-grained investigation of periphrastic passives could perhaps shed more light on this issue. It must be remarked however that the two constructions are not entirely semantically overlapping. Indeed, it appears that the middle voice is mostly limited to the encoding of eventive, i.e. dynamic, passive situations, whereas periphrastic constructions can also have a stative interpretation (already Bechtel 1936: 105, see further Inglese & Luraghi *forthc.*). This distribution complies with a well-known typological tendency for languages that have different passive constructions to display semantic differences among these (cf. Keenan & Dryer 2007: 340-341; cf. also Fried 2006 and Sansò 2011). Diachronically, the overlap between the middle voice and the periphrastic participle can be seen as the outcome of the convergence of two independent functional extensions. The middle voice likely originated as an anticausative marker, and only later developed a passive function (see Chap. 3 for a detailed scenario). The *-ant-* participle instead started out as resultative in meaning, and its P-orientation with transitive verbs made it a suitable candidate to further develop a passive function, following a well-known grammaticalization path from resultative/stative to passive (cf. Haspelmath 1990; see further Inglese & Luraghi *forthc.* for discussion).

As already remarked in sec. 2.2.2.3, the encoding of reflexivity is a functional domain in which the middle voice converges with the reflexive particle =*za*. Compare examples (34)a and (34)b.

(34) a. PARTICLE =*za*

nu=za 6-ŠU *walhanzi*
 CONN=REFL six.times hit.PRS.3PL

“(Afterwards the two priests of the God Zilipuri come) they beat themselves six times.” (KUB 1.14 ii 8, NS)

b. MIDDLE VOICE (PLUS =*za*)

LUGAL-*us=za* *suppiyahhati*
 king.NOM=REFL purify.PRS.3SG.MID

“The king purifies himself.” (KBo 25.122 ii 14, OH/OS)

Concerning the distribution of the two strategies, one can observe that middle verbs with reflexive function only amount to a handful of cases, whereas, even in the absence of systematic quantitative data, a look at Boley’s (1993) data suggests that the reflexive particle is the preferred strategy to derive the reflexive counterpart of active two-place predicates. Moreover, the two constructions also

differ in range of reflexive situations that they can encode: the particle =*za* is associated with both direct and indirect reflexive situations, whereas the middle voice is limited to the encoding of direct reflexives (cf. Luraghi 2012: 13-14). It should also be observed that unlike what was discussed for the transitivity suffixes and the periphrastic construction, the middle voice and the particle do not entirely stand in complementary distribution, as they may co-occur as marker of reflexivity with the same verb (see Chap. 3 for a diachronic explanation). As a matter of fact, as shown in (34)b, most middle verbs with reflexive function do co-occur with the particle, thus suggesting that the middle voice alone is only weakly associated with the encoding of (direct) reflexivity.

In Hittite, several strategies are available for the encoding of the reciprocal domain: the middle voice, the use of the particle =*za*, and the use of so-called polyptotic constructions based on the repetition of the lexical items *sia-* ‘one’, *ka-* ‘this’, and *ara-* ‘friend’. The three constructions are exemplified in (35).

(35) a. MIDDLE VOICE

takku LÚ^{MEŠ} ***zahhanda***
 if man(PL) hit.PRS.3PL.MID

“If (two) men strike each other (and one of them dies).” (KBo 6.26 ii 16, OH/OS)

b. PARTICLE =*ZA*

man=e=za ***idalawessanzi***
 if=3PL.NOM=REFL become.bad.PRS.3PL

“If they have a falling out.” (KBo 6.2 iii 8-11)

c. POLYPTOTIC CONSTRUCTION

[1-]*as* **1-*an*** *kuwaskit*
 one.NOM one.ACC kill.IMPF-PST.3SG

“They killed each other continuously.” (KBo 2.5 iv 18)

In (35)a, the middle form *zahhanda* ‘they hit each other’ provides the reciprocal counterpart of the active transitive verb *zah-*ⁱ ‘hit’. In (35)b, the particle =*za* derives an intransitive reciprocal out of the two-place predicate *idalawēss-*^{zi} ‘become evil (at someone.DAT)’. Finally, in (35)c a reciprocal interpretation of the predicate *kuen-*^{zi} ‘kill’ is triggered by the polyptotic *sia-...sia-* construction. Despite surface similarities, in Inglese (2017: 978-981) I have shown how these three strategies largely stand in complementary distribution, as they cover different semantic and functional domains of reciprocity. To begin with, an opposition can be detected between the middle voice and the particle =*za* on the one hand and the polyptotic construction on the other. The former two tend to be associated

with subject-oriented unary reciprocal situations, that is, situations in which the two participants are encoded as subjects and are involved in a simultaneous and symmetric single-event relationship (cf. Maslova 2008). As such, both contrast with polyptotic constructions, which display a much wider syntactic and semantic distribution, since they can also encode sequential and multi-event reciprocal situation, and can also encode object-oriented, adverbial, and possessive ones.

However, it must be stressed that the middle voice and the particle are by no means fully interchangeable in the reciprocal domain. As a matter of fact, they strongly differ with respect to the predicates they apply to. The middle is mostly associated with lexical reciprocal events, either of the spatial type with anticausative function, as in e.g. *taruppantari* ‘they gather (with one another)’, or of the proper type, as in e.g. *zahhiye/a-^{ta(ri)}* ‘fight (with each other)’. Only marginally is the middle voice associated with grammatical proper reciprocals, as in the case of *zahhanda* ‘they hit each other’ and *appandat* ‘took each other (by hand)’. By contrast, the particle =*za* is only employed to encode grammatical proper reciprocals, as in the case of =*za idalawessanzi* ‘they have a falling out (lit. become evil at each other)’, and can also encode indirect reciprocal of the type =*za sarranzi* ‘they divide (the household) among themselves’, a function that is never performed by the middle voice alone. Even in absence of detailed quantitative data on the distribution of polyptotic constructions, it seems that they also constitute the more frequent strategy for the encoding of reciprocity (e.g. at least 14 predicates with *sia-...sia-*), as compared to the narrower distribution of both the middle voice (4 verbs) and the particle (4 verbs) (data from Inglese 2017).

Summing up, data discussed in this section concerning the relationship between the middle voice and other valency changing markers shows that in all functions, the middle voice displays a narrower semantic or syntactic distribution, or at least a more restricted type frequency. The consequent question is therefore whether one can describe the middle voice as being less productive as compared to the other marker for the encoding of the various intransitivizing functions.

A correct answer to this question requires a clear-cut definition of productivity as a starting point. This is not a trivial point, as the notion of productivity that has been variously employed by linguists, and various operational definitions of it are available in the literature (cf. Barðdal 2008 with extensive references). In this work, I find it convenient to adopt Barðdal’s (2008) definition of productivity, because it has the advantage that it allows for a decomposition of productivity into more well-defined and easily measurable parameters, and it is particularly well suited for the study of the productivity of syntactic constructions (for different approaches to productivity, especially in the field of morphology, see Hilpert 2013: 127-133 with references). Building upon extensive previous scholarship on productivity, Barðdal (2008, cf. esp. Chap. 5) suggests conceiving linguistic productivity as a multi-layered notion that includes at least three properties, i.e. *generality*, *regularity*,

and *extensibility*. Generality relates to the status of a construction as being the default expression for a given grammatical domain, which entails having a wide coverage and being schematic. The concept of regularity refers to the transparency and the compositional meaning of a given construction, to the effect that it can be described as instantiating a regular grammatical ‘rule-based’ pattern. Finally, extensibility concerns the possibility of a construction to attract new items in the lexicon.

More generally, from Barðdal’s (2008) outline, it clearly emerges that the notion of productivity in all its facets is tightly connected to the token and type frequency of individual construction. Unfortunately, since detailed quantitative data, both in terms of tokens and types, on most of the constructions discussed here are not available, in this section I cannot explore the productivity of the middle voice in quantitative terms. Moreover, I also leave out the issue of productivity as extensibility, since the diachronic distribution of the competing constructions is yet to be investigated on a large corpus-based scale. Nevertheless, some interesting remarks on the distribution of the middle voice as compared to the other constructions can still be made.

Concerning the anticausative function, building on Luraghi’s (2012) observations, I have shown how the transitivity suffixes show a wider semantic distribution than the middle voice, which can be interpreted as a sign of the suffixes having a greater generality than the middle inflection. Moreover, the suffixes *-nu-* and *-ahh-* are specialized for the encoding of transitivity and the semantics of derivational causative verbs is in most cases fully predictable from the combination of the base intransitive meaning plus the suffix. In this respect, transitivity suffixes are transparent and semantically compositional. By contrast, the middle voice being a highly polyfunctional marker, its interpretation is less transparent, and heavily relies on contextual cues. As a result, transitivity suffixes can also be regarded as more productive than the middle voice because they are more regular.

Similarly, the particle *=za* can be understood as having a wider range of usages, since it covers both direct and indirect reflexive situations, hence a higher generality. Since the particle also has a whole other range of usages, its distribution is not entirely transparent, so that unlike transitivity suffixes in the domain of anticausativization it cannot be said to be more regular than the middle voice.

In the reciprocal domain, one observes that the middle voice and the reflexive particle *=za* can only encode a sub-set of the possible syntactic and semantic reciprocal configurations, whereas polyptotic constructions do not show any restriction, and can occur in all contexts, thus showing a greater generality. In addition, unlike the middle voice and the particle *=za*, polyptotic constructions do not encode other valency changing derivations, and can be thus described as specialized and regular markers for the encoding of reciprocity.

Turning to the encoding of the passive, I have remarked above how despite claims that the periphrastic construction is more frequent than oppositional middle forms in terms of tokens and types, there are no compelling quantitative data to support this claim. In other words, there is no evidence that the periphrastic construction is more general than the middle voice. As to regularity, since periphrastic constructions with the participle also perform other functions (i.e. stative and perfect), they cannot be said to be more regular than the middle voice.

Based on this evidence, the observation that the middle voice displays a narrower distribution as compared to other means of encoding valency changing operations can be further specified in terms of a lower productivity of the middle voice, at least in the domains of anticausativity, reflexivity, and reciprocity, where it displays a lower type frequency, generality, and regularity, as summarized in Table 22. Concerning the encoding of the passive function, this is the only domain in which the middle voice is possibly not ousted by a more productive dedicated marker.

Table 22: Productivity of the middle voice and competing constructions

	Type frequency	Generality	Regularity
Anticausative			
MIDDLE VOICE	-	-	-
TRANSITIVIZING SUFFIXES	+	+	+
Reflexive			
MIDDLE VOICE	-	-	-
PARTICLE =ZA	+	+	-
Reciprocal			
MIDDLE VOICE	-	-	-
PARTICLE =ZA	-	+	-
POLYPTOTIC CONSTRUCTIONS	+	+	+
Passive			
MIDDLE VOICE	-	-	-
PERIPHRASTIC PASSIVE	-	-	-

2.2.2.7. The lexicalization of oppositional middle verbs

So far, I have discussed those cases in which oppositional middle forms instantiate a transparent pattern of voice alternation. In the corpus, one also finds a small number of verbs that attest to both active and middle forms with different meanings, but whose relationship cannot be synchronically

ascribed to any of the patterns discussed in this chapter. With these verbs, voice alternation appears to be highly idiosyncratic. These are cases such as *es*-^{a(ri)} ‘sit down’ vs. *es*-^{zi} ‘be seated’ and *hink*-^{a(ri)} ‘bow (intr.)’ vs. *hai(n)k*-^{zi} ‘offer’. Such cases can be historically explained as the outcome of different diachronic processes. For instance, verb pairs such as *es*-^{a(ri)} ‘sit down’ vs. *es*-^{zi} ‘be seated’ and *ar*-^{ta(ri)} ‘stand’ vs. *ar*-ⁱ ‘arrive’, in which the meaning of either voice cannot be synchronically derived from the other, are the outcome of the historical merging of etymologically unrelated roots into homophonous stems (see under the individual lemma in Part Two for discussion). Different is the case of verb pairs such as *weriye/a*-^{zi} ‘call’ vs. *weriye/a*-^{ttari} ‘join’, *hink*-^{a(ri)} ‘bow (intr.)’ vs. *hai(n)k*-^{zi} ‘offer’, and *usneske/a*-^{zi} ‘pledge, balance’ vs. *usneske/a*-^{ttari} ‘put up for sale (tr.)’. As discussed in Part Two under the individual lemma, both verbs originally conformed to a synchronically productive pattern of voice alternation, i.e. reflexive and/or anticausative. Later on, the middle forms underwent a specific semantic shift whereby they developed a specialized meaning that could not be synchronically derived from their active counterpart anymore. As a consequence, the pattern of voice alternation became synchronically opaque. These cases are better viewed as instances of the lexicalization of the middle voice (see Chap. 1 sec. 1.3.1).

2.3. Middle forms of derived verbs

The Hittite verbal system is characterized by an extensive use of derivational suffixes that show a wide range of functions (cf. Hoffner & Melchert 2008: Chap. 10). In this section, I discuss in detail the relationship between a number of these suffixes and the morphological voice of the verb bases that they apply to, which is a topic that has not received special attention in previous scholarship on the Hittite middle. As I show, the reason for devoting a separate discussion to these verbs is that in this case the function of the middle voice shows interesting interactions with the functions and the semantics of specific suffixes. The verbs investigated include thematic *-iye/a-* verbs (sec. 2.3.1), causative *-nu-* verbs (sec. 2.3.2), factitive *-ahh-* verbs (3.3.3), and ‘imperfective’ *-ske/a-* verbs (sec. 2.3.4).

2.3.1. Thematic verbs in *-iye/a-*

Hittite displays a fairly large number of verbs that show thematic suffixes and take *mi*-endings, including a group of verbs that display the suffix *-iye/a-* (see Oettinger 1979: 343-356, Kloekhorst 2008: 129 ff., Hoffner & Melchert 2008: 202-203).

Historically, these *-iye/a-* verbs go back to the PIE thematic verbal suffix **-ye/o-*. The suffix enjoyed a significant productivity in most IE languages, where it is attested with a wide range of different functions (see e.g. Beekes 1995: 229-230, Meier-Brügger 2010: 304, *LIV*²: 19). According

to most scholars, the PIE suffix was mostly employed in two different formations (note that according to Fortson 2010: 98-99, one should better speak of two homophonous but distinct suffixes). On the one hand, it was used to form primary present stems, hence its association with imperfectivity, as in e.g. present **g^wm-yé-ti* ‘he goes’ (cf. Lat. *veniō*). On the other hand, the suffix was used to form denominative verbs of the type **h₃n(e)h₃mn-* ‘name’ (Lat. *nomen*) > **h₃n(e)h₃mn-ye/o-* ‘name’ (Gr. *onomainō*).

As pointed out by Kloekhorst (2008: 129; see 129-132 for a list of these verbs), *-iye/a-* verbs constitute one of the most productive verbal classes in Hittite. Verbs that belong to this class can be further sorted out into two main groups that reflect the two possible formations originally associated with the PIE suffix: (i) verbs primarily inflecting as *-iye/a-*, e.g. *aniye/a^{-zi}* ‘work’, (ii) denominal verbs, e.g. *zahhiye/a^{-zi}* ‘fight’ from *zahhai-* ‘battle’. To these one can add a number of verbs that originally inflected according to another pattern and only later were transferred to the *-iye/a-* class, e.g. *halziye/a^{-zi}* ‘call’ from original *halzai⁻ⁱ*, bearing evidence for the productivity of this morphological pattern.

With verbs of the first group, the suffix was historically motivated as a formant of the present stem, possibly connected with atelicity/imperfectivity. As argued by Melchert (1997), remnants of this older distribution can still be observed in Hittite verbs that show an alternating base vs. *-ye/a-* stem, as in the case of *karp-* vs. *karpiye/a^{-zi}* ‘pluck’. This group mostly features transitive verbs, that are consistently active and can develop a functionally motivated voice alternation, as discussed for several verbs in Part Two. A case in point is *kars(iye/a)^{-zi}* ‘cut, stop’ that also shows middle forms *kars(iye/a)^{-ta^(ri)}* with either passive ‘be cut’ or anticausative ‘stop (intr.)’ meaning. Moreover, a number of original deponent *media tantum* transferred to active inflection belong to this group as well, e.g. *huett(i)^{-a^(ri)}* > *huttiye/a^{-zi}* ‘draw, pull’.

Among primary *-ye/a-* verbs, intransitive ones constitute a minority: based on Kloekhorst’s list, 26 such verbs are transitive while only 4 are intransitive. These are *hark(iye/a)^{-zi}* ‘perish’, *karūss(iye/a)^{-zi}* ‘fall silent’, *mumiye/a^{-zi}* ‘crumble’, and *tīye/a^{-zi}* ‘step’. Interestingly, these verbs display both active and middle forms that are equivalent in function. It is thus legitimate to wonder whether these verbs were originally *activa* or *media tantum*. As discussed in Part Two, evidence for *mumiye/a^{-zi}* is rather inconclusive, as there are not enough occurrences to ascertain the original inflection of the verb. With the other verbs, it appears that active voice is primary and that these verbs were only sporadically transferred to middle inflection. See the discussion in Part Two for *karūss(iye/a)^{-zi}*. As for the other verbs, they all occur in copies. The verb *tīye/a^{-zi}* is abundantly attested in the active voice since OH, and possible occur in the middle voice only once in KUB 30.11+

obv. 8 (MS).²⁷ Similar considerations hold for *harkiye/a-^{zi}*: the verb occurs in the active voice since OH, where one also finds the simple stem *hark-*, and the middle voice is attested only twice in NS texts (KUB 57.73 ii 8, KUB 57.60 obv. 4). Therefore, the textual evidence strongly suggests that these intransitive primary *-iye/a-* verbs were originally *activa tantum*, and were only later marginally transferred to the middle voice on analogy with semantically similar verbs that take the middle inflection. For instance, the verb *mau-ⁱ* ‘fall’, which occasionally takes middle endings, could have provided the model for middle forms of *mumiye/a-^{zi}* ‘crumble’. Similarly, the model of *harkiye/a-^{zi}* could have been provided by the *media tantum* verbs *kist-^{a(ri)}* ‘perish’, whereas *karūss(iye/a)-^{zi}* ‘fall silent’ could have been influenced by the class of experiencer *-iye/a-* denominal verbs (see below).

The largest group of *-iye/a-* verbs is constituted by denominal verbs (note that the group also includes a small number of deadjectival verbs, as e.g. *lazziye/a-^{ta(ri)}* ‘become good’).²⁸ A systematic analysis of these verbs in terms of their syntax and semantics is still lacking, and I do not pursue it here (see Oettinger 1979: 351-356 for a thorough morphological description). It suffices to say that the group is highly heterogeneous, and it includes both transitive and intransitive verbs. Among the verbs listed by Kloekhorst (2008: 130, to which I have added a few other predicates from other sources), 41 are transitive, whereas 29 are intransitive only. Transitive verbs are all active and include predicates such as *lammaniye/a-^{zi}* ‘name someone’ from *laman-* ‘name’ and *kussaniye/a-^{zi}* ‘employ, pay’ from *kussan-* ‘pay’. The only exception is deponent *wesiye/a-^{ta(ri)}* ‘pasture’ that is transitive and always takes middle inflection (see Part Two for discussion). Among transitive verbs, one finds a small group of verbs that show a meaningful voice alternation along the patterns described in the previous sections, as e.g. *samesiye/a-^{zi}* ‘burn for fumigation (tr.)’ opposed to *samesiye/a-^{ta(ri)}* ‘burn for fumigation (intr.)’. It is noteworthy that most oppositional *-iye/a-* verbs are anticausative in function, with only a few that can also have a passive reading. A reflexive interpretation is possibly at play only with forms of *arsiyē/a-^{ta(ri)}* with the particle =*za* meaning ‘nurture oneself, take care of oneself’, as exemplified in (28).

Non-oppositional intransitive *-iye/a-* verbs display a synchronically more puzzling relationship with voice. As shown in Table 23, intransitive verbs are either *activa tantum*, *media tantum*, or they show both active and middle forms with identical syntax and semantics.

²⁷ In this text, the editors reconstruct a form *ti-ya-[ri]*, whose last sign is however damaged and thus partly unreliable (see now the edition by E. Rieken et al. (ed.), *hethiter.net*: CTH 374 (TX 2016-01-11, TRde 2016-01-11).

²⁸ Another important class of denominal verbs is the so-called *hatrae*-class, which consists of **-ye/o-* suffixed verbs based on *o*-stems nouns (cf. Kloekhorst 2008: 132). Verbs of this class, either transitive or intransitive, consistently inflect as active and take *mi*-endings.

Table 23: Voice of denominal *-iye/a-* verbs

<i>Activa tantum</i>	<i>Media tantum</i>
<i>haliye/a-^{zi}</i> ‘watch over’	<i>huntariye/a-^{tta(ri)}</i> ‘fart’
<i>kanussariye/a-^{zi}</i> ‘kneel’	<i>hursakniye/a-^{tta(ri)}</i> ‘stew (intr.)’
<i>genussariye/a-^{zi}</i> ‘kneel’	<i>irmaliye/a-^{tta(ri)}</i> ‘be(come) ill’
<i>gimaniye-^{zi}</i> ‘spend the winter’	<i>ishahruwe/a-^{tta(ri)}</i> ‘weep’
<i>gimmantariye/a-^{zi}</i> ‘spend the winter’	<i>kariye/a-^{(tt)a(ri)}</i> ‘be(come) gracious’
<i>kuttaniye/a-^{zi}</i> ‘exert force’	<i>karpiye/a-^{tta(ri)}</i> ‘be(come) angry’
<i>nuntariye/a-^{zi}</i> ‘hasten’ ²⁹	<i>kistanziye/a-^{tta(ri)}</i> ‘be(come) hungry’
<i>parkuwantariye/a-^{zi}</i> ‘become pure (?)’	<i>lēlaniye/a-^{tta(ri)}</i> ‘be(come) furious’
<i>pittuliye/a-^{zi}</i> ‘be anxious’	<i>pangariye/a-^{tta(ri)}</i> ‘become widespread’
<i>puntarriye/a-^{zi}</i> ‘be obstinate (?)’	<i>teshaniye/a-^{tta(ri)}</i> ‘appear in a dream’
<i>sakuniye/a-^{zi}</i> ‘well up’	Identical active and middle forms
<i>sakuwanteriye/a-^{zi}</i> ‘stay, remain’	<i>*hassuezziye/a-^{zi/tta(ri)}</i> ‘become king’
<i>tarkuwalliye/a-^{zi}</i> ‘look angrily’	<i>kardimiye/a-^{zi/tta(ri)}</i> ‘be(come) angry’
<i>tuzziye/a-^{zi}</i> ‘encamp’	<i>ishezziye/a-^{zi/tta(ri)}</i> ‘dominate’
	<i>nahsariye/a-^{zi/tta(ri)}</i> ‘be(come) afraid’
	<i>suppariye/a-^{zi/tta(ri)}</i> ‘sleep’

Diachronic considerations might help disentangle this scenario. *Media tantum* seem to constitute the core of this group. Not only are some of these attested since OH, but they also constitute a semantically coherent group. First, they mostly belong to the class of experiencer predicates and are syntactically unaccusative, as they require subject clitic pronouns. As discussed in Part Two under the individual lemma, these verbs also largely share the same aspectual potential, as they can be construed as either as transitory states or as incremental accomplishments, as in the case of *kistanziye/a-^{tta(ri)}* either static ‘be hungry’ or dynamic ‘become hungry’.³⁰ Note that such aspectual

²⁹ See Neu (1968a: 130) for one possible middle occurrence of the verb.

³⁰ As remarked by Luraghi (2010b), among others, some of these verbs also have an inchoative counterpart in *-ēss-*, which only profiles the change of state component. According to her, this distribution is consistent with the observed cross-linguistic tendency of inchoative experiencer predicate to be morphologically more complex than their more basic stative counterpart. It should also be mentioned that Hittite also has a class of so-called ‘stative’ verbs in *-ē-* (cf. Watkins 1971, Hoffner 1998, Jasanoff 2004, Garcia-Trabazo 2009). This label is however partly misleading, since in fact these verbs

potential is cross-linguistically typical of experiencer predicates, as pointed out by Luraghi (2010b), and is possibly licensed by a metonymical process (Chap. 1 sec. 1.5.1.2).

Verbs that alternate between active and middle forms are also semantically close to the group of denominal *media tantum*. As discussed in Part Two for e.g. *kardimiye/a*-^{zi/ta(ri)} ‘be(come) angry’, there are good reasons to maintain that for all these verbs the middle voice was original, mostly because middle tokens are more frequently attested and/or occur earlier than active forms. Note that this behavior sharply contrasts with intransitive primary *-iye/a-* verbs, which as discussed above were possibly *activa tantum* to begin with. Alternating verbs in Table 23 therefore attest to a process of (partial) morphological renewal, whereby middle verbs start to be transferred to active inflection. It follows that *activa tantum* that are only sporadically attested in NH, especially experiencer predicates such as *pittuliye/a*-^{zi} ‘be anxious’ and verbs that indicate a spontaneous change of state such as *parkuwantariye/a*-^{zi} ‘become pure (?)’, cannot be taken a compelling evidence for determining the original voice of *-iye/a-* verbs. Indeed, either they originally inflected as middle but we simply lack pre-NH attestation, or they were more simply created at a time when the connection between *-iye/a-* verbs of this type and the middle voice had been already lost.

Further evidence that a group of denominal *-iye/a-* verbs was originally associated with the middle voice comes from verbs such as *lazziye/a*-^{zi} ‘set straight (act.), be(come) good (mid.)’. As discussed in Part Two, whereas this verb can be synchronically described as instantiating the anticausative alternation via voice morphology, it is clear that the verb originated as a *medium tantum* meaning ‘be(come) good’, and that an oppositional active transitive counterpart meaning ‘set straight’ was created only at a later stage.

To sum up, among *-iye/a-* verbs of the denominal type, one can detect a distribution whereby those intransitive verbs that indicate a state or a spontaneous change-of-state event that affects the subject participant were originally *media tantum*. Semantically, whereas it is true that these verbs mostly denote experiencer predicates, the association with the experiencer semantics is not the only driving factor, as one also finds other verbs that denote non-experiencer change-of-state events, such as *hursakniye/a*-^{ta(ri)} ‘stew (intr.)’ and *teshaniye/a*-^{ta(ri)} ‘appear in a dream’. Since one also finds a wealth of transitive *-iye/a-* verbs, both primary and denominal, as well as intransitive active primary verbs, it seems safe to conclude that the middle inflection of these verbs is not primarily driven by the

display the same aspectual construal alternations as *-iye/a-* verbs since OS, as they can refer both to states and change-of-state events (see Hoffner & Melchert 2008: 177, Inglese forthc.). Denominal *-iye/a-* verbs, together with the factitive suffix *-ēss-* and the causative/factitives suffixes *-nu-* and *-ahh-* belong to Caland-system of verbal denominal formations (cf. Rau 2009, 2013, Dell’Oro 2015; see fn. 35).

occurrence of the suffix *per se*, but rather by the semantics of these predicates. Note also that intransitive denominal/deadjectival predicates that indicates a state or a change of state of the subject are commonly associated with the middle inflection also in other languages of the world (cf. Grestenberger 2016: 105).

2.3.2. Causative verbs in *-nu-* and *-ni(n)-*

Hittite has two derivational affixes that have been usually associated with causativity: the suffix *-nu-* and the infix *-ni(n)-*. In reference grammars (e.g. Hoffner & Melchert 2008: 178-179), the former is described as combining with either adjectival or verbal bases to derive causatives of other verbs and factitives of adjectives, as in e.g. *ar-* ‘arrive’ > *ar-nu-* ‘cause to arrive’ and *dassu-* ‘strong’ > *das(sa)-nu-* ‘make strong’, whereas the latter is inserted before the final root consonant of some verbs in *-k*, as in *istark-* ‘get sick’ > *istar-nin-k-* ‘make sick, afflict’. Historically, both types are inherited from PIE (cf. *LIV*²: 17, Kloekhorst 2008 s. *-nu-*; see Covini 2017: 25, 28-32 for discussion). In Hittite, the nasal infix represents the more archaic formation and constitutes a recessive feature, while the nasal suffix *-nu-* has become fully productive (see Kronasser 1966: 438-460, Oettinger 1979: 167, 238-255, Kloekhorst 2008: 152-153 for a discussion of the history and formation *nu*-suffixed verbs). The non-productive status of infixed *-ni(n)-* as an inherited feature is also supported by the existence of infixed verbs for which a non-infixed base is not attested, i.e. *nini(n)k-* ‘set in motion’ and *sarni(n)k-* ‘make compensation’ (Luraghi 2012: 9).

The function of the affixes *-nu-* and *-ni(n)-* can be best described in terms of transitivization rather than in terms of causativization proper (Luraghi 1992; see Meiser 1993 for an overview of their functions of in PIE). The suffix *-nu-* mostly attaches to either intransitive stative/change-of-state predicates or adjectives (and more marginally to nouns, see Luraghi 1992: 155-156) to form their causative transitive counterpart, and is therefore involved in the encoding of the anticausative alternation (Luraghi 2012: 7-9). *Nu*-suffixation can be described as a valency increasing operation, whereby a new argument is added to the valency frame of the base verb (intransitive *-nu-* verbs are restricted to a handful of cases, cf. Luraghi 2012 fn. 8 for discussion). Semantically, *nu*-derived verbs share the features of denoting controlled and dynamic change-of-state events (Luraghi 1992: 169). Note that most *media tantum* form their derived transitive counterparts with the suffix *-nu-* (Neu 1968a: 53), as in the case of *ur-āri* ‘burn (intr.)’ vs. *warnu-zi* ‘burn (tr.)’. Normally, *-nu-* derivatives of base transitive verbs leave the secondary Agent unexpressed (Luraghi 1992: 166-169). The only known case of a transitive verb that has a derived ditransitive *-nu-* counterpart is *zai-* ‘cross’ > *zinu-* ‘let cross’ in KBo 6.2 ii 30 (cf. Luraghi 1992: 166). Finally, in a number of cases one fails to detect a meaningful contribution of the suffix, with both the base and the derived verb showing similar

syntax and semantics. A case in point is *pahs-i* ‘protect’, which is virtually identical to its derived counterpart *pahsanu-zi* (see Part Two). This last group of verbs clearly shows that originally the suffix did not encode causativization proper, as it did not regularly attach to already transitive bivalent verbs to form trivalent ones, but was primarily connected with adding telicity and control to stative and uncontrolled change of state intransitive verbs.

When the suffix attaches to adjectives, it is virtually identical to the ‘factitive’ suffix *-ahh-* (see section 2.3.3). The two suffixes stand in complementary distribution, as their occurrence is morphologically determined by the shape of the adjectival stem that they occur with (cf. Oettinger 1979: 238-255).

As remarked by Luraghi (1992: 155), *nu*-verbs are mostly *activa tantum*, and middle forms are relatively rare. Notably, out of 99 *nu*-verbs listed by Luraghi (1992), only for 7 of them do middle forms exist. Derived *nu*-verbs that attest to middle inflection are reported in Table 24.

Table 24: Derived *nu*-verbs in the middle voice

Base	Active voice	Middle voice
IN ORIGINALS		
<i>es-zi</i> ‘be’ ?	<i>as(sa)nu-zi</i> ‘take care of’	<i>asnu-ta(ri)</i> ‘be taken care of’
<i>dassu-</i> ‘strong’	<i>das(sa)nu-zi</i> ‘make strong’	(=za) <i>dasnu-ta(ri)</i> ‘make oneself strong’
* <i>taluki-</i> ‘long’	<i>zaluksnu-zi</i> ‘postpone, delay’	<i>zaluksnu-tari</i> ‘be delayed, be(come) late’
IN COPIES		
<i>parkui-</i> ‘pure’	<i>parkunu-zi</i> ‘purify’	(=za) <i>parkunu-tari</i> ‘purify oneself’
<i>salli-</i> ‘big’	<i>sallanu-zi</i> ‘make big’	<i>sallanu-tari</i> ‘become big, grow’?
<i>ur-āri</i> ‘burn (intr.)’	<i>warnu-zi</i> ‘burn (tr.)’	<i>warnu-tari</i> ‘be burned’
<i>ā(i)-a(ri)</i> ‘be warm’	<i>inu-zi</i> ‘make warm’	(=za) <i>inu-tari</i> ?

The interpretation of middle forms of *nu*-verbs is not always an easy task, and generalizations are seriously hampered by the scarcity of the data. However, some interesting observations can be made. In the first place, middle forms of deverbal *nu*-verbs based on intransitive verbs are mostly likely passive, as in the case of *asnu-ta(ri)* ‘be taken care of’ and *warnu-tari* ‘be burned’.³¹ Consider the form

³¹ The form *i-nu-us-ki-it-ta-ri* occurs only once in KBo 13.119 i 7. This is a middle form based on the *-ske/a-* derived stem of *inu-* ‘make warm’, in turn derived via *nu*-suffixation from the stative *medium tantum ā(i)-a(ri)* ‘be warm’. The form occurs with the particle =za, but the context is too fragmentary to allow a reliable interpretation (Neu 1968a: 71).

warnutari in example (36)b, which functions as the passive counterpart of active *warnuzi* in (36)a, as also evidenced by the occurrence of the agent phrase *IZI-it* ‘by fire’.

- (36) a. *man=an pahhuwenanza arha warnuzi*
 IRR=3SG.ACC fire.ERG away make.burn.PRS.3SG
 “May the fire burn him (completely).” (KBo 32.14 ii 6-7, MH/MS)
- b. *KUR-iyas A.ŠÀ kuras IZI-it warnutari*
 land.GEN field field.NOM fire.INST make.burn.PRS.3SG.MID
 “(When a star falls down from the sky), the field of the land will be burnt by fire.”
 (KUB 8.25 i 8-9, NS)

Verb based on adjectives offer a more varied picture. When they occur with the particle =*za*, they can have a reflexive interpretation. A case in point is the verb *dasnu-ta(ri)* ‘make oneself strong’, as already shown in example (20). Without the particle =*za*, both a passive and an anticausative interpretation are in principle conceivable, but the former remains more likely, as for *zaluksnu-tari* ‘be delayed, be(come) late’ in (37) (see Part Two for discussion).

- (37) a. [*ANA* ^dUTU-SI=*kan* LUG]AL-*iznani asatar kuit zalukanumen*
 to my.majesty=PTC kingship.DAT sit.VB because delay.PST.1PL
 “Because we have postponed the accession to kingship for His majesty.” (KUB 18.36
 12, NH/NS)
- b. *māhhann=a GU₄^{HI.A} zalkanuntar[i]*
 when=CONJ bull(PL) delay.PRS.3PL.MID
 “And when the cattle are late.” (KUB 13.1+ iv 37-39, MH/MS)

As the data presented here and in Part Two shows, with derived *nu*-verbs the middle voice operates as a valency reducing device and is associated with different functions. However, its distribution is not entirely random. To begin with, a reflexive interpretation is so far attested only in contexts in which middle forms of the verb co-occur with the particle =*za*. Moreover, when the suffix derives transitive verbs out of intransitive ones, the middle voice seems to be restricted to encoding the passive voice, and is never associated with the anticausative function. This distribution is unsurprising, for two reasons. First, as an anticausative function of these form would be relatively redundant, given that the base intransitive verb already encodes the corresponding spontaneous change-of-state/stative event. Second, and more importantly, as Luraghi (2010a: 147-148) observes,

since the suffix is strongly associated with the semantic feature of control, it follows that suffixed verbs can hardly denote uncontrolled i.e. spontaneous events. It appears thus that the semantics of the suffix partly constrains the possible polyfunctionality of the middle inflection.

This distribution results in a threefold pattern in which the base verb indicates the plain event, the active derived verb its induced counterpart, and the middle derived verb the passive counterpart of the latter. This is best exemplified by the triplet *ur-^{āri}* ‘burn (intr.)’/*warnu-^{zi}* ‘burn (tr.)’/*warnu-^{tari}* ‘be burned’.³²

When no intransitive verb base is available, as in the case of deadjectival verbs, middle forms are ambiguous between an anticausative and a passive reading. Note that in the former function, middle forms of deadjectival *nu*-verbs, as well as those of *ahh*-verbs (see sec. 2.3.3), compete with derived ‘fientive’ *ēss*-verbs. The suffix *-ēss-* is a derivational morpheme that is mostly suffixed to adjectives to form verbs with the meaning “to become what the adjective signifies” (Hoffner & Melchert 2008: 177).³³ For example, based on the adjective *idalu-* ‘evil, bad’ one finds the corresponding verb *idalawēss-* ‘become evil’. Even though this suffix is often described as deadjectival (Hoffner & Melchert 2008: 177), to a lower extent it also attaches to nouns and verbs (Watkins 1971: 71, Kloekhorst 2008: 255), as in e.g. *saknēss-* ‘become impure’ form *sakkar* ‘excrement’ and *hatēss-* ‘become dry’ from *hāt-ⁱ* ‘dry up’.³⁴

³² Similar patterns of interaction between causative formations and middle morphology have been observed in other IE languages. For instance, middle forms of causative verbs are attested in Tocharian. Notably, these forms all have a variety of functions typically associated with the middle voice, such as the encoding of reflexivity and of the passive voice, but are never used with anticausative meaning (see the thorough discussion in Seržant 2014: 63-72; see Malzahn 2010 Chap: 5 for an overview the middle voice in Tocharian).

³³ According to Watkins (1971: 71), the Hittite suffix goes back to the combination of the stative suffix **-eh₁-*, sporadically attested in Hittite ‘stative’ verbs such as *miyahunte-* ‘be(come old)’ form *miyawant-* ‘old’ (cf. Hoffner & Melchert 2008: 177), with the inchoative suffix **-s-*, with assimilation **-Vh₁sV > -VssV-* (Melchert 1994: 78). Alternatively, as pointed out by Kloekhorst (2008: 256), in order to better explain the consistent geminate *-ss-* spelling of the Hittite suffix, one could reconstruct it as going back to the combination of **-eh₁-* and the ‘imperfective’ suffix **-sh₁-*, attested in Hittite as *-ss(a)-*. If the latter scenario is correct, Hittite *-ēss-* < **-eh₁-sh₁-* would be etymologically parallel and functionally equivalent to the Latin inchoative suffix *-ēsc-* found in e.g. *rub-esc-ō* ‘become red’ from < **-eh₁-skē/o-* (on the Latin *-scō* verbs see Haverling 2000).

³⁴ Whereas with adjective and nouns, which encode stative predications, the suffix productively derives verbs that indicate a change-of-state, the existence of deverbal forms is rather puzzling. When based on verbs, the verb base and the derived form tend to overlap in syntax and semantics, as both indicate a change-of-state event. For instance, the verb *miēss-* is identical in meaning and syntax to its base *mai-ⁱ* ‘grow’. Since a systematic study of deverbal *ēss*-verbs is yet to be provided, I will not pursue the matter further here.

As discussed by Luraghi (2012: 7-8, 22-23), from a functional standpoint *ēss*-verbs constitute the intransitive counterpart of factitive transitive *ahh*-verbs (and to a lesser extent of *nu*-verbs): when based on adjectives, the former indicate a spontaneous change-of-state event, whereas the latter indicate the induced two-participant corresponding one. As an example of such three-fold pattern consider the pair *idalawahh*- ‘harm, injure’ and *idalawess*- ‘become evil’ from the base adjective *idalu* ‘evil’.³⁵ Notably, middle forms of deadjectival *ahh*- and *nu*-verbs with anticausative reading partly overlap with active *ēss*-verbs. For example, middle forms of *nakkiyahh*-^{ta(ri)} are virtually identical to the verb *nakkēss*-^{zi} ‘become difficult, important’, both derived from the adjective *nakkī*- ‘difficult, important’. In this respect, *ēss*-verbs and the middle voice constitute competing strategies in the encoding of the anticausative alternation, and the higher productivity of *ēss*-verbs can be seen as one of the reasons behind the limited distribution of intransitivizing middle forms of *ahh*- and *nu*-verbs.

Evidence from *nin*-infixes is even more restricted, and should be therefore taken with care. As already mentioned, the infix is not productive, and only occurs with the following predicates: *harni(n)k*-^{zi} ‘make disappear’, *huni(n)k*-^{zi} ‘bash’, *istarni(n)k*-^{zi} ‘afflict’, *nini(n)k*-^{zi} ‘mobilize’ and *sarni(n)k*-^{zi} ‘compensate’ (Kloekhorst 2008: 152, Covini 2017: 30-32). Among these, only for the first three an intransitive base is available, whereas the latter two synchronically lack non-infixes counterparts. Middle forms are attested only for *istarni(n)k*-^{zi}, *nini(n)k*-^{zi}, and *huni(n)k*-^{zi}, as reported in Table 25.

Table 25: Verbs with nasal infix in the middle voice

Base verb	Active	Middle
IN ORIGINALS		
<i>istark</i> - ^{zi} ‘fall ill’	<i>istarni(n)k</i> - ^{zi} ‘afflict’	<i>istarni(n)k</i> - ^{tari} ‘become ill’
-	<i>nini(n)k</i> - ^{zi} ‘mobilize (tr.)’	<i>nini(n)k</i> - ^{tari} ‘mobilize (intr.)’
IN COPIES		
<i>huek</i> - ^{zi} ‘slaughter’	<i>hunink</i> - ^{zi} ‘batter, crack (tr.)’	<i>hunink</i> - ^{tari} ‘crack (intr.)’

³⁵ Similar patterns of interrelated derivational verbal forms based on adjectives are well-known in ancient IE languages, and go under the name of Caland-system(s). See Rau (2009: 112-113 on Hittite and esp. Chap. 3 on the morphological properties of the system, 2013) and Dell’Oro (2015) for extensive discussion with further references.

With all three *nin*-infix verbs, the middle voice operates as a valency decreasing device, mostly connected with anticausative alternation. As an example, consider the behavior of *nini(n)k^{-zi}* in example (38).

- (38) a. [*n=a*]t ***nininkun***
 CONN=3PL.ACC mobilize.PST.1SG
 “(The armies that were with me), I set them in motion.” (KUB 19.37 iii 8-9, NH/NS)
- b. *nu* *mān* ^{LÚ}KÚR *kuiski* ***niniktari*** *n=as*
 CONN if enemy INDF.NOM mobilize.PRS.3SG.MID CONN=3SG.NOM
apēdas ANA ZAG^{HL.A} GUL-*ahhuwanzi* *paizzi*
 DEM.DAT.PL to border(PL) strike.INF go.PRS.3SG
 “If some enemy mobilizes and goes to attack these borders.” (FHL 57+ iii 46-47, NH/NS)

In (38)a, the active form is used transitively, as shown by the accusative object clitic pronoun =*at*, and indicates an induced event, ensuing from its causative formation. By contrast, (38)b the middle form *niniktari* is intransitive and denotes a spontaneous change-of-state event. The same pattern also applies to the other verbs in Table 25.

The anticausative function of the middle voice with *nin*-derivatives is apparently in contrast with the observation that deverbal *nu*-verbs are almost never anticausative in function, but predominantly passive and/or reflexive. This difference can be explained by taking into account the different relationship between the derived verb and its base in the two cases. With deverbal *nu*-verbs, one often finds an intransitive base verb alongside a transitive derived verb. In this case, the base verb already provides the plain counterpart of the anticausative alternation (and the pattern can be described in terms of overt transitivization, see Luraghi 2012: 7-8), so that there is no need for middle forms of the causative verb with anticausative function. By contrast, *nin*-infix verbs do not have a simple base verb that can encode a spontaneous event, and therefore rely on the middle voice for the encoding of the anticausative alternation. This is clearly the case of *nini(n)k^{-zi}*, for which a corresponding verb base does not synchronically exist (but is historically attested in the etymologically related OCS verb *vъz-nikъ* ‘they raised themselves’).

For the other two verbs, the picture is slightly more complex. In the case of *istarni(n)k^{-zi}*, an intransitive base verb does exist, i.e. *istark^{-zi}*, but forms of *istark^{-zi}* and middle forms of *istarni(n)k^{-zi}* even though semantically equivalent still differ in their syntax, as the former is almost invariably used impersonally with the Patient in the accusative case whereas the latter is used in a personal

construction with a nominative subject (see Part Two under the two lemmas for a thorough discussion). As for *hunink^{-zi}* ‘batter, crack (tr.)’, its verb base is already transitive in syntax and semantics (note that active *huek^{-zi}* ‘injure, batter’ also shows a middle counterpart with (a possibly lexicalized) passive meaning *hūkanta* ‘are slaughtered’² KUB 55.28 iii 12 MH/NS), so that it cannot serve as the plain member in the anticausative alternation (it still remains unclear why with this verb one fails to detect a meaningful contribution of the suffix *-nin-*, which shows no signs of causativity, cf. *HED s.v.*, Kloekhorst 2008 *s.v.*, Covini 2017: 31).

Note that the primary anticausative function of the middle voice with *nin-*derived verbs also easily explains why middle forms of *harni(n)k^{-zi}* and *sarni(n)k^{-zi}* are not attested. The former is derived from the intransitive verb *hark^{-zi}* ‘perish’, which encodes a spontaneous change-of-state event and therefore supplies for the lack of middle forms of *harni(n)k^{-zi}*. The latter, given its lexical meaning, is not an eligible candidate to enter anticausative alternation.

To sum up, the evidence discussed in this section shows that *nu-*suffixed and *nin-*infixes verbs display a functionally motivated voice opposition and that with these verbs the middle voice operates as a valency reducing device. However, differences can be detected between the two groups. Whereas with the former the middle voice is predominantly associated with the encoding of passive function, in the case of the latter group different functions are available, partly depending on the features of the lexical bases from which these verbs are derived.

2.3.3. ‘Factitive’ verbs in *-ahh-*

The derivational suffix *-ahh-* is predominantly used with adjectival and numeral bases as a means of deriving verbs that indicate “to make something what the adjective or numeral denotes” (Hoffner & Melchert 2008: 175). I follow here reference grammars in labelling the suffix as *factitive*. As an example of the most productive pattern with adjectival stems consider the pair *nēwa-* ‘new (adj.)’ > *newahh-* ‘renew’ (see Oettinger 1979: 239-54, Kloekhorst 2008: 149-150, Hoffner & Melchert 2008: 176 and further references). Notably, the suffix never applies to verbal stems, and is used with nouns as a base form only in a handful of cases, e.g. ÌR (c.) ‘slave’ > ÌR-(*n*)*ahh-* ‘enslave’, *siuni-* (c.) ‘goddess’ > *siuniyahh-* ‘be hit by a disease (through a god)’, *luri-* (c., n.) ‘loss’ > *luriyahh-* ‘put down’, *ishiul-* (n.) ‘binding, treaty’ > *ishiuahh-* ‘bind by treaty’. As pointed out by Kloekhorst (2008: 149), derived *ahh-*verbs consistently follows the *-hi* inflection and fail to show ablaut (*mi-*inflected forms are a sporadic NH innovation, cf. Jasanoff 2003: 139, Kloekhorst 2008: 164).

The semantic and formal match between Hitt. *newahh-* and Lat. *novāre* ‘renew’ (to which Gr. *neāō* ‘plough up anew’ and OHG *niuwōn* can be added) clearly points to a PIE origin of the suffix as **-eh₂-* (Watkins 1971: 54-55, Jasanoff 2003: 139ff., Kloekhorst 2008: 164). Historically, *ahh-*

derivatives were originally available to thematic adjectives only, and later extended to other bases (Oettinger 1979: 240). Other adjectival bases formed their factitive verbal counterpart via *nu*-suffixation (see sec. 2.3.2).

As discussed by Luraghi (2012: 8), *ahh*-suffixation can be described as a transitivity strategy, whereby induced two-place predicates are derived from (stative) adjectival roots. Being transitive, derived *ahh*-verbs unsurprisingly mostly occur in the active voice. Middle forms of *ahh*-verbs are limited to a handful of verbs: out of 57 *ahh*-verbs listed by Kloekhorst (2008: 149-150), only 13 verbs attest to middle forms (data from Neu 1968a), either in original texts (Table 26) or in copies (Table 27).

Table 26: Factitive *ahh*-verbs with middle inflection in originals

Nominal base	Derived <i>-ahh-</i> verb	Active	Middle
İR ‘slave’	İR-(n) <i>ahh</i> ⁻ⁱ	‘enslave’	‘become servant’
* <i>isi-</i> (?)	<i>isiyahh</i> ⁻ⁱ	‘reveal, denounce’	‘be revealed, appear’
<i>mehuwant-</i> ‘old’	<i>mehuwandahh</i> ⁻ⁱ , <i>miyahuwantahh</i> ⁻ⁱ	‘make old’	‘grow old’
<i>suppi-</i> ‘pure’	<i>suppiyahh</i> ⁻ⁱ	‘purify’	‘purify oneself (with =za)’

Table 27: Factitive *ahh*-verbs with middle inflection in copies

Nominal base	<i>ahh-</i> verb	Active	Middle
<i>alwanz-</i> ‘bewitched’	<i>alwanzahh</i> ⁻ⁱ	‘bewitch’	‘be enchanted’ ³⁶
<i>hāhhall-</i> ‘greenery’	<i>hahlahh</i> ⁻ⁱ	‘make green’ (only - <i>ske/a-</i>)	‘become green’ (only - <i>ske/a-</i>)
<i>isharwant-</i> ‘bloody’	<i>ēsharwahh</i> ⁻ⁱ	‘make blood-dark’	‘become blood-dark’ (only - <i>ske/a-</i>)
<i>ināra-</i> (stem) ‘vigor’	<i>innarahh</i> ⁻ⁱ	‘make strong’	‘become strong’
<i>kuliu-</i> ‘flowing; calm’ ³⁷	<i>kuleyawahh</i> ^{-tta(ri)}	-	‘become calm (?)’

³⁶ This reading is based on two forms read as UH-*ha-ti* (= *alwanzahhati*, VBoT 58 iv 4,5) by Neu (1968a: 3), who translates the verb as ‘vezaubert war’. However, the interpretation of this passage is disputed, as the reading of the Sumerogram UH is far from certain (see the recent edition by Rieken *et al.*, hethiter.net/: CTH 323.1 (TX 2009-08-26, TRde 2009-08-26) for discussion with further references)

³⁷ The interpretation of this adjective and its derivatives is not entirely clear: see Neu (1968a: 100-101) and HED *s. ku(wa)liya-* for discussion.

* <i>man(iya)-</i> (?)	<i>maniyahh-ⁱ</i>	‘distribute’	ʔ ³⁸
<i>nakkī-</i> ‘difficult’	<i>nakkiyahh-^{ta(ri)}</i>	-	‘become difficult, important’
<i>sāgai-</i> ‘sign’	<i>sakiyahh-ⁱ</i>	‘give a sign’	‘be indicated through oracle’
<i>sūni-</i> ‘god’	<i>siunniyahh-^{ta(ri)}</i>	-	‘be hit by a disease (through a god)’
<i>tamāi-</i> ‘other, second’	<i>damiummahh-^{ta(ri)}</i>	-	‘change (lit. become other)’
<i>dankui-</i> ‘black’	<i>dankuwahh-ⁱ</i>	‘make black’	‘become black’ (only <i>-ske/a-</i>)

As discussed in Part Two under the individual lemma, the middle voice of *ahh*-verbs can be variously interpreted (see further Neu 1968b: 84-85). As an illustration, consider the behavior of the verbs *mehuwandahh-ⁱ* ‘make old’, *isiyahh-ⁱ* ‘reveal’, and *suppiyahh-ⁱ* ‘purify’ in examples (39) to (41):

- (39) a. [*kuin* LÚ-*a*]*n* LÚŠU.GI-*ahta*
REL.ACC man.ACC make.old.PST.2SG
“Which man you made old.” (KUB 24.7 ii 3, NH/NS)
- b. *nu=kan ANA ŠU* DUTU-ŠI *assuli mihuntahhut*
CONN=PTC to hand my.majesty good.DAT make.old.IMP.2SG.MID
“And under the good hand of my Majesty you shall grow old.” (KBo 4.10 ii 11, NH/NS)
- (40) a. *s=an* LÚ URU*Huntarā isiyahhis*
CONN=3SG.ACC man H. reveal.PST.3SG
“(Nunnu, the royal representative of the city of Hurma [...] did not deliver the silver and the gold [...]) and the man of Huntara denounced him.” (KUB 36.104 i 11, OH/OS)
- b. *nasma=at=si IŠTU SU^{MEŠ} [nasm(a IŠTU)] MUŠEN^{HIA}*
or=3SG.NOM.N=3SG.DAT by flesh.oracle(PL) or by bird.oracle(PL)
isiyahtari
reveal.PRS.3SG.MID
“Or (if) this is revealed by flesh-oracles or bird-oracles.” (KBo 15.11 iv 7, NS)
- (41) a. *nu* LUGAL-*u[(n su)]p[(piya)hhi]*

³⁸ The verb is attested in the middle voice twice in the same text (*ma-ni-ya-ah-ta-ri* KUB 36.32, 1; *ma-ni-ya-ah-hi-is-ki-it-ta-ri* KUB 36.32, 3) but the context is too fragmentary to allow an interpretation (Neu 1968a: 112).

CONN king.ACC purify.PRS.1SG

“And he purifies the king.” (KBo 17.11+ i 40, OH/OS)

b. LUGAL=*us=za* *suppiyahhati*

king.NOM=REFL purify.PST.3SG.MID

“The king has purified himself.” (KBo 25.112 ii 14, OH/OS)

As examples (39) to (41) show, active forms of the verbs *mehuwandahh*⁻ⁱ ‘make old’, *isiyahh*⁻ⁱ ‘reveal’, and *suppiyahh*⁻ⁱ ‘purify’ are used in a transitive construction with an accusative direct object, and indicate an induced change of state in the Patient participant. By contrast, oppositional middle forms of these verbs display intransitive syntax, as the occurrence of the clitic subject =*at* in (40) shows. Semantically, the interpretation of these verbs is different. As shown in (39), the middle voice operates as an anticausative marker with the verb *mehuwandahh*⁻ⁱ: active forms of the verb refer to an externally induced event, whereas middle forms indicate an uncontrolled change-of-state event ‘growing old’ undergone by the subject participant. The fact that middle forms with anticausative functions are attested only for a sub-set of *ahh*-verbs can be partly explained as a consequence of the fact that intransitive counterparts encoding spontaneous change-of-state events could also be provided by *ēss*-derivative fientive verbs, similarly to what discussed for *-nu*- factitive verbs (see sec. 2.3.2; cf. Luraghi 2012: 22-23 for a description of this pattern).

Similarly, middle forms of *isiyahh*⁻ⁱ ‘reveal’ can also have the inchoative reading ‘appear’. However, with this verb middle forms can also be shown to have a passive meaning ‘be announced’, as in example (40)b, in which a passive reading is further suggested by the occurrence of the agent phrases introduced by *IŠTU*. Finally, the oppositional middle of *suppiyahh*⁻ⁱ, reinforced by the particle =*za*, has a reflexive interpretation, as in example (41)b.

As the evidence discussed in this section shows, the behavior of the middle voice with *ahh*-derived verbs is consistent with the behavior of base verbs that show a meaningful active vs. middle voice opposition. The middle voice operates as a valency reducing device, and shows different interpretations depending on the meaning of the base verb and on the context.

2.3.4. Verbs in *-ske/a-*

As discussed in Chap. 1 sec. 1.5.1.3, Hittite features a deverbal suffix *-ske/a-* that roughly covers the range of functions associated with pluractionality, i.e. imperfective, habitual, iterative, distributive (Inglese & Mattioli forthc.). As such, the suffix freely occurs with transitive and intransitive predicates, and is only constrained by the fact that it is semantically incompatible with stative predicates. Transitive verbs that bear the suffix *-ske/a-* can occur either in the active and in the middle

voice, and in this case voice alternation of derived verbs mirrors the alternation of the base verb. In other words, the suffix does not interact with the selection of the verb's voice. As an example, consider the comparable behavior of *nai*⁻ⁱ 'turn' in (42) and its derivative *naiske/a-* in (43).

- (42) a. *n=asta* ^{Giš}*hulugannin* EGIR-*pa* ***neyanzi***
 CONN=PTC cart.ACC back turn.PRS.3PL
 "And they turn the cart back." (IBoT 1.36 iii 68, MH/MS)
- b. ^{LÚ.MEŠ}*HÚB.BÍ* ***nēanda***
 dancer(PL) turn.PRS.3PL.MID
 "The dancers turn around." (KBo 17.9+ 12 ii 29, OH/OS)
- (43) a. *n=an=kan* ^m*Sunassuras* EGIR-*ann=a* *arha lē* ***naiskisi***
 CONN=3SG.ACC=PTC S.NOM back=CONJ away NEG turn-IPFV-PRS.2SG
 "You, Sunassura, must not make it turn away from following (me)." (KUB 8.81 ii 8-9, MH/MS)
- b. *n=asta* *apās* ^{LÚ}*KÚR* *kuwapi* ***naiskittari***
 CONN=PTC DEM.NOM enemy wherever turn-IPFV-PRS.3SG.MID
 "Where that enemy is heading (lit. turning), (write it to me)." (HKM 27 obv. 8, MH/MS)

As the passages in (42) and (43) show, base and *ske/a-* derived forms of the verb *nai*⁻ⁱ 'turn' occur both in the active and in the middle voice. In both cases, the middle voice operates as a valency reducing device with anticausative function, irrespective of the occurrence of the *-ske/a-* suffix, whose contribution has only to do with the aspectual construal of the verb.

The behavior of intransitive verbs sharply contrasts with what discussed so far. Already Watkins (1969: 72), who focused on the verbs *pai-* 'go' and *uwa-* 'come', recognized the existence of a class of intransitive Hittite verbs that inflect in the active voice in their base form but systematically require middle endings in their *-ske/a-* derivatives. In this case, the middle voice adds no noticeable functional contribution, as comparison between (44)a-b shows.

- (44) a. *ta* DUMU^{MEŠ}-*an* *parna* ***paimi***
 CONN son.GEN.PL house.ALL go.PRS.1SG
 "And I go to the house of the sons." (KBo 17.1+ iv 11, OH/OS)
- b. *karū=ma* *É* DUMU^{MEŠ}-*an* ***paiskahat***
 already=PTC house son.GEN.PL go-IMPf-PST.1SG.MID

“But earlier he used to go to the house of the sons.” (KBo 17.1+ iv 13, OH/OS)

This pattern is not limited to the verbs *pai-* ‘go’ and *uwa-* ‘come’, and is documented for a small number of active intransitive verbs in original texts and in copies reported in Table 28.³⁹

Table 28: Intransitive middle *-ske/a-* verbs

Base verb	Derived <i>-ske/a-</i> verb
IN ORIGINALS	
<i>āk-ⁱ</i> ‘die’	<i>akkiske/a-^{ta(ri)}</i>
<i>pai-^{zi}</i> ‘go’	<i>paiske/a-^{ta(ri)}</i>
<i>uwa-^{zi}</i> ‘come’	<i>uwaske/a-^{ta(ri)}</i>
IN COPIES	
<i>ses-^{zi}</i> ‘(go to) sleep’	<i>seske-^{ta(ri)}40</i>
<i>uliliye/a-^{zi}</i> ‘grow (intr.)’	<i>uliliyeske/a-^{ta(ri)}</i>
<i>ulae-^{zi}</i> ‘hide (intr.)’	<i>ulliske/a-^{ta(ri)}</i>

The same pattern is also widely attested for derived *ēss*-verbs, as pointed out by Neu (1968b: 86-87). With respect to voice selection, *ēss*-derived verbs are generally *activa tantum*: they consistently take *mi*-endings and never show ablaut.⁴¹ Syntactically, they are intransitive of the unaccusative type (cf. Garrett 1996: 94). Since they encode one-participant change-of-state events, it is unsurprising that they lack an oppositional middle voice. However, as already observed by Neu (1968b: 88-89), *ēss*-verbs systematically show middle inflection in their derived *-ske/a-* stem. A list of the verbs that display this behavior is given in Table 29 (data from Neu 1968a, Melchert 2017b: 480-481). Similarly to what discussed above for middle *-ske/a-* verb derived from underived active intransitives, middle *-ske/a-* forms of derived *ēss*-verbs display the same syntax and semantics of their corresponding

³⁹ Hoffner & Melchert (2008: 233) give a fairly long list of verbs that occur only in the middle voice in the derived *-ske/a-* stem. However, a distinction should be made between those active intransitive verbs that occur in the middle voice only in the *-ske/a-* stem, as discussed in this section, and those verbs whose occurrence only in the *-ske/a-* stem is merely accidental, as they are either *media tantum* or display a functionally motivated pattern of voice alternation.

⁴⁰ Beside middle forms of *seske-^{ta(ri)}*, the verb also occurs in the hypercharacterized stem *seskeske-* in the active voice. As discussed by Melchert (2017b: 482), active and middle forms partly differ in their semantics, the former being associated with the change-of-state reading ‘go to sleep’, the latter being associated with the stative meaning ‘sleep’.

⁴¹ The only exception is the verb *ishanallēss-^{ta(ri)}* ‘become a murderer’, which thus far is only attested in the middle voice in the same text (KBo 50.44, NS).

active base verbs (when available). As a consequence, one fails to detect a meaningful contribution of the middle voice with these verbs.

Table 29: Fientive *-ēss-ske/a-* verbs attested with middle inflection

Nominal base	Derived <i>-ēss-</i> verb
IN ORIGINAL TEXTS	
<i>asiwant-</i> ‘poor’	<i>asiwantēss-^{zi}</i> ‘become poor’
<i>idalu-</i> ‘evil’	<i>idalawēss-^{zi}</i> ‘become evil’
<i>kallar-</i> ‘inauspicious’	<i>kallarēss-^{zi}</i> ‘become inauspicious’
<i>nakkī-</i> ‘difficult, important’	<i>nakkēss-^{zi}</i> ‘become important’ ⁴²
IN COPIES	
<i>marlant-</i> ‘fool, dumb’	<i>marlēss-^{zi}</i> ‘become foolish’
<i>mekki-</i> ‘much’	<i>makēss-^{zi}</i> ‘become much’
<i>palhi-</i> ‘wide, broad’	<i>palhēss-^{zi}</i> ‘become wide’
<i>parku-</i> ‘high’	<i>pargawēss-^{zi}</i> ‘become tall’
<i>parku-</i> ‘high’	<i>parkēss-^{zi}</i> ‘become tall’
<i>tēpu-</i> ‘less, little’	<i>tepawēss-^{zi}</i> ‘become small, less’

It should be observed that the pattern whereby middle *-ske/a-* verbs are issued out of underived and on *-ēss-* base verbs undergoes changes over time. As observed by Melchert (2017b; see discussion under the individual lemma in Part Two), the pattern is stable and productive in OH, but most of these verbs show a tendency to be transferred to active inflection in NH times. A case in point is *pai-* ‘go’, attested as middle *paiskahat* in OH/OS (KBo 17.1+ iv 13), but also as active *paiskewen* in NH (KUB 18.14 24). The same development underlies the alternation between active and middle forms of *akkiske/a-* ‘die’ in NH texts, as discussed in Part Two, and also involve *-ske/a-* forms of *ēss-* verbs, as alongside middle *kallareskattari* ‘is unfavorable’ (KUB 5.6 iii 18, NH/NS) one also finds active *gal-la-re-es-ki-i[r]* (KUB 5.22 35, NH/LNS).

⁴² As I discuss in Part Two, the verb *nakkēss-^{zi}* regularly inflects in the active voice, with only a single occurrence in the middle voice (*nakkestat* KUB 14.4 iii 25, NH/NS). This middle form is otherwise identical to active forms of the verb (Neu 1968a: 126), and possibly constitutes a later development. Similarly, middle inflection of *miēss-* in the isolated form *mi-es-ha-ti* ‘I grew’ (KUB 30.10 obv. 11), is likely not original and influenced by middle forms of the base verb *mai-ⁱ* ‘grow’.

There is still not agreement on how this pattern came about and how to describe the function of the middle voice with such *-ske/a-* derived verbs. As the critical review in Melchert (2017b) shows, previous accounts are not without problems. Watkins (1969: 72) takes this distribution, as well as the occurrence of middle *-ye/a-* verbs, as evidence for the middle origin of the thematic inflection (see Jasanoff 2003: 224-227), but as Melchert rightly points out (2017b: 477) *-ske/a-* verbs are robustly attested in the active inflection with transitive syntax as early as in OH, as e.g. *akkuske/a-^{zi}* ‘drink (something)’. Neu (1968b: 89) offers a more elaborate explanation. In his view, middle forms of *paiske/a-* and *uwaske/a-* are influenced by a ‘stative’ semantics of the suffix *-ske/a-*, and can be treated as cases of ‘stative middle’, whereas *akkiskeattari* attests to the use of the ‘eventive middle’. Concerning the behavior of *ēss-*verbs, Neu maintains that when these verbs take the iterative suffix *-ske/a-*, the link between the suffix *-ēss-*, which carries some sort of ‘middle semantics’ (i.e. the indication of a spontaneous change of state of the subject participant) and active endings is weakened, and therefore the verb is re-characterized as middle by the insertion of middle endings. As per Melchert (2017b: 478-479), this account is partly inconsistent, as middle inflection is motivated by either its connection with stativity or with the indication of a change-of-state, and remains rather unsatisfactory.

To overcome these difficulties, Melchert (2017b: 482) argues that middle *-ske/a-* verbs were built on active intransitive verbs that can be shown to be syntactically unaccusative, whereas unergative verbs systematically display active *-ske/a-* counterparts. Compare middle *paiskahat*, built on the unaccusative verb *pai-* ‘go’ with active *-ske/a-* forms of the active unergative verb *palwāi-* ‘clap, recite’ (Melchert 2017b: 481). Later on, the distinction was partly blurred by the transfer of middle *-ske/a-* verbs to active inflection, possibly because the marking of unaccusativity had been increasingly connected with the occurrence of clitic subjects, particularly with verbs of motion (cf. Luraghi 2010a). To support his hypothesis, Melchert adds that the contrast detected in OH is fully compatible with similar patterns of voice distribution in Tocharian *-sk-* and *-tk-* intransitives, and this possibly points to a PIE inheritance of the pattern (Melchert 2017b: 482-484). If voice selection of intransitive *-ske/a-* verbs is indeed an inherited feature, originally connected to the indication of unaccusativity, this would explain the lack of synchronic functional motivation of the pattern in Hittite and its eventual demise in NH.

2.4. Lability and voice in Hittite

As discussed in Chap. 1, in typological works the term *lability* is usually employed to describe those verbs whose change in valency does is not paired with a morphological encoding of the alternation (Kulikov & Lavidas 2014: 871). Most often, the term *labile* is used with reference to verbs that can

be used either transitively or intransitively. Based on whether the intransitive verb retains as subject the Agent or the Patient of the corresponding transitive verb, one speaks of A(gent)- or P(atient preserving)-lability, which can be regarded as a type of antipassive and anticausative lability respectively. Lability can also be associated with other valency changing operations, including reflexive, reciprocal, and passive.

In the remainder of this section, I provide an overview of lability patterns in Hittite. Since this work is not devoted to the study of lability in Hittite, I limit my observations to labile verbs and their relationship with the middle voice.⁴³ As first remarked by Luraghi (2010a, 2012), lability constitutes a marginal pattern, and is not a widespread strategy to encode valency change. As a matter of fact, instances of lability are all restricted to MH and NH texts. Among the few labile verbs, the majority is represented by anticausative verbs. This observation is borne out by data gathered in Part Two. Verbs that normally encode the anticausative alternation via active vs. middle voice alternation can occasionally display labile syntax, i.e. P-lability. Notably, two different patterns can be detected, based on whether lability affects either active or middle forms (cf. Luraghi 2012: 16). Anticausative lability of middle forms is instantiated for instance by the verb =za *es*-^{a(ri)}, that can be used both intransitively with the meaning ‘sit’ and transitively with the meaning ‘settle, occupy’, as comparison between example (45)a-b shows:

- (45) a. ^dUTU-ŠI=ma=za=kan ANA ^{GIŠ}GU.ZA ABI=YA *ēshahat*
my.majesty=CONN=REFL=PTC to throne father=1SG.POSS sit.PST.1SG.MID
‘‘I, the sun king, sat down on my father’s throne.’’ (KBo 19.66+ NH/NS)
- b. nu=za ANA PANI ABI ABI=YA *kuis* ^{URU}*Gasgas*
CONN=REFL to front father father=1SG.POSS REL.NOM K.NOM
^{HUR.SAG}*Tarikarimun* GEŠPU-az *esat*
T.ACC force.ABL sit.PST.3SG.MID
‘‘The Kaskean who at the time of my grandfather had seized with force Mount Tarkalmu.’’ (KBo 3.4+ iii 60-61, NH/NS)

⁴³ Lability also affects active verbs. A-lability constitutes a rather widespread phenomenon, whereby active (and transitive deponent) verbs can also be used intransitively without a direct object, as in the case of *ed*-^{zi} ‘eat’ and *pars*(*iyē/a*)-^{a(ri)} ‘break’ (cf. Luraghi 1990: 38). When this is the case, intransitive forms of these verbs consistently display unergative syntax, as they do not require a clitic subject pronoun (Garret 1996: 98). Moreover, P-lability also affects *activa tantum*. A case in point is e.g. the verb *tekussiye/a*-^{zi}, that can be used both transitively and intransitively to refer to an induced event ‘show’ and to a spontaneous event ‘appear’ respectively.

The pattern whereby middle forms are used both intransitively and transitively is not widespread. Beside the case of =za *es*-^{a(ri)}, Luraghi (2012) mentions that lability also affects middle forms of *pars(iye/a)*-^{a(ri)} meaning either ‘break (tr.)’ and ‘break (intr.)’. However, as I discuss in Chap. 3, it is more accurate to describe intransitive middle forms of *pars(iye/a)*-^{a(ri)} as a case of renewed voice alternation, whereby new middle forms with anticausative function were created once the originally deponent verb was partly transferred to active inflection.

Slightly more frequent is the pattern whereby active forms of a verb are the ones attesting to labile syntax. Consider the behavior of the verb *hantae*-^{zi}, that is normally used transitively with the meaning ‘align (tr.)’, as in example (46)a, but can also be employed in an intransitive construction meaning ‘line up (intr.)’, as in (46)b. Beside *hantae*-^{zi}, the same pattern also cover the verbs *nai*-ⁱ ‘turn (tr./intr.)’ and *warsiye/a*-^{zi} ‘appease (one’s soul), be appeased’.⁴⁴

- (46) a. LÚ^{GIŠ} BANSUR^{NINDA} *zippulasne* ^{GIŠ} *arimpi* ***hantāizzi***
 man table z.bread(N).ACC a.vase.DAT align.PRS.3SG

“The table attendant aligns the *zippulasne*-bread with the *arimpa*-vase.” (KUB 29.3 obv. 9 OH/OS)

- b. *nu=smas=kan* *apē* ***handanzi***
 CONN=3PL.DAT=PTC DEM.NOM.PL align.PRS.3PL

“But if the mayor or the chief of the military heralds is present, then they line up with them.” (IBoT 1.36 iii 47, MH/MS)

The two patterns can also be combined. This combination is extremely rare, and to my knowledge is attested for the verb *park(iy/a)*-^{zi} ‘raise’ only. With this verb, one finds both active and middle forms used either transitively or intransitively, so that synchronically “there appears to be no correlation between voice and transitivity” (CHD P: 157).

Other types of lability are less commonly attested. Reciprocal lability can partly affect *activa* and *media tantum*, as in the case of *assiyē/a*-^{tt(a(ri))} ‘be loved, love each other’ and *idalawēss*-^{zi} ‘become evil, have a falling out (lit. become evil at each other)’ (see Inglese 2017: 969, 979 for a detailed discussion). Reflexive and passive lability is not attested at all. Alleged labile use of deponent verbs with passive function, as e.g. *tuhs*-^{a(ri)} ‘cut, be cut’, should be explained as the outcome of the creation

⁴⁴ According to Luraghi (2012: 19), lability is also at play with middle forms of *nē*-^{a(ri)} ‘turn (intr.)’. As discussed in Part Two, evidence for a transitive use of forms of *nē*-^{a(ri)} is rather scanty, as most alleged case of transitive use can be better explained otherwise, so that all the evidence boils down to a handful of NH occurrences.

of new passive forms based on the transfer of transitive *media tantum* to the active voice, as discussed in Chap. 3 (sec. 3.2.3).

Overall, the Hittite data points to anticausative lability as being the most common pattern, and this complies with the distribution detected by Letuchyi (2009), whereby anticausative lability is cross-linguistically more frequent than other types of labile syntax. As Letuchyi (2009: 228-229) points out, P-lability does not occur randomly. Instead, its occurrence in the languages of the world is accounted for by at least two-distinct parameters, i.e. spontaneity of the event and affectedness of the Patient. For instance, whereas P-labile verbs in French are the ones that encode events most likely to occur spontaneously, in Lezgian lability is primarily connected to destruction verb associated with a highly affected Patient. If one tries to apply these parameters to Hittite, the results are however rather inconclusive, since the amount of labile verbs is too small to draw any significant generalization.

A final note is in order on the relationship between lability and other means of encoding the anticausative alternation in Hittite. As discussed by Letuchyi (2009: 229-237), if lability and overt anticausative markers coexist in a given language, they either stand in complementary distribution with respect to the verbs that they apply to, or they show an overlap and apply to the same verbal bases. In the latter case, one can still detect various semantic distinctions between the labile form and the use of a derivational anticausative marker (Letuchyi 2009: 233). As an example, Letuchyi mentions the German verb *hinunterstürzen* ‘turn over’, which occur intransitively either in its simple form or with the ‘reflexive’ pronoun *sich*. The two forms are however not entirely synonymous: whereas simple *hinunterstürzen* always encode an uncontrolled event ‘fall’, the combination *sich hinunterstürzen* can also have an autocausative meaning, i.e. it expresses an event volitionally initiated by the Agent.

A look at our data shows that Hittite falls within the second group, since lability systematically co-exists with voice alternation in the encoding of the anticausative alternation. Remarkably, despite Letuchyi’s prediction that “intransitive uses of labile verbs are not fully synonymous with morphological [anti]causatives” (2009: 233), in Hittite one fails to detect any noticeable semantic distinction between active labile forms and their middle equivalent, which are entirely synonymous. It is still interesting to observe that P-lability seems restricted to verb pairs that normally encode the alternation via voice alternation. Intransitive verbs that build their transitive causative counterpart via suffixation never show lability, i.e. they are never used transitively. This distribution points to a special connection of lability with voice.

To sum up, lability in Hittite constitute a marginal and recent pattern, mostly connected with the encoding of the anticausative alternation, in which it overlaps with the use of the middle voice as an

intransitivizing marker. Synchronically, one fails to detect any principled motivation for the use of labiality, also owing to the extreme scarcity of the data.

2.5. The middle voice in Hittite: towards a unified synchronic description?

In the course of this chapter, I have described the various functions of the middle voice from a strictly synchronic perspective, based on a thorough analysis of middle verbs attested in original texts and in copies. In doing so, I have abandoned Neu's earlier classification of middle verbs into stative, process, and activity middle, and I have proposed a different classification. In particular, I have distinguished two main groups, that is, non-oppositional, i.e. *media tantum*, and oppositional verbs. Moreover, I have dedicated a separate discussion to the interplay between verbal voice and various derivational suffixes. In this section, I recapitulate the findings of this chapter and address the issue whether the complexity of the data collected can be reduced to one or more underlying functional motivations, or in other words, whether the middle voice in Hittite can be synchronically analyzed as a uniform phenomenon.

Based on the data presented in this chapter, the following picture emerges regarding the distribution of the middle voice from a purely synchronic standpoint. Hittite presents a fairly large group of verbs that only occur in the middle voice, i.e. *media tantum*. Once problematic verbs have been sifted out, i.e. deponents and verbs that freely alternate between active and middle voice, one remains with a consistent group of original *media tantum*. With these predicates, the common assumption is that the middle voice is lexically determined by the semantic features of the base verbs. Even though disagreement exists as to which semantic feature should be regarded as the driving factor for the occurrence of the middle voice with these verbs, as discussed in sec. 2.2.1.1, the core of the Hittite *media tantum* indeed share a number of common features: they are used intransitively, display unaccusative syntax, and they indicate either a state or a spontaneous change of state undergone by the subject participant. To these, as remarked in sec. 2.3.1, one can add a number of denominal verbs in *-iye/a-* that also have an alternating stative/dynamic aspectual construal and display unaccusative syntax. Notably, none of these features alone is capable of accounting for the distribution of the middle voice with all of the *media tantum* in a straightforward way. Semantically, non-oppositional verbs largely fall within the classes established by Kemmer (1993), and include motion verb, verbs of position and change of body posture, and verbs that indicate spontaneous events, the latter group being by far the most representative in terms of type frequency.

With oppositional middle verbs, i.e. those opposed to active counterparts, the middle voice operates as a marker of various valency decreasing operations. Depending on the features of the base verb, and also on different contextual cues, middle forms can be shown to have anticausative, passive,

reflexive, and reciprocal function. In spite of the semantic differences among the various operations discussed in sec. 2.2.2, it should be remarked that they all share a core syntactic feature: the middle voice operates as an intransitivizing device, and intransitive oppositional middle forms invariably display unaccusative syntax. Compare the examples in (47), in which intransitive oppositional middle forms of active transitive verbs all occur with subject enclitic pronouns irrespective of their specific function.

(47) a. ANTICAUSATIVE

ped[e]=ssi=ya=at=kan *lē niniktar[i]*
 place.DAT=3SG.POSS.DAT=CONJ=3SG.NOM.N=PTC NEG mobilize.PRS.3SG.MID

“(Behold, I have fixed in place the king’s oath, curse, blood and tears [...]) let it not come loose in its place.” (KBo 24.4+ rev. 7-10, NS)

b. PASSIVE

n=at; *wemiya[t]taru*
 CONN=3SG.ACC.N find.PRS.3SG.MID

“(And the reason for which people die,) it should be found out!” (KUB 14.10 iv 19, NH/NS)

c. REFLEXIVE

n=as=za *munnaittat*
 CONN=3SG.NOM=REFL hide.PST.3SG.MID

“(When Anu finished talking, he went up to the sky,) and hid himself.” (KUB 33.120 i 38, MH/NS)

d. RECIPROCAL

nu=war=at=za=kan *sāntati*
 CONN=QUOT=3PL.NOM=REFL=PTC become.angry.PST.3PL.MID

“They became angry at each other.” (KUB 12.26 ii 1-3, NS)

The various functions of oppositional middles are not equally distributed, as shown in Table 30. Combining evidence from verbs attested in original and copies, it turns out that the function mostly associated with the middle voice is the passive. This partly contradicts the common view that the passive voice is only marginally associated with the middle voice (Hoffner & Melchert 2008: 303, Luraghi 2012: 20). The second largest group is constituted by verbs that are used in anticausative function, whereas the reflexive and the reciprocal functions remain significantly marginal. Note that

this is the picture that emerges if one considers together evidence from OH, MH, and NH. As I discuss in Chap. 3, a closer look at each historical stage unveils a partly different scenario.

Table 30: Functions of oppositional middle verbs⁴⁵

	Anticausative	Anticausative/Passive	Passive	Reciprocal	Reflexive
Original	11	11	15	2	2
Copy	15	8	22	1	5
Total	26	20	36	3	7

If one compares the synchronic description of the Hittite middle voice with the general typology of middle voice systems (Kemmer 1993) and with the situation of other ancient IE languages, it turns out that the Hittite system partly deviates from both. In the first place, the distribution of *media tantum* is somewhat restricted as compared to other IE languages: not only is the core of the Hittite *media tantum* represented by verbs that denote spontaneous event, but (cross-linguistic) verb classes typically associated with non-oppositional middle forms, such as verbs of emotion, perception, and cognition are absent altogether. Note this is unlikely to be a gap in the documentation: even if few in number, such verbs are well attested in Hittite, but they occur as active verbs. More importantly, the reflexive function, which is the prototypical function of the middle voice both cross-linguistically and in other IE languages, has only a marginal role in Hittite, and middle reflexive forms are virtually always accompanied by the particle =za since the earliest stages of the language.

The question is whether non-oppositional and oppositional uses of the middle voice in Hittite can be integrated in a unified model that fully explains its distribution. This ultimately relates to the still unresolved issue whether one can characterize the middle voice as linguistic uniform phenomenon (see discussion in Chap. 1 sec. 1.2).

As I have discussed in Chap. 1, approaches to the middle voice in linguistics are varied. Individual accounts greatly differ from one another, and even though the numerous contributions have sensibly advanced our understanding of the middle domain, several issues remain unsettled. The complexity of the scholarship on this matter cannot be done justice to here: however, some recurrent trends and themes in the debate can be singled out.

Scholars who focus on oppositional middle forms tend to assume that the valency changing functions of the middle constitute the core of voice systems, and that the middle voice can be defined

⁴⁵ Note that most verbs listed under reciprocal and reflexive often also allow for a passive and/or an anticausative interpretation, as discussed in sec. 2.2.2.5.

as a syntactic device. Within these approaches, non-oppositional forms are often regarded as a marginal phenomenon. By contrast, especially in typologically oriented works such as Kemmer (1993), one detects a trend to treat oppositional and non-oppositional middle forms as instantiating different aspects of a unified domain. These approaches aim at capturing the fact that the middle voice is spread among a similar variety of contexts and performs the same range of functions in the languages of the world. To explain this distribution, typologists appeal to general common properties of middle voice systems, such as e.g. low degree of elaboration of events (Kemmer 1993), but individual accounts differ in their details. This approach has also been pursued in IE linguistics. For instance, Allan (2003: 35-37), strongly advocates for a unified treatment of oppositional and non-oppositional middle verbs in Ancient Greek.

None of these accounts is however without problems. As several scholars have remarked, as insightful as such attempts can be, defining the middle voice, and more generally highly polyfunctional grammatical markers, in terms of a single general principle does not always yield satisfactory results. Indeed, in order to account for the entirety of highly heterogeneous data, one is often forced to assume very abstract and ultimately uninformative underlying semantic/functional concepts. As a result, one cannot avoid the feeling that “[these] vague description[s] seek to unify a number of functions which seem to resist a uniform characterization” (Alexiadou *et al.* 2015: 136). As mentioned in Chap. 1, this criticism was first moved to Kemmer’s (1993) model already by Palmer (1995) and Saed (1995), who argued that there is no straightforward motivation for the need to explain all phenomena connected to the middle voice as responding to the underlying notion of degree of elaboration of events, which remains rather a linguists’ generalization more than a cognitive and psychologically real principle.

Approaches that seek a single core meaning to account for the semantics of the middle voice share a number of features with monosemic approaches to lexical meaning, chiefly the attempt to reduce the variation in function of a linguistic item to a single abstract underlying principle. In general linguistics, to overcome the shortcomings of these approaches, analyses based on a polysemic perspective to grammatical meaning have been devised.⁴⁶ Polysemic accounts are grounded on the assumption that different senses or meanings associated with a linguistic item are independent and yet connected to each other in specific ways. Polysemy prominently featured in earlier works of cognitive linguistics, where, combined with insights from categorization and the so-called prototype

⁴⁶ A third approach is the homonymic approach, whereby each meaning of a linguistic item is associated with a distinct form. For a cursory but insightful comparison between monosemic, polysemic, and homonymic approaches to meaning see Haspelmath (2003).

theory (e.g. Rosch 1978), it gave rise to a particularly fruitful line of research (see also Gries 2015 and Lossius Falkum & Vincente 2015 for a useful overview of various approaches to polysemy with extensive references). First confined to lexical semantics, with a focus on the polysemy of individual lexical items, chiefly prepositions such as *over* (e.g. Lakoff 1987) and verbs such as *see* (e.g. Gisborne 2010), the polysemic approach was also partly extended to the domain of grammatical meaning, as in the pioneering work by Nikiforidou (1991) on the polysemy of the genitive.

Kemmer's (1993) treatment of the middle voice, even though she ultimately pursues a monosemic approach in trying to define a single underlying core meaning, is already informed by a polysemic perspective, in that she singles out different situation types associated with middle markers in the world languages and tries to explain the specific connections between the individual situations, both in synchrony and in diachrony. With respect to the study of voice phenomena, approaches based on the prototype model can be exemplified by Shibatani's (1985) account of the passive and Dixon & Aikhenvald's (2000) description of other voice categories (see further Malchuckov 2015: 122). Descriptions of middle voice systems informed by the prototype model include Lazzeroni (1990) on PIE, Maldonado (2000) on Spanish, Manney (2000) on Modern Greek, and Allan (2003) on Ancient Greek.

Since Allan's work, polysemy models have been increasingly refined, therefore partly outdating Langacker's *complex network* approach (1987; see Gries 2015 for an overview of the criticism moved to earlier polysemy approaches). In particular, two models have proposed a more structured way to investigate polysemy networks. The first is the *Principled Polysemy Framework*, originally devised by Tyler & Evans (2001, 2003) to describe the polysemy of English prepositions (see Zanchi 2016 for the application of this model to Ancient Greek's prepositions), and later on also applied to other domains, such as nouns (e.g. Evans 2005). The second model, which partly constitutes a further extension of the former, is Evans' *Theory of Lexical Concepts and Cognitive Models* (Evans 2009, 2015).

What interests us most here is that these approaches provide a more structured methodology to identify the polysemous senses of a linguistic form and pick out the prototypical meaning among those (also termed Sanctioning Sense in Evans 2009). According to Evans (2009), in order for a sense to be established as the prototypical meaning of a lexeme, it has to conform to at least the following features (i) it is the historically more ancient meaning, (ii) it synchronically shows the higher type frequency, (iii) other senses can be naturally derived from it.

If we pursue a polysemic approach and try to pin down the prototypical meaning of the Hittite middle voice according to Evan's (2009) criteria, we are confronted with conflicting evidence. On the one hand, based on data in Table 25, the passive function would be the most likely candidate

according to parameter (ii), as this is the function that attests to the higher type frequency. However, a closer look at the OH data shows that the passive function is the least frequent in the oldest layer of the language (see Chap. 3 for discussion), where by contrast the most robustly attested function in OH is the anticausative one, which also subsumes all *media tantum* that indicate a change-of-state event. Moreover, parameter (iii) is rather inconclusive, as the synchronically extensive Anticausative/Passive polysemy makes it difficult to decide which of the two meanings can be more ‘naturally’ derived from the other.

It must be stressed that both *Principled Polysemy* and *Theory of Lexical Concepts and Cognitive Models* have been originally devised to represent the polysemy of lexical items. It is therefore not clear to what extent it is legitimate to apply these models to the study of the polyfunctionality of a grammatical marker such as the Hittite middle voice. Indeed, as already remarked in sec. 2.2.2.5, one should be more careful in distinguishing between polysemy in the domain of forms that express grammatical meanings, which can be more appropriately defined as *polyfunctionality* (Haspelmath 2003; see also sec. 2.2.2.5), and polysemy in the domain of the lexicon, which has been termed *colexification* (François 2008: 171). Tyler & Evan’s (2001) approach is particularly suited to investigate colexification, but has to face a number of issues when applied to a polyfunctional marker such as the Hittite middle voice. A clear problem emerges in the treatment of oppositional vs. non-oppositional middle forms. For instance, what exactly does it mean that the Passive and the Change-of-body-Posture constitute two independent meanings of the middle voice? Indeed, whereas the meaning of the former is based its relationship with an active counterpart, and compete with other readings when applied to the same verb base, in the second case the semantic component is inherent to the base verb alone. A more promising approach would be describing the polyfunctionality of the middle voice by adopting the semantic map model, which has proven a highly useful tool in linguistic typology to investigate cross-linguistic recurrent polyfunctionality patterns (cf. Georgakopoulos & Polis 2018). Unfortunately, as extensively discussed in Chap. 1.2.3, today there exists no up-to-date typologically cross-linguistic conceptual space for the middle voice domain, since the map first proposed by Kemmer (1993) suffers from a number of shortcomings and does not provide a suitable model.

To sum up, whereas the individual functions of the middle voice in Hittite can be successfully described in their synchronic features, as discussed at length in sec. 2.2., finding a suitable theoretical model to account for this heterogeneity proves a challenging task. A survey of possible approaches to this issue has shown that most of the solutions that have been proposed in previous scholarship are not without problems, and that a comprehensive and successful model for the synchronic description of middle voice systems is yet to be elaborated.

That synchronic models tend to fail in providing a uniform description of linguistic data is partly unsurprising, and the reason also resides in the nature of language itself. Indeed, as rightfully remarked by Dryer (2006) description and explanation should be conceived as two distinct aspects of the linguistic inquiry. Whereas one can effectively describe a language or a single linguistic domain in purely synchronic terms, the explanation as to why languages behave in a certain way is often a historical one. In other words, the variety that one observes in synchrony cannot always be uniformly explained in exclusively synchronic terms because it arises from specific diachronic processes.

The role of historical linguistics in explaining why language systems synchronically behave in the way they do has also recently gained ground in linguistic typology. In typology, cross-linguistic regularities in the distribution of polyfunctional items, as captured by language universals, typological hierarchies, and semantic maps, have often been explained by resorting to exclusively synchronic motivations such as economy, iconicity, and ease of processing. In recent years, various scholars, including e.g. Bybee (2006), Cristofaro (2010, 2013, 2017), and Anderson (2016), among others (see also Cristofaro & Zúñiga 2018 and Haspelmath 2018 for an overview), have challenged this approach, and have argued that cross-linguistic regularities can be best accounted for in diachronic terms, as they are at least in part the outcome of *mutational constraints*, i.e. “constraints on possible diachronic transitions or possible diachronic sources, which can have an effect on synchronic distribution.” (Haspelmath 2018). To put it differently, the explanation of typological universals should be sought in the specific diachronic processes that give rise to the language-specific patterns in the first place. A standard example to explain this way of reasoning is the universal whereby languages that have nasal vowels also have oral vowels, with nasal vowels being rarer in the lexicon (Greenberg 1978). This universal can be explained diachronically by observing that nasal vowels always arise out of VN sequences of an oral vowel plus a nasal consonant. Therefore, the implicational relationship ORAL VOWELS > NASAL VOWELS is not due to a more basic nature of oral vowels *per se*, but rather to the fact that nasal vowels systematically develop out of oral vowels in the first place. Advocates of diachronic motivations have also shown that these apply to the explanations of regularities in more complex grammatical domains, such as the case-marking patterns in perfective and imperfective contexts (Anderson 2016) and the coding of singulars vs. plurals (Cristofaro 2017).

As already hinted by Haspelmath (1995) in his review of Kemmer’s work, these considerations can be profitably extended to the interpretation of middle voice systems as well. Even if one succeeds in synchronically establishing a polysemy network of language-specific middle markers, the explanation as to why networks are shaped in that particular way should be sought in the diachronic processes that link the different meanings to one another, and not only in the association of all the functions with the parameter of low degree of elaboration of events. Based on such observations, I

do not pursue further here a synchronic account of the Hittite middle voice, and rather propose a diachronic approach that aims at understanding what the original meaning of the middle voice was and how the various functions are connected over time. The next chapter is dedicated to this endeavor.

Chapter 3: The diachrony of the Hittite middle voice

3.1. Introduction

As I have remarked in the conclusion of Chap. 2, the diversity of the functions displayed by the Hittite middle voice can hardly be accounted for in purely synchronic terms, as one fails to single out one (or more) semantic or syntactic motivations that are able to provide a satisfactory explanation for the entirety of the data. In this chapter, I address the issue from a different perspective, and show that diachronic considerations may shed light on the (series of) specific historical developments that brought about the synchronic picture outlined in Chap. 2.

The chapter is organized in three main sections. In sec. 3.2, I focus on the language-internal historical developments that affect the middle voice from Old to New Hittite (sec. 3.2.1 - 3.2.3). I give an overview of the distribution of middle verbs and their functions in the three sub-corpora, and highlight asymmetries in their distribution (sec. 3.2.4). In addition, I also sketch a history of the relationship between the middle voice and the particle *=za* (sec. 3.2.5). Section 3.3 provides a comprehensive account of the mechanisms of the development of the middle voice in Hittite. First, I investigate the historical relationship between the oppositional functions, and propose that the first oppositional function to develop was the anticausative, from which the others can be historically derived through specific paths of semantic extension (sec. 3.3.1). In section 3.3.2, I explore how the oppositional usages of the middle voice can be related to the group of *media tantum*, and single out the class of *media tantum* that indicate spontaneous change-of-state events as the locus of the transition from a lexically to a grammatically based system of voice distribution. Finally, in section 3.3.3, I clarify to what extent the diachronic process(es) that gave rise to Hittite middle can be understood in terms of grammaticalization. In section 3.4, I evaluate whether the diachronic scenario proposed for the evolution of the middle voice in Hittite comply with our knowledge of the voice system of proto-language. In order to do so, I provide an overview of the intricacies of the morphological (sec. 3.4.1) and functional (sec. 3.4.2) reconstructions of the PIE voice system. Section 3.5 features a conclusive summary of the chapter, and provides a tentative picture of the development of the middle voice from PIE to NH.

3.2. The middle voice from Old to New Hittite

As remarked in Chap. 1, the developments in the dating of Hittite texts and tablets has brought to light noticeable changes undergone by the Hittite language throughout its documented history. In the domain of syntax alone, the combined effort of different scholars has shown that several diachronic

changes can be detected in our textual records. These include, to name a few, the syntax of local cases and local adverbs (e.g. Starke 1977, Luraghi 2001, Francia 2002a, Brosch 2014; see also e.g. Melchert 1977 on the instrumental and the ablative) and local particles (e.g. Boley 1989, Luraghi 2001), the syntax of sentence connectives (e.g. Luraghi 1990, Inglese 2016), the periphrastic *hark-* and *es-* constructions (e.g. Boley 1984, Inglese & Luraghi *forthc.*), possessive constructions (e.g. Luraghi 1989, Garrett 1998), the ‘serial’ constructions with *pai-* and *uwa-* (e.g. van den Hout 2010, Luraghi *forthc.a*), the syntax of relative clauses (e.g. Probert 2006, Huggard 2015), the use of clitic subject pronouns (Goedegebuure 1999, Luraghi 2010a) and of demonstratives (Goedegebuure 2014), and the development of the ergative case (Goedegebuure 2012, *forthc.*).

Beside the insightful overview by Melchert (*forthc.b*), a systematic account of the diachrony of the Hittite middle voice, and of related valency changing constructions, is however still lacking. As discussed in Chap. 1, this is mostly due to the fact that the only comprehensive work on the middle voice in Hittite, i.e. Neu’s monograph (1968a, b), was written before the paleographic dating of manuscript became a full-established practice in Hittitology. In this section, I aim at partly filling this gap, and provide a thorough description of the changes undergone by the middle voice during the history of Hittite. In order to do so, I first survey the use of the middle voice in the three diachronic sub-corpora, and then proceed to a structured discussion of the findings. Since this section deals with the inner Hittite diachrony, only verbs attested in original texts will be taken into consideration. Note that the material presented in this chapter has been already introduced in Chap. 2, but the organization here is different. Whereas in Chap. 2 the verbs were arranged for synchronic classes and functions, in the following sections they are presented based on their diachronic distribution.

3.2.1. Old Hittite

Let us begin by considering the distribution of the middle voice in OH. It is a relatively common observation that in OH verbal voice seems to largely follow a lexical distribution, with most OH verbs belonging either to the *activa* or to the *media tantum* (cf. e.g. Luraghi 1990: 135, 2012). This observation is confirmed by data extracted from my corpus. Out of 37 verbs that attest to middle inflection, 27 belong to the *media tantum*, and only 10 display active forms alongside middle ones (see data in Table 31 and 32).

Table 31: OH *media tantum*¹

Verb	Tokens	Etymology and cognates
UNDERIVED		
<i>ar</i> - ^{ta(ri)} ‘stand’	12	PIE * <i>h₃er-</i> , Lat. <i>orior</i> ‘rise’
<i>ark</i> - ^{a(ri)} ‘mount (tr.)’	2	PIE * <i>h₃erǵ^h-</i> , Gr. <i>órkhis</i> ‘testicle’
<i>es</i> - ^{a(ri)} ‘sit down’	20	PIE * <i>h₁es-</i> , Gr. <i>émai</i> ‘be seated’
<i>hai(n)k</i> - ^{ta(ri)} , <i>hink</i> - ^{a(ri)} ‘bow (intr.)’	8	PIE (?) * <i>h_{1/2}einK-</i> , unknown
<i>happ</i> - ^{ta(ri)} ‘join (intr.); work out’	1	PIE * <i>h₂ep-</i> , Lat. <i>aptus</i> ‘fitting’
<i>harp</i> - ^{ta(ri)} ‘separate and re-associate oneself’	2	PIE * <i>h₃erb^h-</i> , Gr. <i>orphanós</i> ‘orphan’
<i>huett(i)</i> - ^{a(ri)} ‘draw, pull (tr.)’	4	unknown
<i>ye/a</i> - ^{ta(ri)} ‘go, march’	2	PIE * <i>h₁ei-</i> , Gr. <i>eîmi</i> and Lat. <i>eo</i> ‘go’
<i>ki</i> - ^{ta(ri)} ‘lie’	32	PIE * <i>kei-</i> , Skt. <i>śay-</i> and Gr. <i>keîmai</i> ‘lie’
<i>kīs</i> - ^{a(ri)} , <i>kikkis</i> - ^{ta(ri)} ‘become, happen’	11	PIE * <i>geis-</i> ‘turn’, OHG <i>kēran</i> ‘turn’
<i>kist</i> - ^{a(ri)} ‘perish’	1	PIE (?) * <i>g^hesd-</i> , unknown
<i>lukk</i> - ^{ta} ‘get light, dawn’	7	PIE * <i>léuk-</i> , Ved. <i>rócate</i> ‘shine’
<i>marriye/a</i> - ^{ta(ri)} , <i>marra</i> - ^{ta(ri)} ‘melt, stew (intr.)’	1	PIE * <i>merh₂-</i> (?), Skt. <i>mṛnáti</i> ‘crush’
<i>pars(i)</i> - ^{a(ri)} ‘break (tr.)’	46	PIE <i>b^hers-</i> , ON <i>bresta</i> ‘burst’
<i>salik</i> - ^{a(ri)} ‘approach’	4	PIE * <i>sléig-</i> , OIr. <i>sligid</i> ‘strike down’
<i>tith</i> - ^a ‘thunder’	3	unknown
<i>tuhs</i> - ^{a(ri)} ‘cut (tr.)’	4	unknown
<i>wess</i> - ^{ta} ‘wear’ ²	2	PIE * <i>wes-</i> , Skt. <i>váste</i> ‘be clothed’
<i>ur</i> - ^{āri} , <i>war</i> - ‘burn (intr.)’	1	* <i>urh₁-</i> , OCS <i>vireti</i> ‘cook’
<i>zē</i> - ^{a(ri)} ‘cook (intr.)’	1	PIE * <i>tiéh₁-</i> , unknown
DERIVED		
<i>irmaliye/a</i> - ^{ta(ri)} ‘be(come) ill’	1	<i>erman-</i> ‘illness’
<i>kistanziye/a</i> - ^{ta(ri)} ‘be(come) hungry’	1	<i>kāst-</i> ‘hunger’
<i>lazziye/a</i> - ^{ta(ri)} ‘be(come) good, be favorable’	2	<i>lazzi-</i> ‘good (adj.)’
<i>lēlaniye/a</i> - ^{ta(ri)} ‘be(come) furious’	1	* <i>lelan-</i> ‘rage (?)’
<i>paiske/a</i> - ^{ta(ri)} ‘go’	2	<i>pai-</i> ‘go’

¹ In Table 31, I group with the *media tantum* also those verbs that attest to active voice in post-OS and whose middle inflection can be regarded as primary (see Chap. 2 sec. 2.1.3 and Part Two for the description of the individual verbs).

² OS attests an active form *wa-as-se-e[z-zi]* (KBo 20.18 + rev. 5) of difficult interpretation. See Part Two for an extensive discussion of the voice patterns displayed by this verb.

<i>usneske/a-tta(ri)</i> ‘put up for sale (tr.)’ ³	3	<i>usniye/a-zi</i> ‘put up for sale’
<i>wesiye/a-tta(ri)</i> ‘graze (tr., intr.)’	1	<i>wesi-</i> ‘pasture’

As discussed in Chap. 2, *media tantum* are defined as those verbs that occur in the middle voice only, and with these, voice distribution is considered to be lexically determined. This means that the reason why these verbs display middle inflection is to be sought in their lexical semantics, and does not depend on any grammatical rule.

The question remains as to whether the assignment of verbs to the middle inflection was productively motivated by semantic considerations in OH, or whether middle inflection with the *media tantum* was simply inherited from PIE and voice selection was consequently learnt by speakers as an idiosyncratic feature already at the oldest stage of the language.

A closer inspection suggests that when it comes to individual verbs, their belonging to either the active or middle voice is largely idiosyncratic, and cannot be synchronically fully predicted on semantic and/or syntactic grounds only. In this respect, the observation that the OH voice system displays a lexical distribution should be interpreted in descriptive terms, as it only refers to the fact that some verbs exclusively inflect in the active or in the middle voice. As discussed in Chap. 2, whereas a semantic core of *media tantum* can be individuated in uncontrolled state or change-of-state events with unaccusative syntax, one also finds that verbs encoding such events, as well as unaccusative verbs more generally, can be *activa tantum* since OH already.⁴ In other words, even if the middle voice was originally inherited from PIE as a marker of unaccusativity (cf. Benedetti 2002), this connection was already weakened in pre-Anatolian, where the use of clitic subject pronouns emerged as a new and productive means of encoding unaccusativity. It is therefore tempting to assume that OH *media tantum* were simply inherited as such from PIE.

A look at the etymology of OH *media tantum* unveils a more complex scenario. In Table 1, I have given the etymology of OH *media tantum* (see Part Two for a more detailed discussion of the

³ Active forms of the *-ske/a-* stem are also attested as early as in MS, but these systematically differ from middle forms, the former being associated with the meaning ‘put up for sale’ the latter with the non-commercial meaning ‘pledge, balance’ (Melchert 2015). Therefore, with this verb voice alternation can be described as being lexicalized (see Part Two for discussion).

⁴ Among intransitive OH middle verbs, whereas the majority display unaccusative syntax only, there is a small set that shows variation between unaccusative and unergative syntax, i.e. *paiske/a-tta(ri)* ‘go’, *salik-a(ri)* ‘approach’, *nē-a(ri)* ‘turn (intr.)’, *weh-zi* ‘turn (intr.)’. Unsurprisingly, all these verbs are verbs of motions, which have been shown to fully acquire unaccusative syntax in post-OH times only (cf. Goedegebuure 1999, Luraghi 2010a).

individual cases). The picture that emerges is far from clear. In the first place, only a very few verbs have verbal cognates in other IE language with the same structure and meaning, and can therefore be reconstructed as being directly inherited from PIE. These are, *es*-^{a(ri)} ‘sit down’ (Gr. *êmai* ‘be seated’), *ki*-^{ta(ri)} ‘lie’ (Gr. *keîmai* ‘lie’), *lukk*-^{ta} ‘get light, dawn’ (Ved. *rócate* ‘shine’), and *wess*-^{ta} ‘wear’ (Skt. *váste* ‘be clothed’). In the second place, there is a small group of Hittite verbs that do have other verbal IE cognates, but with which the semantic match is not as straightforward, e.g. *ar*-^{ta(ri)} ‘stand’ but Lat. *orior* ‘rise’ (see Part Two on this etymology), or whose counterparts are either active or based on a different stem formation process, e.g. *ur*-^{āri} ‘burn’ vs. OCS *vireti* ‘cook’ or *kīs*-^{a(ri)} ‘become’ vs. OHG *kēran* ‘turn’ (from causative **gois-éye-*). Clearly, whereas these verbs allow for the reconstruction of a common PIE verbal root, they do not straightforwardly support the reconstruction of middle forms in the parent language, thus leaving open the option that middle inflection is an Anatolian/Hittite innovation. This is also the case of those verbs for which a PIE etymology is reconstructable, but which lack (verbal) cognates outside Anatolian, as in e.g. *ark*-^{a(ri)} ‘mount (tr.)’ related to Gr. *órkhis* ‘testicle’. Finally, there is a group of verbs that simply escape an etymological explanation in IE terms, as e.g. *tith*-^a ‘thunder’. Overall, the etymology of the OH *media tantum* shows that only in a few cases these verbs do continue middle formations directly inherited as such from PIE. Whereas this picture is surely altered by the lack of further comparative data, I do not believe that it is entirely accidental, and obviously points to the fact that the lexical distribution of middle voice among *media tantum* based on semantic consideration was still at play in Pre-Hittite to some extent. This observation is further confirmed by the existence of derived *media tantum*, such as *irmaliye/a*-^{ta(ri)} ‘be(come) ill’, which must reflect innovative Hittite formations. Overall, data from the etymology of the OH *media tantum* shows that whereas it is certainly true that the distribution of verbal voice is not systematically driven by semantic/syntactic considerations, the middle inflection can still be considered a somewhat productive pattern in the prehistory of Hittite, as it is able to attract new verbs.

Turning to verbs that attest to both active and middle forms, these can be further divided into two groups, as shown in Table 32. In the first place, there are verbs whose active and middle forms stand in a functional opposition. These are only 7 (I take the lack of OH active forms of *zahh*-ⁱ ‘hit’ as merely accidental, see Part Two). It is interesting to observe that in spite of their small number, these oppositional verbs already display all the possible functions that one finds in later stages of the language, i.e. anticausative, passive, reflexive, and reciprocal. Therefore, there is no compelling textual evidence for any of the functions to be historically more ancient. Nevertheless, it can be remarked that even from such limited inventory of verbs, the anticausative function seems to be prominent in OH (cf. already Hart 1988: 78). Not only are anticausatives slightly more frequent than

passives, both in terms of types and tokens, but if to these one also adds evidence from *media tantum*, it turns out that the middle voice is more robustly associated with spontaneous change-of-state events, irrespective of whether they already enter in a functional opposition of the anticausative type with an active counterpart or not.

In the second place, already in OH one finds a few verbs that inflect according to both voices without any noticeable functional difference among the two. As discussed in Part Two, there are good reasons to maintain that at least *hatt*^{-a(ri)} ‘hit’ was originally a deponent verb later transferred to the active paradigm, increasingly associated with the newly formed stem *hazziye/a*^{-zi}, whereas the original diathesis of *mai-/mi*⁻ⁱ ‘grow (intr.)’ and *weh*^{-zi} ‘turn (intr.)’ cannot be ascertained. This means that cases of fluctuation of (mostly intransitive) verbs between active and middle inflection, which become increasingly common in later Hittite, can be already traced back to the oldest stage of the language.

A final note is in order on the morphology of middle verbs in OH. As Melchert (forthc.b: 6) has pointed out, in OH there seems to be a correlation between the inflectional class of the active verb and the distribution of the endings *-a* over *-ta*, with oppositional middle verbs to active *-hi* verbs consistently selecting the former and *-mi* verbs selecting the latter. Whatever the motivation for this pattern, this correlation was lost in the course of the history of Hittite, with most oppositional middles, especially passive ones, consistently selecting the *-ta* ending in NH (see sec. 4.3.2). moreover, as discussed by Yoshida (1990), in OH the ending *-ri* still displays a narrow distribution.

Table 32: OH verbs attesting to active and middle forms

Verb	Tokens ⁵	Function
OPPOSITIONAL MIDDLES		
<i>halzai</i> ⁻ⁱ ‘shout, call’ vs. <i>halzi</i> ^{-a(ri)} ‘be called (mid.)’	7	PASSIVE (?)
<i>hantae</i> ^{-zi} ‘align (tr.)’ vs. <i>handai</i> ^{-ta(ri)} ‘align (intr.)’	10	ANTICAUSATIVE
<i>istarni(n)k</i> ^{-zi} ‘afflict’ vs. <i>istarni(n)k</i> ^{-ta(ri)} ‘become ill’	1	ANTICAUSATIVE
<i>markiye/a</i> ^{-zi} ‘refuse’ vs. <i>markiye/a</i> ^{-ta(ri)} ‘be refused (mid.)’	1	PASSIVE
<i>nai</i> ⁻ⁱ ‘turn’ vs. <i>nē</i> ^{-a(ri)} ‘turn (intr.)’	2	ANTICAUSATIVE
<i>suppiyahh</i> ⁻ⁱ ‘purify’ vs. (=za) <i>suppiyahh</i> ^{-ta(ri)} ‘purify oneself’	2	REFLEXIVE
<i>zahh</i> ⁻ⁱ ‘hit’ (post-OS) vs. <i>zahh</i> ^{-ta(ri)} ‘hit each other’	2	RECIPROCAL
ACTIVE = MIDDLE FORMS		

⁵ In this and the following tables, when token frequencies of oppositional middle verbs are given, the numbers refer to occurrences of middle forms only and not of active ones, unless explicitly noted.

<i>hatt-^{a(ri)}</i> , <i>hazziye/a-^{zi}</i> ‘hit, pierce’	2	-
<i>mai-/mi-ⁱ</i> ‘grow (intr.)’	1	-
<i>weh-^{zi}</i> ‘turn (intr.)’	1	-

3.2.2. Middle Hittite

The MH corpus already shows a more complex picture in the patterns of voice distribution. Overall, in MH/MS manuscripts one finds 52 verbs that show at least one form inflecting in the middle voice. Of these, only 18 are continued from OH, whereas 33 are recorded starting from MH.

With respect to the *media tantum*, one observes a strong continuity with the OH situation. The majority of the *media tantum* that one finds in MH/MS texts is already attested in OH, with only 4 newly attested verbs out of 14 (data in Table 33). There are good reasons to believe that most of these are indeed older, and that their absence in OH is entirely accidental. For instance, both *istu-^{āri}* ‘get out, become known’ and *tukk-^{āri}* ‘be visible, be important’ have good IE etymologies, that make them likely to be inherited (cf. PIE **steu-*, cf. Gr. *steútai* ‘announce’, Skt. *stav-* ‘honor’ and PIE **tuek-* ‘be visible’ (?), cf. Skt. *tvác-* ‘skin’ respectively). The verb *uwaske/a-^{ta(ri)}* ‘come’ must also reflect an older pattern of voice distribution (cf. OH/OS *paiske/a-^{ta(ri)}* ‘go’), as middle *-ske/a-* verbs based on active intransitive start being transferred to active inflection in MH (see below). Therefore, the only verb for which a new inner-Hittite formation cannot be ruled out is *hiswai-^{ta(ri)?}* ‘(be) open’, whose etymology remains still disputed (cf. Part Two).

Among the *media tantum* continued from OH, two interesting developments can be singled out. In the first place, the verb *es-^{a(ri)}*, beside retaining its OH meaning ‘sit down’, starts to be used in a transitive construction with a direct object and the particle =*za* with the meaning ‘occupy, settle’. In the second place, the verb *kīs-^{a(ri)}*, which in OH freely alternates between the two meanings ‘become’ and ‘happen’, starts to occur with the particle =*za*, which is increasingly associated with the reading ‘become’, whereas simple *kīs-^{a(ri)}* is preferred for the meaning ‘happen’.

Table 33: MH *media tantum*

Verb	Tokens
UNDERIVED	
<i>ar-^{ta(ri)}</i> ‘stand’	39
<i>es-^{a(ri)}</i> ‘sit down’	13

<i>hiswai</i> - ^{ta(ri)?} ‘(be) open’	1
<i>ye/a</i> - ^{ta(ri)} ‘go, march’	32
<i>istu</i> - ^{āri} ‘get out, become known’	1
<i>ki</i> - ^{ta(ri)} ‘lie’	18
<i>kīs</i> - ^{a(ri)} , <i>kikkis</i> - ^{ta(ri)} ‘become (=za), happen’	21
<i>kist</i> - ^{ā(ri)} ‘perish’	1
<i>lukk</i> - ^{ta} ‘get light, dawn’	8
<i>tukk</i> - ^{āri} ‘be visible, be important’	2
<i>wakk</i> - ^{āri} ‘be lacking’	1 ⁶
DERIVED	
<i>lazziye/a</i> - ^{ta(ri)} ‘be(come) good, be favorable’	3
<i>uwaske/a</i> - ^{ta(ri)} ‘come’	3
<i>wesiye/a</i> - ^{ta(ri)} ‘graze (tr., intr.)’	3

Oppositional middle verbs offer a more varied picture. To begin with, they are much more numerous than in OH, with 20 verbs attested in MH/MS (Table 34) vs. the 7 verbs attested in OH (Table 32). Of these, only 3 are taken over from OH, i.e. *halzai*-ⁱ ‘call’, *hantae*-^{zi}, and *nai*-ⁱ ‘turn’. For the other verbs, two main patterns can be detected. On the one hand, there are verbs for which active and middle forms are both attested alongside since MH only (this pattern covers 8/20 verbs), as in the case of *damme/ishae*-^{zi} ‘damage’ vs. *damme/ishae*-^{ta(ri)} ‘be damaged’. On the other hand, 9 verbs that were already attested in active forms in OH start appearing in the middle voice as well in MH. This is the case of e.g. *kars(iye/a)*-^{zi} ‘cut off’, only attested in the active voice in OS, which in MH is opposed middle *kars(iye/a)*-^{ta(ri)} ‘be cut, stop (intr.)’.

It is of course difficult based on this data alone to claim that this distribution reflects an expansion of the middle voice to new verbs, since lack of middle forms in OS texts can simply be due to the limited size of the corpus. Nevertheless, it can be observed that irrespective of the date of oldest attestation of either active or middle forms, for a number of verbs a reasonable guess can be made regarding their original voice. In the first place, there are verbs that must have been original *activa tantum* and for which the middle voice is a secondary acquisition. This is clearly the case of derived causative verbs such as *as(sa)nu*-^{zi} ‘take care of’, *nini(n)k*-^{zi} ‘set in motion (tr.)’, *zalu**knu*-^{zi} ‘delay

⁶ See Part Two for the problematic status of this MH occurrence of *wakk*-^{āri} ‘be lacking’.

(tr.)’, and *damme/ishae*-^{zi} ‘damage’, since causative formations tend to be *activa tantum* and only sporadically develop oppositional middle forms (cf. Chap. 2).

However, this is not the entire picture, as some of the verbs in Table 4 are indeed old *media tantum* that develop oppositional active forms in MH times only. In the case of OH *wess*-^{ta} ‘wear’, causative forms ‘dress, make wear’ based on the enlarged stem *wasse-* and *wassiyē/a-* start appearing more systematically (see Part Two for discussion). A particularly instructive example is the verb *harp*-^{ta(ri)}. As discussed in Part Two, the verb was originally a *medium tantum* associated with the complex meaning ‘separate and reassociate oneself’. Only later on, when the original meaning bleached to ‘join (intr.)’, active forms with causative function ‘join (tr.)’ were created, possibly on the model of semantically similar verbs such as *tarupp*-^{zi} ‘gather (tr.)’ vs. *tarupp*-^{ta(ri)} ‘gather (intr.)’. Another different case is the verb *hai(n)k*-^{ta(ri)} ‘bow (intr.)’: this verb is only attested in the middle voice in OH, whereas in MH it exists alongside active *hai(n)k*-^{zi} ‘offer’. As argued in Part Two, voice alternation with this verb must however be older, with an original reflexive alternation ‘offer’ vs. ‘offer oneself’ becoming lexicalized as ‘offer’ vs. ‘bow’.

Table 34: MH oppositional middle verbs

Verb	Tokens	Function
MH OPPOSITIONAL PAIRS		
<i>as(sa)nu</i> - ^{zi} ‘take care of’ vs. <i>as(sa)nu</i> - ^{ta(ri)} ‘be taken care of’	8	PASSIVE
<i>hai(n)k</i> - ^{ta(ri)} ‘bow (intr.)’ vs. <i>hai(n)k</i> - ^{zi} ‘offer’	2	LEXICALIZED
<i>happ</i> - ^{zi} ‘join (tr.)’ vs. <i>happ</i> - ^{(t)a(ri)} ‘join (intr.); work out’	4	ANTIC./LEX.
<i>harra</i> - ⁱ ‘destroy’ vs. <i>harra</i> - ^{ta(ri)} ‘go to waste, be destroyed’	1	ANTIC./PASS.
<i>harp</i> - ^{ta(ri)} ‘join (intr., OS)’ vs. <i>harp</i> - ^{zi} ‘join, pile up (tr.)’ ⁷	2	ANTICAUSATIVE
<i>hulāliye/a</i> - ^{zi} ‘encircle (OS)’, <i>hulāliye/a</i> - ^{ta(ri)} ‘be encircled (mid.)’	1	PASSIVE
<i>ispānt</i> - ⁱ ‘libate (OS)’ vs. <i>ispant</i> - ^{a(ri)} ‘be offered (?)’	1	PASSIVE (?)

⁷ Middle forms of *harp*-^{ta(ri)} are not attested in MH/MS texts, but the earlier active occurrence date indeed to MS, so that it is reasonable to assume that voice alternation for this verb has been established since MH times already, and is continued in NH, where active and middle forms are attested alongside.

<i>istāp-/istapp⁻ⁱ</i> ‘block (OS)’ vs. <i>istapp^{-ta(ri)}</i> ‘be(come) closed’	1	ANTIC./PASS.
<i>kars(iye/a)^{-zi}</i> ‘cut off (OS)’ vs. <i>kars(iye/a)^{-ta(ri)}</i> ‘be cut, stop (intr.)’	1	ANTIC./PASS.
<i>nini(n)k^{-zi}</i> ‘set in motion (tr., OS)’ vs. <i>nini(n)k^{-ta(ri)}</i> ‘mobilize (intr.)’	2	ANTICAUSATIVE
<i>punuss^{-zi}</i> ‘ask (OS)’ vs. <i>punuss^{-ta(ri)}</i> ‘be asked’	1	PASSIVE
<i>damme/ishae^{-zi}</i> ‘damage’ vs. <i>damme/ishae^{-tta(ri)}</i> ‘be damaged’	2	PASSIVE
<i>tarna⁻ⁱ</i> ‘release (OS)’ vs. <i>tarna^{-tta(ri)}</i> ‘be released’	2	PASSIVE
<i>tarupp^{-zi}</i> ‘gather (tr., OS)’ vs. <i>tarupp^{-ta(ri)}</i> ‘gather (intr.), be gathered’	3	ANTIC./PASS.
<i>das(sa)nu^{-zi}</i> ‘strengthen’ vs. (=za) <i>das(sa)nu^{-tta(ri)}</i> ‘strengthen oneself’	1	REFLEXIVE
<i>wess^{-tta}</i> ‘wear’ vs. <i>wassiyē/a^{-zi/tta(ri)}</i> ‘dress (tr.)’	4	ANTICAUSATIVE
<i>zalu^{knu^{-zi}}</i> ‘delay (tr.)’ vs. <i>zalu^{knu^{-tari}}</i> ‘be(come) late, be delayed’	1	ANTIC./PASS.
<i>zinni-/zinn^{-zi}</i> ‘stop (tr., OS)’, <i>zinna^{-tta(ri)}</i> ‘finish (intr.)’	2	ANTICAUSATIVE
OPPOSITIONAL PAIRS CONTINUED FROM OH		
<i>halzai⁻ⁱ</i> ‘call’ vs. <i>halzi^{-a(ri)}</i> ‘be called (mid.)’	1	PASSIVE (?)
<i>hantae^{-zi}</i> ‘align (tr.), determine’ vs. <i>handai^{-tta(ri)}</i> ‘align (intr.), be determined’	12	ANTIC./PASS.
<i>nai⁻ⁱ</i> ‘turn’ vs. <i>nē^{-a(ri)}</i> ‘turn (intr.)’	11	ANTICAUSATIVE

The distribution of the individual functions is also different from what observed in OH. Besides the lack of grammatical reciprocal verbs proper (which is likely accidental given the overall scarcity of this function in Hittite, cf. Chap. 2 and Inglese 2017), and a single reflexive verb, i.e. (=za) *das(sa)nu^{-tta(ri)}* ‘strengthen oneself’, one observes a slight increase in the frequency of passive verbs, so that anticausative and passive verbs are almost evenly distributed (7 passives vs. 6 anticausatives). A clear case of the expansion of the passive voice is the verb *hantae^{-zi}*. This verb is attested in the active voice in OH with the meaning ‘align (tr.)’, and in this respect, it stands in anticausative opposition with middle forms meaning ‘align (intr.)’. In MH, one finds the first occurrences of the verb in the meaning ‘determine, decide’, on which new passive forms meaning ‘be determined’ are created. This clearly shows that the passive function is productive in Hittite historical times, as it applies to newly developed meanings of already existing verbs that previously did not enter in a passive alternation. In addition, since MH one also starts to observe the more widespread occurrence of verbs that display a passive/anticausative polysemy, such as *tarupp^{-zi}* ‘gather (tr.)’ vs. *tarupp^{-ta(ri)}* ‘gather (intr.), be gathered’. Concerning anticausatives, a noticeable development is that some of these start being optionally reinforced by the particle =za, as in the case of *nē^{-a(ri)}* ‘turn (intr.)’, *handai^{-tta(ri)}* ‘align (intr.)’ (see sec. 4.2.5).

Finally, one also detects a steep increase of verbs that inflect in both voices without there being any detectable functional motivation, as shown in Table 35. I refer to Part Two for a detailed discussion of each lemma. I would like to point out here that such voice fluctuations are not as random as they may appear, and three major trends can be detected. In the first place, there is a group of verbs for which there is simply not sufficient evidence to decide the original inflection: whichever the original voice, it is clear that for some reason they were at least partly transferred to a different inflectional class. Consider for instance the verb *hanna*-^{a(ri)/i} ‘sue, judge, contest’: this verb occurs both in active and in middle forms since MH, and good arguments can be made for either to be original (see Part Two). In the second place, one observes a tendency for (mostly) intransitive *activa tantum* verbs to be occasionally transferred to middle inflection. Even though sporadic, the transfer mostly concerns intransitive unaccusative verbs and is possibly based on analogy to semantically similar verbs that inflect in the middle voice (e.g. middle forms of active *aruwae*-^{zi} ‘bow down’ analogical on middle *hai(n)k*-^{ta(ri)} ‘bow’; an exception is however *sanna*-ⁱ ‘hide’ which is likely to be originally active and unexpectedly shows a couple of transitive middle forms, see also Melchert forthc.b: 23-24). Finally, there is a number of original *media tantum* that start being transferred to active inflection. Among these, a further distinction should be made. On the one hand, there is an increasingly consistent trend to transfer deponent, i.e. transitive, *media tantum* as well as *-ske/a-* verbs based on active intransitive to active inflection, as in the case of *sārr*-^{ta(ri)/i} ‘transgress’ and *paiske/a-*^{ta(ri)/zi} ‘go’ respectively. On the other hand, more sporadically are intransitive *media tantum* transferred to active inflection, and this appears to mostly concern derived *-iye/a-* verbs, such as *mummiye/a-*^{zi} ‘crumble’.

Table 35: MH verbs attesting to functionally identical active and middle forms

Verb	Middle tokens
MIDDLE > ACTIVE	
<i>ark</i> - ^{a(ri)} ‘mount’	1
<i>huett(i)</i> - ^{a(ri)} , <i>huettiye/a-</i> ^{zi/i} ‘draw, to pull’ ⁸	2
<i>kardimiye/a-</i> ^{ta(ri)} ‘be(come) angry’	1
<i>mummiye/a-</i> ^{zi} ‘keep falling, crumble (?)’	1
<i>pahs</i> - ⁱ ‘protect’	38

⁸ Middle forms of *huett(i)*-^{a(ri)} are not attested in MH/MS texts, where one finds the first active forms of the stem *huetiye/a-*^{zi}. This distribution suggests that transfer of this verb to active inflection started by MH already, even though the co-occurrence of active and middle forms is well-documented in NH/NS texts only.

<i>paiske/a</i> - ^{ta(ri)} ‘go’	6
<i>parh</i> - ^{zi} ‘chase, hunt’	5
<i>pars(i)</i> - ^{a(ri)} ‘break (tr.)’	10
<i>sārr</i> - ⁱ ‘divide, transgress’	11
<i>zahhiye/a</i> - ^{zi} ‘fight’	20
ACTIVE > MIDDLE	
<i>āk</i> -/ <i>akk</i> - ⁱ ‘die’	1 (?)
<i>aruwae</i> - ^{zi} ‘bow down, prostrate oneself’	1
<i>huwai</i> - ⁱ ‘run’	2
<i>idalawess</i> - ^{zi} ‘become evil’	1
<i>tame(n)k</i> - ^{zi} ‘affix, stick to, join (intr.)’	2
UNCERTAIN DIRECTION	
<i>hanna</i> - ⁱ ‘sue, judge, contest’	1
<i>ishuwai</i> - ⁱ ‘throw, scatter, pour’	1
<i>neku</i> - ^{zi} ‘become evening’	1
<i>weh</i> - ^{zi} ‘turn’	2

To sum up, in MH/MS texts one can already glimpse a change in the patterns of voice distribution as compared to OH. In the first place, functionally motivated oppositional middle verbs are on the rise, with an expansion of the passive function as compared to the anticausative, the latter being also optionally reinforced by the occurrence of =*za*. In the second place, verbs that freely alternate between active and middle forms start appearing more frequently. Even though random at first sight, two basic tendencies can be detected among these fluctuations: deponents and some derived *media tantum* start being transferred to active inflection, whereas some *activa tantum* can be occasionally transferred to the middle inflection due to analogy with semantically similar middle verbs.

3.2.3. New Hittite

The NH/NS corpus unsurprisingly offers a much richer inventory of middle verbs. At this stage of the language, 70 verbs are documented in the middle voice, of which 35 verbs are attested in NH texts only.

Let us begin by considering the situation of the *media tantum* (Table 6). As already observed for MH, this class is largely conservative, and does not show a significant increase in its type frequency. As a matter of fact, one could even speak of a progressive demise of the *media tantum*, as an

increasing number of them start being transferred to active inflection (see below). A few *media tantum* of OH date, which were not attested in MH, surface again in NH, so that one can conclude that their absence in MH is purely accidental (e.g. *ur-^{āri}*, *war-^{āri}* ‘burn’). Moreover, one finds a few verbs that are only attested in NH, such as *tarra-^{ta(ri)}* ‘be able, can (+ inf.)’ and *wakk-^{āri}* ‘be lacking’. As both have good IE etymologies (cf. PIE **terh*₂-, cf. Skt. *tirāte* ‘overcome’ and PIE **ueh*₂g- ‘break’, cf. Gr. *ágnumi* ‘break’), it is entirely possible that both formations have been inherited and that the fact that they only surface in NH is a historical accident. By contrast, derived verbs such as *asiwantēsske/a-^{ta(ri)}* ‘become poor’ and *teshaniye/a-^{ta(ri)}* ‘appear in a dream’ most likely reflect inner-Hittite formations, showing that the middle voice was still productively assigned in the inflection of specific (sub)-classes of non-oppositional derived verbs.

Innovations among the *media tantum* only concern the lexical semantics and the constructions of individual verbs (see Part Two for discussion). For instance, the verb *es-^{a(ri)}* undergoes a semantic shift whereby it takes over the stative meaning ‘sit’ from active *es-^{zi}*, which eventually disappears, and the dynamic meaning ‘sit down’ is increasingly associated with the occurrence with the particle =*za*. Similarly, the combination of the verb *kīs-^{a(ri)}* with the particle =*za* is fully conventionalized for the meaning ‘become’, whereas simple forms of the verb become virtually confined to the meaning ‘happen’ only.

Table 36: NH *media tantum*

Verb	Tokens
UNDERIVED	
<i>ar-^{ta(ri)}</i> ‘stand’	72
<i>es-^{a(ri)}</i> ‘down, sit down (=za)’	49
<i>ye/a-^{ta(ri)}</i> ‘go, march’	63
<i>ki-^{ta(ri)}</i> ‘lie’	139
<i>kīs-^{a(ri)}</i> , <i>kikkis-^{ta(ri)}</i> ‘become (=za), happen’	154
<i>tarra-^{ta(ri)}</i> ‘be able, can (+ inf.)’	3
<i>tukk-^{āri}</i> ‘be visible, be important’	5
<i>ur-^{āri}</i> , <i>war-^{āri}</i> ‘burn’	1
<i>wakk-^{āri}</i> ‘be lacking’	2
DERIVED	
<i>asiwantēsske/a-^{ta(ri)}</i> ‘become poor’	1
<i>irmaliye/a-^{ta(ri)}</i> ‘be(come) ill’	7

<i>kariye/a-</i> ^{(tt)a(ri)} ‘be(come) gracious towards’	1
<i>teshaniye/a-</i> ^{tt(a)(ri)} ‘appear in a dream’	5

Oppositional middle verbs display an even higher type frequency, as shown in Table 37. Beside 12 alternating verb pairs that continue OH and MH patterns, one finds 20 new verbs that instantiate a functionally motivated voice alternation in NH/NS texts. Remarkably, only for two verbs, i.e. ARAD-(n)ahh-ⁱ ‘enslave’ and *mehuwandahh* -ⁱ ‘make old’ active and middle forms are both attested in NH only. For the most part, we are rather dealing with newly created middle forms based on verbs that were already abundantly attested in the active voice since OH and MH times. Again, whereas lack of middle forms in older phases might just be coincidental, it is clear that in a number of cases either voice must be older, and that voice alternation cannot be original. Consider the verb *lazziye/a-*^{tt(a)(ri)} ‘be(come) good’, which is a very well attested *medium tantum* in OH and MH, and that only shows a handful of active transitive forms in NH. This distribution thus strongly suggests that only in NH the verb started being involved in a functional alternation with active forms. Similarly, the verb *wars-*^{tt(a)(ri)} ‘lift up (intr.), be(come) appeased’, attested since MH, was probably a *medium tantum*, and only entered a productive voice alternation pattern once active forms based on the newly created stem *warsiye/a-*^{zi} ‘relieve (one’s spirit)’ started to appear. In the latter case, the higher morphological complexity of the active stem clearly points out to the secondary status of active forms (this is not an isolated pattern, see also *huett(i)-* vs. *huettiye/a-* ‘draw, pull’, *wess-* vs. *wassiye/a-* ‘wear’, and *park-* vs. *parkiye/a-* ‘raise’). By contrast, as argued at length in Part Two, the verbs *karp(iye/a)-*^{zi} ‘pluck, raise’ and *kars(iye/a)-*^{zi} ‘cut, finish’ must have been *activa tantum* originally, so that their middle forms clearly constitute an innovation.

The distribution of the individual functions continues a trend already detected in MH. Beside lexicalized verbs such as *weriye/a-*^{zi} ‘call’ vs. *weriye/a-*^{ttari} ‘join’, one detects a tendency for the anticausative function (10 verbs), as in e.g. *mehuwandahh* -ⁱ ‘make old’ vs. *mehuwandahh-*^{tt(a)(ri)} ‘age’, to lose ground to the passive (13 verbs), as in e.g. *dā-*ⁱ ‘take (OS)’ vs. *da-*^{tt(a)(ri)} ‘be taken’, with an increasing number of verbs that are ambiguous among the two readings, as in the case of *sārr-*ⁱ ‘divide (tr., OS)’ vs. *sarra-*^{tt(a)(ri)} ‘split up (intr.), be split’. Morphologically, all passives in NH are formed with *-tt(a)(ri/ti)* endings, irrespective of the inflection of the active verb (cf. Melchert forthc.b: 12).

Table 37: NH oppositional middles

Verb	Tokens	Function
NH OPPOSITIONAL PAIRS		

ARAD-(n)ahh- ⁱ ‘enslave’ vs. ARAD-(n)ahh- ^{tt(a)(ri)} ‘become slave (mid.)’	6	ANTICAUSATIVE
ariyeske/a- ^{zi} ‘determine (MS)’ vs. ariyeske/a- ^{tt(a)(ri)} ‘be determined’	3	PASSIVE
aseske/a- ^{zi} ‘settle (tr., OS)’ vs. aseske/a- ^{tt(a)(ri)} ‘be settled’	1	PASSIVE (?)
au- ⁱ /u- ‘see (OS)’ vs. u- ^{tt(a)(ri)} ‘become visible, be seen’	9	ANTIC./PASS.
dā- ⁱ ‘take (OS)’ vs. da- ^{tt(a)(ri)} ‘be taken’	4	PASSIVE
epp- ^{zi} ‘take (OS)’ vs. epp-/app- ^{tt(a)(ri)} ‘be taken, take each other’	2	PASS./RECIPR.
isiyahh- ⁱ ‘reveal (OS)’ vs. isiyahh- ^{tt(a)(ri)} ‘appear, be revealed,’	1	ANTIC./PASS.
istamass- ^{zi} ‘hear (OS)’ vs. istamass- ^{tt(a)(ri)} ‘be heard’	1	PASSIVE
karp(iye/a)- ^{zi} ‘pluck, raise, finish (tr., OS)’ vs. karp(iye/a)- ^{tt(a)(ri)} ‘be taken, raise, finish (intr.)’	2	ANTIC./PASS.
kars(iye/a)- ^{zi} ‘cut off (OS)’ vs. kars(iye/a)- ^{tt(a)(ri)} ‘be cut, stop (intr.)’	2	ANTIC./PASS.
lā- ⁱ ‘release, remove (OS)’ vs. lā- ^{i/ta(ri)} ‘be released, be removed (mid.)’	8	PASSIVE
lāk- ⁱ ‘knock out, turn (OS)’ vs. lag- ^{ā(ri)} ‘fall’	2	ANTICAUSATIVE
lazziye/a- ^{tt(a)(ri)} ‘be(come) good (OS)’ vs. lazzīye/a- ^{zi} ‘set straight’	215	ANTICAUSATIVE
mehuwandahh- ⁱ ‘make old’ vs. mehuwandahh- ^{tt(a)(ri)} ‘age’	3	ANTICAUSATIVE
sārr- ⁱ ‘divide (tr., OS)’ vs. sarra- ^{tt(a)(ri)} ‘split up (intr.), be split’	1	ANTIC./PASS.
tamāss- ^{zi} ‘press, oppress (MS)’ vs. tamass- ^{tt(a)(ri)} ‘be oppressed’	5	PASSIVE
wars- ^{tt(a)(ri)} ‘lift up (intr.), be(come) appeased (MS)’ vs. warsiye/a- ^{zi} ‘relieve (one’s spirit)’	1	ANTIC./PASS.
wemiye/a- ^{zi} ‘find (OS)’ vs. wemiye/a- ^{tt(a)(ri)} ‘be found’	1	PASSIVE
weriye/a- ^{zi} ‘call, name, summon (MS)’ vs. weriye/a- ^{ttari} ‘join’	7	LEXICALIZED
OPPOSITIONAL PAIRS CONTINUED FROM OH AND MH		
as(sa)nu- ^{zi} ‘take care of’ vs. as(sa)nu- ^{tt(a)(ri)} ‘be taken care of’	1	PASSIVE
hai(n)k- ^{tt(a)(ri)} ‘bow (intr.)’ vs. hai(n)k- ^{zi} ‘offer’	1	LEXICALIZED
halzai- ⁱ ‘call’ vs. halzi- ^{a(ri)} ‘be called (mid.)’	3	PASSIVE
hantae- ^{zi} ‘align (tr.); determine’ vs. handai- ^{tt(a)(ri)} ‘align (intr.); be determined’	189	ANTIC./PASS.
happ- ^{zi} ‘join (tr.)’ vs. happ- ^{(t)a(ri)} ‘join (intr.); work out’	2	ANTICAUSATIVE
harp- ^{tt(a)(ri)} ‘join (intr., OS)’ vs. harp- ^{zi} ‘join, pile up (tr.)’	2	ANTICAUSATIVE
nai- ⁱ ‘turn; send’ vs. nē- ^{a(ri)} ‘turn (intr.); be sent’	26	ANTIC./PASS.
nini(n)k- ^{zi} ‘set in motion (tr.)’ vs. nini(n)k- ^{tt(a)(ri)} ‘mobilize (intr.)’	7	ANTICAUSATIVE
damme/ishae- ^{zi} ‘damage’ vs. damme/ishae- ^{tt(a)(ri)} ‘be damaged’	1	PASSIVE
tarna- ⁱ ‘release (OS)’ vs. tarna- ^{tt(a)(ri)} ‘be released’	2	PASSIVE

<i>tarupp</i> ^{-zi} ‘gather (tr., OS)’ vs. <i>tarupp</i> ^{-ta(ri)} ‘gather (intr.), be gathered’	6	ANTIC./PASS.
<i>zahh</i> ^{-i/ta(ri)} ‘hit’, <i>zahh</i> ^{-ta(ri)} ‘be hit’	1	PASSIVE
<i>zinni-/zinn</i> ^{-zi} ‘stop (tr.)’, <i>zinna</i> ^{-ta(ri)} ‘finish (intr.)’	4	ANTICAUSATIVE

In addition to oppositional middle verbs, in NH/NS one also finds a large number of verbs that inflect according to both voices without a functional motivation (Table 38). As discussed for the MH data, whereas with a number of these it is hard if not impossible to determine their original voice, it is clear that the majority of these verbs were originally either *activa* or *media tantum* that for the reasons discussed in sec. 3.2.2 were partly transferred to the other class. Again, the transfer from the active to the middle voice is relatively sporadic, as shown by the low type and token frequency of middle forms: it is mainly driven by analogy and concerns intransitive verbs only. A clear example of this process in NH texts is the verb *huwai*⁻ⁱ ‘run’, which is attested in the active voice since OH, and shows only a handful of middle tokens in NH, possibly on analogy to the semantically similar and more frequent verb *iyē/a*^{-ta(ri)}. By contrast, the transfer from middle to active inflection is more systematic for transitive deponent *media tantum* and *-ske/a-* derived verbs.

Table 38: NH verbs attesting to functionally identical active and middle forms

Verb	Token
MIDDLE > ACTIVE	
<i>akkiske/a</i> ^{-ta(ri)} ‘die’	19
<i>lukk</i> ^{-ta} ‘get light, dawn’	2
<i>nahsariye/a</i> ^{-zi} ‘be(come) afraid’	6
<i>pahs</i> ⁻ⁱ ‘protect’	39
<i>pars(i)</i> ^{-a(ri)} ‘break (tr.)’	18
<i>sārr</i> ⁻ⁱ ‘transgress’	1
<i>zahhiye/a</i> ^{-zi} ‘fight’	1
ACTIVE > MIDDLE	
<i>āss</i> ^{-zi} ‘remain’	2
<i>huwai</i> ⁻ⁱ ‘run’	1
<i>istar(k)</i> ^{-zi} , <i>istar(ak)kiye/a</i> ^{-zi} ‘be(come) ill’	1
<i>kallaressske/a</i> ^{-zi} ‘become inauspicious’	1
<i>mēma</i> ⁻ⁱ ‘speak, tell’	1
<i>mer</i> ^{-zi} ‘disappear, vanish’	1

<i>nakkēss</i> ^{-zi} ‘become important’	3
<i>tame(n)k</i> ^{-zi} ‘affix, stick to, join (intr.)’	1
<i>watku</i> ^{-zi} ‘jump, flee’	1
UNCERTAIN	
* <i>hassuezziye/a</i> ^{-tta(ri)} ‘be(come) king’	7
<i>uske/a</i> ^{-zi} ‘see’	9
<i>haliye/a</i> ^{-zi} ‘kneel down’	4
<i>hanna</i> ⁻ⁱ ‘sue, judge, contest’	2
<i>karūss(iye/a)</i> ^{-zi} ‘be(come) silent’	2
<i>mau/mu</i> ⁻ⁱ , <i>mauss</i> ^{-zi} ‘fall’	1
<i>neku</i> ^{-zi} ‘become evening’	1
<i>sup</i> ^{-(tt)a(ri)/zi} ‘fall asleep, sleep’	1
<i>weh</i> ^{-zi} ‘turn’	13

The development of deponents deserves a more detailed discussion. As pointed out already by Neu (1968b: 54-56), most of the original deponent verbs were to some extent transferred to active *hi*- or *mi*-inflection (cf. Hoffner & Melchert 2008: 233, Melchert forthc.b: 18 ff., 25-26, Oettinger forthc.: 16-18, and the discussion under the individual lemmas in Part Two).⁹ This tendency, that can be already singled out in the OH verb *hatt*^{-a(ri)} >> *hazziye/a*^{-zi} ‘hit, pierce’, continues in MH times, and is pervasive in NH.

Evidence that the transfer of deponents to active inflection is increasingly common also comes from the syntax of these verbs. As observed by Neu (1968a: *passim*), despite being largely transitive, some deponents sporadically occur in an intransitive construction, with various functions. Compare the occurrence of a transitive middle form *pars(i)*^{-a(ri)} in (1)a, with the intransitive form *parsittari* in

⁹ Forms of the *mi*-inflection are attested for verbs that form the active paradigm on an enlarged *-ye/a-* stem, such as *parsiye/a*^{-zi}, *huettiye/a*^{-zi}, *wassiyē/a*^{-zi} and *zahhiye/a*^{-zi} (in the case of *parsiye/a*^{-zi} and *huettiye/a*^{-zi}, transfer to the *-ye/a*^{-zi} class was probably due to the occurrence of the 3rd person stems in *-i-* on the base verbs *huett(i)*^{-a(ri)} and *pars(i)*^{-a(ri)}, see Part Two for discussion). The only simple deponent verbs that display *mi*-inflection are *tuhs*^{-a(ri)} and *parh*^{-zi}. The rest of the *media tantum* are more commonly transferred to *hi*-inflection. Since *hi*-inflection mostly constitutes a non-productive inflectional type, as the frequent transfers from *hi*- to *mi*-inflection in the history of Hittite show (cf. Kloekhorst 2008), one can assume that the transfer of deponents to active inflection began quite early. The more or less systematic transfer of deponent verbs to active inflection is also attested elsewhere in the IE family, as in the case of Old Irish, whose deponent verbs were virtually all eliminated by Modern Irish time (cf. Cowgill 1983: 73).

(1)b. As these examples show, beside occurring in a transitive construction, middle forms can equally be used intransitively with anticausative function.

- (1) a. ^{LÚ}SÌLA.ŠU.DU₈ LUGAL-*i* NINDA.KUR₄.RA *parsiya*
 cup.bearer king.DAT bread break.PRS.3SG.MID
 “The cup bearer breaks bread for the king.” (KBo 25.61 ii 10, OH/OS)
- b. MUN-*as=ma=kan* GIM-*an hassi* *anda parsittari*
 salt.NOM=PTC=PTC as brazier.DAT in break.PRS.3SG.MID
 “Just as the salt disintegrates on the brazier...” (KBo 6.34 ii 9-10, MH/NS)

Similarly, whereas the deponent verb *huett(i)-^{a(ri)}* ‘draw, pull’ is always transitive in OH, in NH it is sometimes attested in an intransitive construction. As comparison between examples (2)a and (2)b shows, when used intransitively middle *huett(i)-^{a(ri)}* is semantically passive, as confirmed by the occurrence of the agent phrase *IŠTU È.LUGAL* ‘by the palace’. The same pattern, whereby transitive forms of deponent verbs coexist alongside sporadic intransitive forms with passive function is also attested for *tuhs-^{a(ri)}* ‘cut, be cut’ and *parh-^{ta(ri)}* ‘chase, be chased’ (see Part Two for discussion).

- (2) a. [xxx] URU-*riyaz* ERIN^{MEŠ}=ŠU *huittiyati*
 city.ABL troop(PL)=3SG.POSS draw.PST.3SG.MID
 “[...] moved (lit. drew) his army from the city.” (KBo 3.22 rev. 54, OH/OS)
- b. [GIM-(*an=ma*)] *uit* IŠTU È.LUGAL DI-*essar* *ku[(itki*
 when=PTC come.PST.3SG by palace case(N).NOM INDF.NOM.N
 EGIR-*pa huitti)]yattat*
 back draw.PST.3SG.MID
 “But when it came to pass that the trial was somewhat protracted by the palace.” (KUB 1.1+ iii 14-15, NH/NS; integration from KUB 19.67+ NH/LNS, cf. Otten 1981: 38)

The intransitive use of otherwise deponent verb illustrated in (1) and (2) has been described by Luraghi (2010a, 2012 *passim*) as instantiating lability, since these verbs display a valency change of either the anticausative or the passive type without an overt morphological encoding of the alternation. This interpretation is not however entirely accurate. Indeed, middle forms of deponent verbs with intransitivizing function only appear in MH and NH times, after transitive forms of the verb have been transferred to active inflection. Rather than speaking of lability, one can assume that only once deponent verbs were partly transferred to active inflection, could new oppositional middle

forms be made on the basis of such active transitive forms following productive patterns of active vs. middle voice alternation (thus also Melchert forthc.b: 13-14). Evidence for a later development of oppositional middle forms of original deponents also comes from the morphology of these verbs. A case in point is *pars(i)-^{a(ri)}*: since OH, when used transitively the verb always takes the ending *-a(ri)*, whereas the few intransitive forms all display the more recent and productive ending *-ta(ri)* (cf. Neu 1968b: 57).

3.2.4. The development of the middle voice in Hittite: a summary

In the previous sections, I have shown that middle verbs are not equally distributed across the three diachronic sub-corpora of Old, Middle, and New Hittite, as summarized by the quantitative data concerning their type and token frequency in Table 39.

Table 39: Token and type frequency of middle verbs in the corpus

	Token frequency	Type frequency
OH	204	37
MH	313	52 (34 since MH)
NH	1152	70 (34 since NH)
Total	1669	105

In OH, 37 verbs are inflected in the middle voice, for a total of 204 tokens. In MH, beside a group of verbs that already occurred in OH, one finds 34 new verbs that inflect in the middle voice, for a total token frequency of 313 occurrences. Most of the material comes from the NH corpus, which includes 70 middle verbs, 34 of which occur in NH only, for a total of 1152 tokens. Clearly, such an unbalanced distribution makes quantitative analyses across the three sub-corpora unreliable. Also, lack of an annotated corpus that covers the entire documentation of the language greatly limits the possibility to carry out significant quantitative analyses (cf. Inglese 2015). For instance, without information about the overall token size of the three sub-corpora and the frequency of verbs in general, it is impossible to draw compelling quantitative conclusions regarding the spread and/or decay of the middle voice from Old to New Hittite. Even if the token and type frequency of middle verbs in NH is higher, this can well be simply a by-product of the larger corpus size, and the ratio of middle verbs in terms of token and type frequency might be the same as in OH. However, given the lack of data on the overall size of the three sub-corpora, the hypothesis cannot be properly tested.

Nevertheless, the distribution shown in Table 9 provides at least one interesting insight on the productivity of the middle voice in the history of Hittite.¹⁰ As the data in Table 9 shows, in the passage from MH to NH only 35 new verbs are attested, which is virtually the same amount of new verbs that one detects moving from OH to MH. This distribution is clearly surprising, as it does not match the expected increase of corpus size from MH to NH, as even a quick glance at Goedegebuure's (2014) list of MH/MS and NH/NS texts reveal. This is especially true if one looks at the token frequency of middle verbs in NH as compared to MH. If the increase that one observes in token frequency (314 > 1153) were to be mirrored by a parallel increase in type frequency, we would expect to find in NH texts at least 190 middle lemmas. This prediction is however openly falsified by the actual distribution of middle lemmas as extracted from the corpus. To put it differently, the discrepancy in the increase of token and type frequency shows that in NH times, tokens of already well-established middle verbs increase in number (due to the larger size of the corpus), but the number of new verbs that are added to the lexicon at this stage is way more restricted.

If one turns to the distribution of individual classes of verbs and functions illustrated in the previous sections, an interesting picture emerges. Again, the data should be read with care, as accidental gaps in the documentation clearly affect the overall picture. Nevertheless, the distribution that one detects in the extant sources is at least suggestive that one is dealing with a real and ongoing diachronic development.

In the first place, *media tantum* and oppositional middle verbs are not evenly distributed in the corpus, as the summary in Table 40 shows. Whereas in OH the majority of the verbs are *media tantum*, with only a few oppositional middle verbs, the tendency is reversed in MH and NH times, with *media tantum* being largely outnumbered by oppositional middle forms. This distribution is the outcome of the convergence of different processes. First, a number *media tantum*, chiefly deponents and intransitive *-ske/a-* verbs, are partly transferred to active inflection, thereby falling into the ACTIVE = MIDDLE group. Whereas with the majority of verbs such transfer is never fully achieved, as active and middle forms coexist alongside until NH times, a few verbs attest to a complete renewal, whereby NH active form entirely replace middle ones, as in the case of OH *tith-a^(ri)* > NH *titha-i* 'thunder' (which also shows a newly created stem *titha-*) and OH *salig-a^(ri)* > *salig-zi* 'approach'. It is also important to observe that those *media tantum* that do not undergo a change of inflection are those that display the highest token frequency, e.g. *ki-tta^(ri)* 'lie' and *kis-a^(ri)* 'happen, become'. This fact is

¹⁰ I understand here productivity in the narrow sense of *extensibility*, i.e. the capacity of a morphosyntactic pattern to be applied to new items in the lexicon (cf. Barðdal 2008; see discussion in Chap. 2).

unsurprising: high frequency forms are notoriously more likely to retain older morphosyntactic patterns, as they are more entrenched and are stored independently in the lexicon (cf. Bybee 2006).¹¹

In the second place, new oppositional middle verbs are created, according to two main patterns. On the one hand, intransitive *media tantum* of various kind start developing oppositional active forms with various functions, as in the case of *happ-^{ta(ri)}* ‘join (intr.)’ >> *happ-^{zi}* ‘join (tr.)’ and *lazziye/a-^{ta(ri)}* ‘be(come) good’ >> *lazziye/a-^{zi}* ‘set straight’. On the other hand, oppositional middle forms of verbs that originally must have been *activa tantum* in OH appear, as in the case of most derived causative *-nu-* and *-ahh-* verbs.

Table 40: Diachronic distribution of *media tantum* and oppositional middle verbs (types)

	<i>MEDIA TANTUM</i>	OPPOSITIONAL MIDDLES	ACTIVE = MIDDLE
OH	27 (73%)	7 (19%)	3 (8%)
MH	15 (28%)	21 (40%)	17 (32%)
NH	13 (18%)	32 (46%)	25 (36%)

Concerning oppositional verbs, as discussed in Chap. 2, if one considers data from all stages of the language, including copies, the passive function is quantitatively the most prominent one, closely followed by the anticausative, with reflexive and reciprocal playing a minor role only. If we zoom in on the diachronic distribution in original texts, a different pattern can be detected, as shown in Table 41. I have already discussed how oppositional middle verbs are on the rise from OH to NH. Beside increasing in type and token frequency, one also detects an increase in the passive function, which is largely underrepresented in OH but becomes increasingly common in NH. Increased productivity of the passive is also nicely illustrated by the creation of middle forms with passive readings out of old deponents transferred to active inflection in NH, as discussed in section 3.3.3. By contrast, the anticausative function, which was clearly prominent in OH, especially if one also counts those *media tantum* that indicate spontaneous events, shows only a more restricted expansion in post-OH times. The fact that the middle voice becomes increasingly associated with the encoding of the passive function over time can also be explained if one considers that this is the only function for which a

¹¹ It is interesting to observe that whereas the progressive demise of *media tantum* is a process that is common to many ancient IE languages, this is not always the case. For instance, unlike what happened in Hittite, in the history of Latin the class of *media tantum* became increasingly productive over time, as it became productively associated with new formations such as denominal verbs (cf. Flobert 1975, Gianollo 2010, Pinzin 2015).

more productive dedicated alternative construction is possibly not available in the language (see Chap. 2, sec. 3.2.2.6).

Table 41: Diachronic distribution of the functions of oppositional middles

	ANTICAUSATIVE	PASSIVE	ANTIC./PASS.	RECIPROCAL	REFLEXIVE
OH	3	2	0	1	1
MH	6	7	6	0	1
NH	9	13	8	0	0

To sum up, in this section I have illustrated how different processes contribute to altering the pattern of voice distribution from OH up to NH. If we take the distribution of middle verbs in original texts from OH to NH at face value, the picture that emerges is one of diffusion of voice alternation, whereby an increasing number of verbs display a productive active vs. middle voice alternation to encode a variety of valency changing derivation. Voice fluctuations of some *activa* and *media tantum* can also be taken as an attempt to analogically level out the original lexical distribution of verbal voice, by transferring transitive *media tantum* to the active paradigm and intransitive (unaccusative) active ones to the middle one. As I discuss in sec. 3.3, these changes can also be described in terms of increased paradigmaticization.

3.2.5. The middle voice and the particle =za: outline of the diachronic relationship

As discussed in Chap. 1, many features of the synchronic distribution and the diachrony of the particle =za still escape our understanding, and a new in-depth corpus-based assessment of the data is necessary before coming to any more stable conclusion. Once properly described, especially the historical development of the particle will surely provide important new insights on the dynamics of the changes in the domain of the morphological middle voice as well.

In Chap. 2, I have already highlighted aspects of the functional convergence and difference of the middle voice and =za in the encoding of valency changing operations, chiefly reflexive and the reciprocal. In the remainder of this section, I discuss how the detailed analysis of middle verbs carried out in the preceding chapters can fill in some gaps and contribute to improve our understanding of the historical relationship between the middle inflection and the particle =za.

Scholarly opinions on the precise extent of such interaction differ. Boley (1993: 212 ff.) describes the historical relationship between the two as one of replacement. According to her, the middle voice originally covered a number of functions, including the encoding of direct and indirect reflexive situations. Later on, in some contexts middle forms came to be reinforced by the particle =za that

indicated some sorts of emphasis, i.e. what she labels ‘ethical dative’ (see Yakubovich 2006 for a similar discussion on the Luwian data). Starting from these contexts, the function of the middle inflection was transferred to the particle, leading to a progressive decay of the middle voice and its replacement by active inflection with $=za$, to the effect that “middles that are so actively subject-oriented they take on or switch to active morphology and acquire $-za$ in the process (e.g. verbs of body care)” (Boley 1993: 187). To put it differently, under Boley’s approach, the Hittite middle voice domain underwent a deep restructuring whereby the older inflectional middle marker was ousted by a newly created reflexive marker that also extends to encode non-reflexive middle situation types. A similar approach is also pursued by Cotticelli Kurras & Rizza (2013: 11): as the authors point out, one can imagine an early stage in which the middle inflection covered the entire functional domain of the typological middle, including reflexivity. Some of these functions received for some reason extra marking through $=za$, which was later grammaticalized as the new conventional means of encoding reflexivity and related domains. The process described by Boley (1993) and Cotticelli Kurras & Rizza (2013) essentially complies with Kemmer’s (1993) predictions about the diachrony of reflexives evolving into middle markers. As a close parallel, one can mention the demise of the Latin mediopassive inflection, replaced in Romance languages by the combination of active verbs with outcomes of the Lat. reflexive pronoun $sē$, which started to emphatically reinforce some verbs inflecting in the mediopassive in Classical and Late Latin already (cf. Cennamo 1993, 1998). This type of development can be understood as a cyclic change, i.e. a process of morphosyntactic renewal whereby an original optional ‘emphatic’ item undergoes grammaticalization and replaces an older marker as the new standard means of encoding a given functional domain (cf. already Jespersen 1917; see van Gelderen 2011 for discussion with references).

A different scenario has been proposed by Luraghi (2010a, 2012). According to Luraghi, Hittite attests to a split in the encoding of the semantic domain of the middle. On the one hand, the morphological middle is typically used with stative or change-of-state events that feature a non-controlling participant. On the other hand, the particle $=za$ is connected with the encoding of events that feature a higher degree of subject involvement, thus including controlled reflexive situations and self-beneficent. Luraghi’s account differs from the other ones in that she does not assume a functional decay of the middle voice that progressively loses ground to the particle $=za$, but rather envisages a scenario in which the two coexist from the beginning as markers dedicated to the encoding of different functional domains, with only minor overlaps.

Both scenarios outlined so far have their own merit, and are in principle equally conceivable. In part, the different claims that they put forward hinge upon different reconstructions of the original meaning of the middle in the proto-language, which is in turn a current matter of debate (cf. sec. 3.4).

Moreover, since none of the authors base their observations on a comprehensive description of either the middle voice or the particle =za, the exact dynamics of how either developments precisely came about have received less attention, and only a new-corpus based analysis of the particle =za could complement the data presented in this work and lead to a better understanding of the issue (cf. Smith in prep.). Finally, a matter that deserves a more in-depth investigation, which I leave out here, is the extent to which language contact with Luwian might have influenced the development of the particle =za in its relationship to middle verbs.

Let us turn now to discussing how the particle =za distributes with middle verbs that occur in my corpus. As I discuss in Part Two, in original texts there is a sizable number of verbs that inflect in the middle voice and display an interaction with the particle =za. These verbs are summarized in Table 42. I refer to Part Two for examples of the individual predicates, and only summarize the main patterns here.

Table 42: Middle verbs that occur with the particle =za

1) Oppositional active vs. middle (with =za) verbs			
ACTIVE	MIDDLE (WITH =ZA)	DATE	FUNCTION
<i>nai</i> ⁻ⁱ ‘turn’	(=za) <i>nē</i> ^{-a(ri)} ‘turn (intr.)’	MH	autocausative
<i>hantae</i> ^{-zi} ‘align (tr.)’	(=za) <i>handai</i> ^{-tta(ri)} ‘align (intr.)’	MH	autocausative
<i>sārr</i> ⁻ⁱ ‘divide (tr.)’	(=za) <i>sarra</i> ^{-tta(ri)} ‘split up (intr.)’	NH	autocausative
<i>suppiyahh</i> ⁻ⁱ ‘purify’	=za <i>suppiyahh</i> ^{-ati/ta(ri)} ‘purify oneself’	OH [?]	reflexive
<i>das(sa)nu</i> ^{-zi} ‘strengthen’	<i>das(sa)nu</i> ^{-tta(ri)} ‘strengthen oneself’	NH	reflexive
2) Media tantum with and without =za			
MIDDLE	MIDDLE WITH =ZA	DATE	
<i>nahsariye/a</i> ^{-tta(ri)} ‘be(come) afraid’	=za <i>nahsariye/a</i> ^{-tta(ri)} ‘become afraid’	NH	-
<i>es</i> ^{-a(ri)} ‘be seated’	=za <i>es</i> ^{-a(ri)} ‘sit down’	NH	-
<i>kīs</i> ^{-a(ri)} ‘happen’	=za <i>kīs</i> ^{-a(ri)} ‘become’	MH	-
<i>sup</i> ^{-(tt)a(ri)/zi} ‘sleep’	=za <i>sup</i> ^{-(tt)a(ri)/zi} ‘fall asleep’	NH	-
<i>karūss(iye/a)</i> ^{-zi} ‘be(come) silent’	=za <i>karūss(iye/a)</i> ^{-tta(ri)} ‘keep silent’	NH	-
3a) Media tantum with meaningful use of =za			

SIMPLE	WITH THE PARTICLE	DATE	FUNCTION
<i>pahs</i> - ^{a(ri)} ‘protect’	=za <i>pahs</i> - ^{a(ri)} ‘protect (one’s own land)’	MH	possessive
<i>hanna</i> - ^{ta(ri)} ‘sue’	<i>hanna</i> - ^{nta(ri)} ‘argue with each other’	NH	reciprocal
3b) Lexicalized combination of verb and =za			
ACTIVE	MIDDLE	DATE	
-	=za <i>es</i> - ^{a(ri)} ‘occupy’	MH	-
-	=za <i>uske/a</i> - ^{ta(ri)} ‘watch out for’	NH	-
=za <i>asās</i> - ⁱ ‘settle’	=za <i>aseske/a</i> - ^{ta(ri)} ‘be settled’	NH	-
=za <i>halzai</i> - ⁱ ‘call’	=za <i>halzi</i> - ^{a(ri)} ‘be called (mid.)’	NH	-

Based on their relationship with =za, the verbs in Table 42 can be sorted out in three groups. In the first place, there are oppositional middle verbs that occur with the particle =za only in the middle voice (Group 1). In these cases, the particle can be thought of as reinforcing the meaning of the middle voice. To begin with, this is the case of reflexive verbs, as discussed in Chap. 2. Consider e.g. =za *suppiahh*-^{ta(ri)} ‘purify oneself’ as opposed to the active transitive verb *suppiahh*-ⁱ ‘purify’, and =za *dassanu*-^{ta(ri)} ‘strengthen oneself’ reflexive to active transitive *dassanu*-^{zi} ‘make strong’. The same pattern is also attested for verbs that only occur in copies, such as (=za) *warp*-^{ta(ri)} ‘wash oneself’. In addition, the particle =za also occurs with middle verbs in anticausative function when they are opposed to transitive active verbs that do not normally take the particle. These verbs include *nē*-^{a(ri)} ‘turn (intr.)’, *handai*-^{ta(ri)} ‘align (intr.)’, and *sarra*-^{ta(ri)} ‘separate’. With both classes of verb, the particle =za arguably does not contribute to the verb’s meaning, but only disambiguates a reflexive/autocausative reading from other possible ones. In this respect, note that oppositional middle forms with passive meaning are never reinforced by the particle. It should be remarked that besides surface similarities, these two patterns show two significant differences. The first is diachronic: reflexive forms with =za go back to OH/OS, as in the case of =za *suppiahh*-^{ta(ri)} in KBo 25.112 ii 14 (but see Part Two on the controversial dating of this text), whereas middle verbs with =za and anticausative meaning only start occurring in MH times. Moreover, the two patterns differ in their token frequency. The occurrence of =za with reflexives is systematic, to the extent that reflexive middle forms without the particle are extremely rare, whereas the reverse is true for anticausative verbs, which prefer the simple form and only occur with the particle in a very few cases. For instance, in NH/NS texts the middle verb *nē*-^{a(ri)} ‘turn (intr.)’ occurs with the particle only 3 times

out of 25 total tokens. Clearly, this distribution points to the reflexive usage of the particle as being older and more entrenched than the autocausative one.

In the second place, the particle occurs with verbs that are *media tantum* or that display an active counterpart with the same meaning as the middle (Group 2). With these verbs, one often observes that the occurrence of the particle affects the lexical semantics of the predicate, as it triggers a reading of the verb that differs from that of the base form. For verbs that can be construed as either static or dynamic, the particle tends to correlate with the change-of-state meaning, as in the case of *es*-^{a(ri)} ‘be seated’ vs. =*za es*-^{a(ri)} ‘sit down’, and possibly =*za nahsariye/a*-^{ta(ri)} ‘become afraid’ and =*za supp*-^{ta(ri)} ‘fall asleep’. With other verbs, the particle =*za* highlights the subject’s involvement, as in e.g. =*za kīs*-^{a(ri)} ‘become’ as opposed to *kīs*-^{a(ri)} ‘happen’, or underscores higher control on behalf of the subject, e.g. =*za karussiye/a*-^{ta(ri)} ‘keep silent’ vs. *karussiye/a*-^{ta(ri)} ‘be silent’.

With other verbs, the particle does not appear to interact with the middle voice specifically, so that the co-occurrence of both on the same verb should be understood as driven by different factors. These verbs fall into two sub-classes. First, the particle can occur with middle verbs instantiating one of its productive functions, in the same way as it does with active verbs (Group 3a). For instance, the particle occurs in its possessive function with transitive *media tantum*, as with e.g. =*za pahs*-^{a(ri)} ‘protects (one’s own land)’, as well as in its reciprocal function, as with =*za hanna*-^{ta(ri)} ‘argue with each other’. Second, the particle appears to be lexicalized with a number of predicates to yield a partly unpredictable and idiosyncratic meaning (Group 3b). A peculiar case is the verb *au*-ⁱ ‘see’. The verb does not normally occur with the particle, but middle *-ske/a-* forms systematically do with the meaning ‘watch out for’. Similarly, the verb *es*-^{a(ri)} occurs in a transitive construction with the particle and the meaning ‘occupy, settle’. Finally, there are also active verbs that display a lexical combination with the particle, as in e.g. =*za halzai*-ⁱ ‘call by name’ (vs. *halzai*-ⁱ ‘call, shout’) and =*za asās*-ⁱ ‘settle’ (vs. *asās*- ‘make sit’). These verbs also have middle oppositional counterparts with passive reading, that likewise occur with the particle. Clearly, with these verbs the particle does not contribute to the expression of passive meaning, as it only occurs because the combination of the particle with the active verb has been lexicalized with a specialized semantics.

Summing up, the particle occurs with a variety of middle verbs, and displays different functions. Out of the verbs listed in Table 42, only with the ones in Group 1 does the particle converge with the middle voice in the encoding of valency reducing operations. With the other verbs, the occurrence of the particle rather reflects its distribution with active verbs elsewhere, so that no specific interaction with the middle voice can be singled out. A clearer picture emerges if one considers the data from a diachronic perspective. In OH/OS texts, the middle voice and the particle =*za* are in almost complete complementary distribution, with the only exception of =*za suppiyahh*-^{ati/ta(ri)} ‘purify oneself’.

Starting from MH/MS times, two main developments take place. First, beside the reflexive function, the particle also starts reinforcing oppositional middle forms with anticausative meaning, such as (=za) *nē-^{a(ri)}* ‘turn (intr.)’, even though this remains a marginal pattern. Possibly based on this extension from reflexive to the anticausative use, the particle starts to occur with a number of *media tantum* that indicate change-of-state events, in which case it underscores semantic components linked with dynamicity and subject control/involvement. Second, the lexicalized collocations of given verbs plus the particle start occurring, thereby weakening the link between the particle and the grammatical domain of reflexivity.

The development sketched here, based on the distribution of =za with middle verbs in original OH, MH, and NH texts, seems to support Luraghi’s scenario, whereby the middle and the particle =za were dedicated to the encoding of different sub-parts of the functional domain of the typological middle in OH and only later partly converged. This is especially true if one considers the reflexive and the reciprocal functions, which are domains in which, as discussed in Chap. 2, the particle =za is more productive than the middle voice since OH, because of its of higher type frequency and of its wider syntactic and semantic range of applicability.

3.3. The diversity of the Hittite middle voice: diachronic explanations

In the previous sections, I have provided a detailed description of how middle forms distribute in the three sub-corpora of OH, MH, and NH, and have highlighted those patterns of distribution that may hint at ongoing diachronic processes in the history of the language. The main finding is that the passive voice is on the rise from OH to NH and that voice alternation, which only concerned a few predicates in OH, becomes increasingly widespread in the verbal system, with a progressive demise of the *media tantum*.

In this section, I would like to focus my attention on the specific diachronic processes that gave rise to the Hittite middle voice as we observe it in historical texts. The main aim of this section is to illustrate how the synchronic variation that has been documented in Chap. 2, and that is admittedly difficult to account for in synchronic terms, can be at least partly explained as being rooted in diachrony. In doing so, I frame the discussion of the Hittite data within the diachronic typology of middle voice systems and valency changing markers discussed in Chap. 1. Specifically, I provide articulated answers to the following questions: how do different functions detected for oppositional middle verbs relate to one another in diachrony? What is the historical relationship between *media tantum* and oppositional middles? Can the development of the Hittite middle voice be described in terms of grammaticalization?

3.3.1. The middle voice as a valency changing device: in search of the original function

As I have extensively discussed in Chap. 2, the middle voice can be classified as a polyfunctional marker of various valency changing derivations, since intransitive middle verbs can be used in opposition to transitive active verbs in four basic functions, i.e. anticausative, passive, reflexive, and reciprocal. Synchronically, this pattern of polysemy is not exceptional, as the clustering of such intransitivizing functions is a recurrent feature of middle voice markers cross-linguistically (see Chap. 1 for discussion).

In most typologically oriented works, in order to explain the synchronic and diachronic association of middle voice makers with such range of functions, functional similarity among these is often assumed as the driving factor. As Givón puts it “detransitive constructions, most conspicuously the passive, commonly arise via re-grammaticalization of some functionally related construction [...], functional extension of syntactic constructions is driven primarily by functional similarity” (Givón 2001: 92).

Concerning the four functions at hand, they indeed all share a number of similar features. Structurally, they are all intransitivizing strategies and alter the argument structure construction of transitive verbs. In Hittite, reduced transitivity of oppositional middle verbs is confirmed by their consistent occurrence with enclitic subject pronouns, which are notoriously available to a sub-set of intransitive predicates only. Semantically, they rank low on the semantic scale of transitivity laid out by Hopper & Thompson (1980) and encode situation with a lower degree of distinguishability between participants and sub-events (Kemmer 1993).

Invoking functional similarity however does not readily explain how the different functions are diachronically related in terms of sources and targets. Indeed, as recently pointed out by Sansò (2017: 206), “functional similarity [...] is an elusive concept if we are not able to figure out a hypothetical context in which there may be ambiguity between the source and the target constructions”. To put it differently, in order to understand the precise dynamics of such diachronic developments, one has to individuate what Heine (2002: 84) defines as *bridging contexts*, i.e. those contexts that “trigger an inferential mechanism to the effect that, rather than the source meaning, there is another meaning, the target meaning, that offers a more plausible interpretation of the utterance concerned”. Starting from such ambiguous contexts the new meaning can be taken over by speakers and eventually fully conventionalized.

In the case of the Hittite middle voice, diachronic investigations *à la* Heine (2002) are further complicated by the fact that we are dealing with a (set of) verbal ending(s), i.e. with an already highly bounded grammatical marker, which cannot be easily shown to derive from a previous lexical item following a canonical path of grammaticalization (see sec. 3.4 on the etymological reconstruction of

the PIE middle voice). As a result, the original meaning from which the rest of the functions of the Hittite middle voice derive cannot be easily singled out. In addition, there is no compelling textual evidence to decide which of the four oppositional functions was the original one, as they all coexist since OH, although to different extent (sec. 3.2.1).

In the remainder of this section, I try to assess which is the most probable diachronic scenario that can explain the polyfunctionality of the Hittite middle, and illustrate possible bridging contexts in which source functions could have led to the development of target functions. Here, I rely on inner-Hittite data only, and momentarily leave out etymological considerations regarding the possible origin and function of the PIE middle voice (see sec. 3.4.). The internal reconstruction pursued in this section is then tested against comparative data in Section 3.4. Note further that here I make no claim concerning the exact dating of these processes. Clearly, since the polyfunctionality is well established in OH, the evolution that led to the creation of the different functions must date at some point between PIE and PAnat. I leave out the issue of the absolute chronology of these changes, which must remain matter of speculation, and rather focus on illustrating the mechanisms that gave rise to the various functions in the first place, as well as their relative chronology.

As discussed in Chap. 1 sec. 1.3.3, Kemmer (1993) was among the first scholars to suggest that reflexive markers constitute the cross-linguistic most frequent source of middle voice systems. Since Kemmer's work, this claim has subsequently been backed up by a considerable amount of cross-linguistic empirical data, to the point that there is a general agreement in postulating a unidirectional REFLEXIVE > MIDDLE grammaticalization path (cf. e.g. Heine & Kuteva 2002).

Nevertheless, despite the typological tendency for reflexive constructions to provide sources for middle markers, reflexivity can hardly lie at the core of the Hittite middle voice system, as already observed by Luraghi (2012). Even leaving aside etymological considerations, on which see sec. 3.4, there are strong reasons to be at least skeptical about a possible reflexive origin of the Hittite middle. In the first place, reflexivity, even though attested since OH, remains a quantitatively marginal function throughout the history of the language. In the second place, as I have discussed in sec. 3.2.5, middle forms with reflexive reading are reinforced by the particle =*za* since their earliest attestation, and the particle remains the most productive strategy to derive reflexives from active transitive verbs (cf. Chap. 2). Finally, the middle voice is only associated with direct reflexives built on two-place predicates, without any trace of the indirect reflexive function. Again, these facts point towards a relatively marginal and underdeveloped status of the reflexive function of the middle voice. If this is so, it is difficult to maintain that the entire system of voice opposition is ultimately derived on such sporadic reflexive usages.

The reciprocal function also constitutes an unlikely candidate for the original function of the middle. As discussed in Chap. 1, even though less frequently than reflexives, reciprocal morphemes can serve as sources of middle voice markers in the world languages (cf. e.g. Kemmer 1993 and Dom *et al.* 2016 on Bantu, Janic 2016 and Moysse-Faurie 2017 on Oceanic, Gandon 2013 on Turkic). However, this is hardly the case in Hittite. Not only is reciprocity the least frequent function associated with the middle voice, but also one observes that reciprocal markers that extended to the encoding of other valency changing operations tend to be derived from collective/sociative morphemes that encode “plurality of relationship” (Lichtenberk 2000), which is clearly not the case of the Hittite middle (see further below in sec. 3.4 on the reconstruction of the PIE middle).

Assuming that the passive voice was the original function of the Hittite middle also runs into problems. Cross-linguistic data suggests that the passive is generally the last stage in the development of valency decreasing markers. Passive markers that provide the source for other intransitivizing functions constitute a typological rarity. So far, extensions from passive to reflexive have been detected only in Uto-Aztecan languages (cf. Dik 1983). Moreover, the development from passive to anticausative has been shown by Kulikov (2011) to occur only in very specific contexts, in which passives of (especially experiential) verbs with generic subjects, i.e. impersonalized passives, can be reinterpreted as indicating a spontaneous event (e.g. Skt. *ucyáte* ‘is pronounced (by someone)’ > ‘(a voice/instrument) sounds’). Finally, data presented in sec. 3.3 clearly shows that the passive function is on the rise in the history of Hittite, so that it appears to be a relatively younger development, hence unlikely to be the original function of the middle voice.

If for the reasons discussed above one discards the reflexive, the reciprocal, and the passive functions as possible candidates for the original functional core of the middle voice, the only remaining option is the anticausative. This function proves in fact much more promising.

To begin with, the anticausative function can easily be the source of the passive. Anticausatives are one of the cross-linguistic more frequent sources of passive constructions, as also evidence by the extensive passive/anticausative polysemy attested in the world languages, including Hittite (see Chap. 2.). This development is also attested elsewhere in the IE family. As a matter of fact, derivational passives such as Indo-Aryan *-ya-* presents and Ancient Greek *-(th)ē* aorists were originally associated (also) with the encoding of (intransitive) spontaneous events and only later developed a passive function (the picture is admittedly more complex than this: for details and further references see Kulikov 2012a on Indo-Aryan and Tronci 2005 and Magni 2010 on Greek).

As already pointed out by Haspelmath (1990), the shift from anticausative to passive can be understood as one of generalization. These two constructions are similar in that they refer to non-controlled Patient-oriented events. Anticausatives are however more specialized, as they can only

indicate Patient-oriented (change-of-state) events that come about spontaneously. Once the spontaneous restriction is dropped, anticausatives can easily develop a passive reading.

Possible bridging contexts in which anticausative constructions can be re-interpreted as passives have been already described in the literature (e.g. Haspelmath 1990). Among these, I would like to focus on the occurrence of spontaneous events with an overt inanimate Cause or Instrument. A remarkably instructive case is provided by verbs that denote changes of physical state such as ‘burn’ or ‘freeze’. With these verbs, the cause is lexicalized in the predicate, to the point that, even though world-knowledge suggests that these events are naturally triggered by some physical agent, speakers can easily conceptualize them as coming about spontaneously (i.e. they are *automatic* anticausatives, cf. Haspelmath 2016). As a result, with these verbs cause expressions, such as ‘burn through fire’ or ‘freeze through ice’, are disfavored because highly redundant. Therefore, in contexts in which for some reason speakers express the cause component through an oblique phrase, the overt mention of the cause can be easily interpreted as highlighting the role of the internal cause in bringing about the event itself. In other words, the overt mention of an internal cause with spontaneous change-of-state events might thus be interpreted by speakers as profiling an externally induced event in which the cause plays a more agentive role.¹²

This is possibly how the construction of a spontaneous event with an instrument phrase ‘burn through fire’ is reinterpreted as a passive construction with an inanimate oblique Agent ‘burnt by fire’. Once the inanimate restriction on the Cause phrase is dropped, and animate Agents start being used, the construction develops into a full-fledged passive. Consider example (3), in which a middle form of Hittite *warnu-* ‘burn (tr.)’ is accompanied by the Instrumental phrase *IZI-it* ‘fire.INST’, which easily lends itself to a passive reading ‘burnt by fire’.

(3) KUR-iyas A.ŠÀ *kuras* IZI-it *warnutari*
 land.GEN field field.NOM fire.INST make.burn.PRS.3SG.MID

“(When a star falls down from the sky), the field of the land will be burnt by fire.” (KUB 8.25 i 8-9, NS)

Similar bridging contexts can also be individuated in stative *media tantum* that denote stable properties of some entity. Consider as an example the Hittite verb *tukk-^{āri}* ‘be visible’. As discussed in Part Two, this verb is a *medium tantum* that predicates a stative perceptual disposition ‘be visible’.

¹² This is ultimately a process of implicature driven by Grice’s (1989) maxime of quantity: in order to interpret as relevant apparently redundant linguistic material, the hearer is prone to give it special prominence.

In absence of an oppositional transitive verb, *tukk-^{āri}* cannot be possibly interpreted as a passive. However, one also finds examples such as (4), in which the verb occurs with the instrumental phrase *sākuwat* ‘through the eye’. In principle, such occurrences are ambiguous between a spontaneous reading ‘visible to/through the eye’ and a passive reading ‘seen by the eye’. Once the passive reading is taken over as more salient by speakers, animate Agents can easily replace inanimate Cause/Instrument phrases, hence licensing a full-fledged passive interpretation.

- (4) *kuis=a ēszī=ma sākuwat=kan duggāri*
REL.NOM=PTC be.PRS.3SG=PTC eye.INST=PTC be.visible.PRS.3SG.MID
“‘And what there is, it is visible with the eye.’” (KUB 23.72 rev. 15, MH/MS)

The process described so far, whereby spontaneous events with an overtly mentioned internal cause are reinterpreted as passive events with an oblique agent, can be sketched as follows:

1. ANTICAUSATIVE CONSTRUCTION¹³

$[N_{1(NOM)} V_{1(MID)}] = [SEM_1 \text{ undergoes the spontaneous change-of-state event denoted by } SEM_2]$

2. ANTIC. CONSTRUCTION WITH INTERNAL CAUSE

$[N_{1(NOM)} N_{2(INST)} V_{3(MID)}] = [SEM_1 \text{ undergoes the spontaneous change-of-state event denoted by } SEM_3 \text{ because of the internal cause } SEM_{2(INAN)}]$

3. PASSIVE CONSTRUCTION WITH OBLIQUE AGENT

$[N_{1(NOM)} N_{2(INST)} V_{3(MID)}] = [SEM_1 \text{ is } SEM_3\text{-ed by } SEM_2]$

Note that, given the limited distribution of cause and agent expressions with passives (cf. Chap. 2), I do not claim that this is the only context in which such change has taken place. Indeed, the development described so far is only one among possible contexts in which the reinterpretation of anticausative verbs led to the rise of passive constructions, i.e. in which verbs that indicate events that come about spontaneously are re-interpreted as indicating externally induced events from the

¹³ For descriptive purposes, in this chapter and in Part Two, constructions in which verbs occur are represented loosely following the conventional layout of Construction Grammar (e.g. Goldberg 1995, 2006), in which constructions are represented as a pairing of form and function.

perspective of the Patient (for other types of contexts, that also apply to the Hittite data, see discussion in Haspelmath 1990 and Heine 2002).

Crucially, for the process to be fully achieved, two factors are necessary that can be described in terms of dropping of semantic restrictions of the original construction. On the one hand, internal inanimate causes are replaced by external animate ones (e.g. ‘burnt by the fire’ > ‘burnt by the man’), while on the other, the construction also extends to verb that cannot but indicate an externally induced event, i.e. verbs such as *cut* that lexicalize the agent-manner component in Haspelmath’s (1993) terms. Finally, in order for the passive construction to become fully conventionalized, passive middle forms need to be formed in opposition to active transitive verbs. To put it differently, the extension of an anticausative into a passive is also linked to the lexical expansion of the marker to verbs that were previously incompatible with its original semantics (cf. Haspelmath 1993: 42). In this respect, one observes that whereas the anticausative function of the Hittite middle voice was virtually restricted to telic change-of-state predicates, once the passive function becomes conventionalized, the middle voice also extends to oppositional passive based on stative/atelic predicates, as discussed in Chap. 2. Note that, as discussed in Chap. 1, it is commonly believed that anticausatives that give rise to passives are in turn derived from earlier reflexive constructions. However, anticausatives that give rise to passives without necessarily having derived from an earlier reflexive, which would be the case of Hittite, have also been documented, as in the case of Korean (cf. Ahn & Yap 2017).

Finally, it should also be observed that whereas the shift ANTICAUSATIVE > PASSIVE captures a general tendency in the development of the Hittite voice system, whereby passive verbs ultimately derive from anticausatives, a closer look at individual verbs shows that the reverse process is also possible. A case in point is the verb *kars(iye/a)^{-zi}*. As discussed in Part Two, also based on etymological considerations, it is likely that the original meaning of this verb was ‘cut’. Consequently, its oppositional middle forms could only have had a passive reading ‘be cut’, this predicate being unavailable to anticausative alternation due to the presence of agent-meaning components (Haspelmath 1993). In specific contexts, in which the Agent of the passive event is deemphasized to the point that the verb becomes an Agentless passive, a new anticausative meaning could develop (cf. Kulikov 2011), following a cline passive ‘be cut (by someone)’ > agentless passive ‘get/be cut’ > spontaneous ‘stop’. Similarly, the verb *karp(iye/a)^{-zi}* originally meant ‘pluck’, so that its oppositional middle forms could only be passive in meaning ‘be plucked’. In specific contexts, especially when combined with object nouns indicating events such as e.g. EZEN^{MES} ‘festivals’ the verb acquired the new metaphorical meaning ‘carry out, bring to completion’, based on which new anticausative middle forms meaning ‘finish (intr.)’ were created. The history of verbs such as *kars(iye/a)^{-zi}* ‘cut’ and *karp(iye/a)^{-zi}* ‘pluck’ nicely shows how, even though more global trends in the

development of the voice system can be detected, one should always keep in mind that individual predicates in certain contexts may undergo specific diachronic changes that differ from the overall tendencies that one observes generalizing over the entire corpus data.

As discussed so far, anticausative forms can easily provide the source construction for the passive function. The shift from anticausative to reflexive and to reciprocal is more difficult to explain, but I would like to argue that even though possibly rarer cross-linguistically, such development is in principle entirely plausible.

The diachronic relationship between anticausative and reflexives has been mostly discussed in connection to reflexive markers extending into the anticausative domain (and eventually developing into passives). Both reflexive and anticausative (decausative) situations refer to one-participant events that do not involve a second distinct external causer. They differ however in that the former systematically refer to events agentively brought about by an Agent that acts upon himself, whereas the latter indicate a spontaneous event undergone by a Patient participant. Therefore, as Haspelmath (1993: 44, also Heine 2002: 89) puts it, in order for reflexives to develop into anticausative, agency restriction on the only participant must be dropped. To illustrate this process, Haspelmath quotes the pair of sentences illustrated in (5), taken from Lakoff (1971: 158).

- (5) a. *John hurt himself (in order to commit suicide)* reflexive, agentive
 b. *John hurt himself (accidentally) = John gets hurt* anticausative, non-agentive

As mentioned in Chap. 1, König & Siemund (2000), drawing on earlier claims by Kemmer (1993: 223), argue that the development REFLEXIVE > ANTICAUSATIVE is unidirectional, and it complies with the general tendency of grammaticalization processes to proceed from less to more abstract grammatical functions, whereby the most abstract function is expected to be the last one to develop in time. In order to explain why reflexive markers are less abstract than other intransitive derivations, including anticausatives, König & Siemund (2000: 59) argue that reflexives differ from other derived intransitivity functions because they are used referentially, i.e. as reflexive anaphor, to indicate co-reference between the subject and the (indirect) object. This observation however only holds for middle markers that arise out of dedicated reflexive anaphors, such as Germ. *sich*, and thus does not tell us much on the diachrony of an already highly grammaticalized marker such as the Hittite middle voice.

Against the commonly held view that the process REFLEXIVE > ANTICAUSATIVE is unidirectional, I argue that a shift from anticausative to reflexive is equally conceivable. The bridging context between the two functions is arguably provided by anticausative verbs of the autocausative type. As discussed

in Chap. 1 and 2, among anticausative events one finds both those that can only come about spontaneously, i.e. decausative such as *melt* (intr.), and those in which the single participant is conceived as volitionally bringing about (at least) the onset of the change of state, typically verbs of self-induced motion, i.e. autocausative or endoreflexives such as *mobilize* (intr.). Notably, some verbs can be used in both meaning depending on the possibility to construe their only participant as volitional or not. Taking anticausative as a starting point, one can assume the following diachronic cline. At the onset, prototypical anticausatives mostly apply to decausative verbs proper with inanimate subjects. When the same verbs are used with animate participants, the latter trigger an autocausative interpretation of the situation, whereby the event is still profiled as coming about without the intervention of an external Agent, but the internal participant is also construed as partly initiating the event himself. In this respect, autocausative events are halfway between anticausatives and reflexives proper. From these contexts, the subject's active participation in a self-induced event can be taken over as the primary semantic component, thus paving the way for the use in reflexive contexts proper.

This process can easily account for the Hittite data. In the first place, anticausative verbs are much more frequent since OH than reflexives, possibly suggesting that the former are more likely to be the source of the latter than the other way round. Moreover, as discussed in Chap. 2, Hittite middle verbs with anticausative function show a strong preference for inanimate subjects, as in e.g. *zinna*-^{ta(ri)} ‘end’, hence showing the primacy of the decausative function. However, verbs with autocausative meaning also occur. Evidence for verbs that occur in both function is rather scanty, but some examples can still be found. Consider for example the behavior of the verb *nini(n)k*-^{ta(ri)}, which can be used with the decausative meaning ‘get moving’, as in (6)a, or with the autocausative meaning ‘mobilize (oneself)’ with an animate subject as in (6)b.

- (6) a. [karitt]es **nininkta**
 flood.NOM.PL raise.PRS.3SG.MID
 “Floods will get moving.” (KUB 8.1 iii 21, NS)
- b. nu mān LÚKÚR kuiski **niniktari**
 CONN if enemy INDF.NOM mobilize.PRS.3SG.MID
 “If some enemy mobilizes (and goes to attack these borders).” (FHL 57+ iii 46-47, NH/NS)

This pattern is not limited to *nini(n)k*-^{ta(ri)}, and is also attested for e.g. *park(iye/a)*-^{ta(ri)} ‘raise (intr.)’, *nē*-^{a(ri)} ‘turn (intr.), happen’, and *weh*-^{ta(ri)} ‘turn’. One can speculate that the possibility of animate

subjects to occur with otherwise decausative verbs led to the expansion of the autocausative use, hence providing the natural bridging context to reflexive situations proper, in which the subject not only initiates the event, but is also fully affected by it. In this respect, it is important to observe that most Hittite middle forms employed to indicate reflexive events in fact belong to the grooming type rather than to direct reflexive proper, as discussed in Chap. 2. Grooming verbs such as ‘wash’ and ‘dress’, also known as inherent or lexical reflexive, notoriously involve a lesser degree of distinguishability between the Agent and the Patient roles (see extensively Kemmer 1993), hence being closer to autocausative events rather than to reflexive proper. Nevertheless, there is evidence that the middle voice also extended to the encoding of prototypical reflexive events, as in the case of (=za) *das(sa)nu-^{ta(ri)}* ‘strengthen oneself’ (see Chap. 2. sec. 2.2.2.3 for discussion). Moreover, middle reflexive verbs are often reinforced by the particle =za since their earliest occurrence. Therefore, the distribution of the Hittite middle verbs with reflexive function is entirely compatible with the picture outlined so far, whereby the middle inflection was only marginally taken over from anticausative verbs as a marker of reflexivity. In this function, it never gained much ground in this function, only partly extending to the encoding of direct reflexivity, and never to the encoding of indirect reflexivity.

To sum up, the following cline can be set up for the development of middle forms with reflexive meaning:

1. DECAUSATIVE CONSTRUCTION

$[N_{1(NOM)} V_{1(MID)}] = [SEM_{1(INAN)}$ undergoes the spontaneous change-of-state event denoted by $SEM_2]$

2. AUTOCAUSATIVE CONSTRUCTION

$[N_{1(NOM)} V_{1(MID)}] = [SEM_{1(ANIM)}$ triggers the spontaneous change-of-state event denoted by $SEM_2]$

3. REFLEXIVE CONSTRUCTION

$[N_{1(NOM)} V_{1(MID)}] = [SEM_{1(ANIM)}$ does SEM_2 to himself]

Let us turn to the reciprocal function. As discussed in Chap. 1, cross-linguistically common sources of verbal reciprocal constructions include originally sociative or reflexive markers. Heine & Miyashita (2008) explain the shift from reflexive to reciprocal as follows. According to the authors, the shift takes place in cases in which reflexive constructions with a plural subject are ambiguous between a reflexive (i.e. each participant in the group performs the action denoted by the verb on himself) and a reciprocal interpretation (i.e. each participant performs the action on another one), as in the German example in (7):

(7) *Wir hassen uns*
 1PL.NOM hate.PRS.1PL 1PL.ACC

“We hate ourselves/each other.” (from Heine & Miyashita 2008: 186)

Starting from ambiguous contexts such as (7), speakers may extend the use of the marker to those predicates such as *kiss* and *fight* that inherently denote reciprocal situations, i.e. lexical reciprocals, and therefore only license a reciprocal reading. This is how a reflexive marker gets reinterpreted as a full-fledged reciprocal marker.

It is therefore possible that the Hittite middle voice first developed a reflexive function out of the anticausative one through the path sketched above, and later on the newly created reflexive function was further extended to the encoding of reciprocity following the scenario described by Heine & Miyashita (2008). However, as I have also discussed in Inglese (2017), I think this can hardly be the case. Not only are middle forms with reflexive function extremely limited in OH, but they mostly belong to grooming actions rather than to proper reflexives, which would be a more natural source of reciprocal meaning under Heine & Miyashita’s (2008) approach. As an alternative explanation, one can also trace back the development of the reciprocal function to the anticausative. The process runs partly parallel to the process described above for the development of reflexivity, in which autocausative situations played a major role as a bridging context.

At the onset, middle morphology was associated with events that denote a spontaneous change-of-state affecting an inanimate participant, i.e. decausative verbs. As discussed in Chap. 2, among these, one also finds a sub-class of verbs denoting spontaneous changes of location, including events of joining and splitting, i.e. spatial lexical reciprocal verbs. Again, with these verbs, the middle inflection cannot be interpreted *per se* as a marker of reciprocity, but rather as a marker of anticausative, and these verbs are better termed *reciprocal anticausative* (Nedjalkov 2007a: 91). To put it differently, the middle voice operates as a maker of anticausative reciprocals, i.e. as an intransitivizing marker applied to transitive object-oriented spatial reciprocals to derive the corresponding subject-oriented anticausative event, as in the case of *tarupp-^{zi}* ‘gather (tr.)’ vs. *tarupp-^{ta(ri)}* ‘gather (intr.)’. When animate subjects occur with such lexical reciprocal events, they trigger an autocausative reading, whereby the event is construed as volitionally brought about by the participants themselves, as in (8):

(8) DINGIR^{MEŠ}=*ya* *hūmantēs* *taruppantat*
 god(PL)=CONJ all.NOM.PL gather.PST.3PL.MID

“The gods gathered all together.” (KUB 36.97 obv. 6, NS)

Due to the specific interplay of the verb’s inherent reciprocal meaning, the middle voice’s autocausative meaning, and the plurality of the subjects involved, contexts such as the one in (8) can be conceived as describing a situation in which multiple entities bring about a change in spatial configuration with respect to one another. From such contexts, a reciprocal non-spatial meaning can be easily inferred as primary, and the reciprocal meaning can eventually be extended to non-spatial situations, such as *zahhiye/a-^{ta(ri)}* ‘fight’. The last step of the process is the extensions of the middle voice in reciprocal function to verbs that are not inherently reciprocal, which leads to the conventionalization of the middle voice as a marker of proper grammatical reciprocals, as in the case of *zahh-ⁱ* ‘hit’ vs. *zahhanda* ‘they hit each other’.

The entire process can be sketched as follows:

1. DECAUSATIVE CONSTRUCTION

$[N_{1(NOM)} V_{1(MID)}] = [SEM_{1(INAN)} \text{ undergoes the spontaneous change-of-state event denoted by } SEM_2]$

2. AUTOCAUSATIVE CONSTRUCTION WITH SPATIAL LEXICAL RECIPROCAL AND PLURAL SUBJECT

$[N_{1(NOM.PL)} V_{1(MID)}] = [SEM_{1(ANIM.PL)} \text{ trigger the spontaneous spatial lexical reciprocal event denoted by } SEM_2]$

3. RECIPROCAL CONSTRUCTION

$[N_{1(NOM.PL)} V_{1(MID)}] = [SEM_{1(ANIM.PL)} \text{ does } SEM_2 \text{ to one another}]$

If one accepts this account, then there is no need to posit an intermediate stage in which the middle voice encoded reflexivity and the reciprocal function developed out of contexts of systematic reflexive/reciprocal ambiguity. Moreover, this account also explains why the vast majority of Hittite middle verbs with reciprocal semantics largely fall into the class of spatial lexical reciprocal predicates, with only a handful of grammatical proper reciprocals (cf. Chap. 2). Though relatively uncommon, similar developments, whereby middle markers become associated with reciprocity without an intervening reflexive stage, have been reported for instance in Oceanic (Lichtenberk 2000) and possibly in Germanic and Romance languages as well (Gast & Haas 2008).

To conclude, in this session I have argued that the diachronic scenario that most easily fits the available Hittite data points to the anticausative function as being the original one. Starting from this function, the middle voice was eventually extended as a marker of valency decreasing operations to

the encoding of the passive, the reflexive, and the reciprocal domains. This extension happened through independent semantic extensions triggered by the conventionalization of implicatures available in specific contexts, as summarized in Fig. 14.

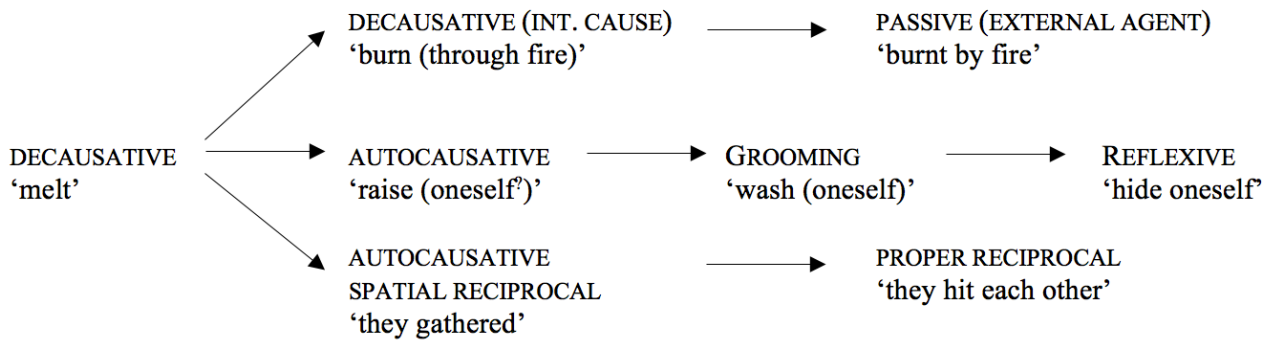


Figure 14: *The development of the oppositional functions of the middle voice*

A final note is in order concerning the lack in Hittite of middle forms with facilitative and impersonal function. As observed in Chap. 2, in Hittite one does not find traces of middle forms used with so-called facilitative function, i.e. the type *the bread cuts easily*, nor in impersonal function (with the possible exception of the isolated verb *akkiske/a-ttari* ‘there is dying, people die’ see Part Two for discussion). The lack of these function is however perfectly in line with the diachronic processes described in this section, and should not be surprising. Impersonal constructions notoriously constitute a further development of passive ones (cf. e.g. Giacalone & Sansò 2011, Holvoet *et al.* 2015 among others). Therefore, one can simply assume that in Hittite passive constructions never extended to the impersonal use, possibly because impersonal situations were already encoded by non-referential 3rd person plural verbs (cf. Luraghi 1990, see further Chap. 2). More complex is the scenario for the facilitative function. As a matter of fact, several authors consider the facilitative function an intermediate diachronic step in the cline that leads from anticausatives to passives (e.g. Haspelmath 2003, Holvoet *et al.* 2015). Under this assumption, lack of this function in Hittite is partly surprising. It must be however remarked that whereas cross-linguistically the chain of semantic extension ANTICAUSATIVE > FACILITATIVE > PASSIVE is robustly attested, one also finds languages in which the facilitative function develops only after the passive one, or directly from the anticausative through an independent development. A case in point is Korean, where, as discussed at length by Ahn *et al.* (2017), facilitative uses of the middle voice marker *-eci* developed only after the passive use had been established out of the original anticausative function. Comparison with Korean thus suggests that, even though this constitutes a typologically rarer pattern, lack of facilitative middles in Hittite

might be due to the fact that the development of anticausatives simply stopped at the passive stage, without any further development. To sum up, absence of the impersonal and the facilitative functions does not contradict the diachronic scenario outlined in this section.

3.3.2. Oppositional middle forms and *media tantum*: unity in diachrony?

As I have extensively discussed in Chap. 1 and 2, one of the most difficult issues that linguists have been confronted with in describing middle voice systems is how to integrate within a single consistent model the existence of verbs that only inflect in the middle voice, i.e. *media tantum*, with those stand in a functionally motivated grammatical opposition with active counterparts. Indeed, whereas one can describe the former in terms of their lexical semantics, the latter rather belong to the pole of grammar and are involved in valency alternations.

In this section, I argue that a better understanding of the relationship between Hittite *media tantum* and oppositional middle verbs can be achieved if one considers how these two groups are historically related. In Chap. 1 sec. 1.3.3, I have observed that middle voice systems emerge following two main paths of developments. Either the *media tantum* constitute the older group and out of these middle markers extend to the encoding of oppositional functions, or the reverse, i.e. a marker of grammatical oppositions extends to the domain of the *media tantum*. The question that I address in this section is which of the two scenarios best accounts for the development of the Hittite middle.

Unfortunately, as I have already remarked, the Hittite middle is an already highly grammaticalized inflectional (set of) endings, and it appears with both *media tantum* and oppositional middles since its earliest attestation. As a consequence, there is no direct evidence to assess which of the two scenarios is ultimately correct. Nevertheless, based on a careful observation of the (especially OH) data, some reasonable guesses can be put forward. As already observed in sec. 3.3.1, in OH most middle verbs belong to the *media tantum*, with only a few verbs that attest to a systematic voice alternation with grammatical function. Taken at face value, this distribution already points to a primacy of *media tantum* as compared to oppositional usages, at least in quantitative terms. Overall, the evidence points towards the development *MEDIA TANTUM* > *OPPOSITIONAL* as the more likely.

Building upon this observation, one can further speculate, following e.g. Lazzeroni (1990), Benedetti (2002), Luraghi (2012, *forthc.*), and Cotticelli Kurras & Rizza (2013), that in pre-Hittite verbal voice was lexically distributed. In this model, verbs originally exclusively occurred either in the active or in the middle voice, the assignment of individual predicates to either inflectional class being determined by some semantic feature (as extensively discussed in Chap. 1 and 2, disagreement exists as to which feature(s) was the driving factor behind the distribution). This position is not new, and has been already formulated by Hart (1988: 78), among others, who states that “the old function

the mediopassive in Hittite was not to provide a category derived from active and in opposition to it, but that there were certain verbs, transitive and intransitive in function, which were inflected with ‘middle’ endings”. In this respect, at this stage the verbal voice would partly display the behavior of a derivational strategy, chiefly being used to motivate the lexicon.

Whatever the exact distribution of lexical voice might have been prior to Hittite, the pattern partly broke down already in OH, as the occurrence of e.g. transitive deponent *media tantum* and unaccusative active verbs shows (see sec. 3.3.1). Still, one detects a strong tendency for the Hittite *media tantum* to be associated with stative/change-of-state intransitive events, most of which feature a non-controlling/non-volitional participant. In other words, the group of the *media tantum* included a large number of verbs that indicated spontaneous events, such as e.g. *kist-^{ā(ri)}* ‘perish’.

The historical relationship among semantic sub-classes of *media tantum* is difficult to assess, also owing to the recessive nature of this class in Hittite, and to the fact that voice assignment of intransitive verbs was not consistently semantically based anymore even in OH (sec. 3.3.1). However, a scenario whereby spontaneous/uncontrolled events constitute the core of this class can easily account for some meaning extensions. For instance, spontaneous and stative verbs, e.g. *kis-^{a(ri)}* ‘become’ and *tukk-^{āri}* ‘be visible’ both share the feature of lack of control. Spontaneous events are similar to autocausative ones, such as *es-^{a(ri)}* ‘sit down’, which are in turn similar to motion verbs such as e.g. *ark-^{a(ri)}* ‘mount’, as both entail volition on behalf of the subject to initiate a change in body configuration in space. Again, what is crucial in this case is that pairs of predicates share at least one semantic component that justifies the extension of middle marking to a new verbal class, but not all semantic classes need necessarily to share all the relevant features. To put it differently, this is how the middle voice historically evolves into a synchronically complex radial category centered around a group of more prototypical verbs (cf. Lazzeroni 1990).

The link between *media tantum* and oppositional middles is provided by those *media tantum* that indicate spontaneous change-of-state events. Already in a pre-Hittite, it is conceivable that some of these verbs were liable to be opposed to transitive active counterparts, thus disrupting the system of lexical distribution. In the active voice, these verbs would indicate a causative transitive event, whereas in the middle voice they would indicate the corresponding spontaneous one. This is how oppositional middle forms with anticausative function were first created, thus establishing a pattern of inflectional valency alternation encoded by voice opposition as we know it from historical Indo-European languages. Later on, as also remarked by Luraghi (2012), the anticausative function independently extended to the passive, the reflexive, and the reciprocal domains through the processes of meaning extension described in sec. 3.3.1. Thanks to the development of oppositional

functions, the middle voice started being productively applied to transitive *activa tantum* as a valency reducing device, thereby contributing to the further strengthening of the system of voice opposition.

The process outlined so far can be described in terms of increasing paradigmaticization: verbal voice shifted from a derivational-like to a full-fledged inflectional category fully integrated in the verbal paradigm. In other words, whereas at the onset either voice was solely available to a specific class of predicates, in later stages potentially every transitive verb can enter in a pattern of grammatical voice alternation. As discussed in sec. 3.2.4, this is an ongoing process that can still be observed in Hittite historical times, as evidenced by the increasing number of verbs that inflect according to both voices to encode valency decreasing derivations and by the decrease of the *media tantum*. Paradigm regularization of voice oppositions is also supported by the morphological developments undergone by the middle inflection. As discussed in Chap. 1, from OH to NH one detects a tendency to unify the middle inflection, by analogically extending the ending *-ta* over *-a* in the course of time and by regularizing the occurrence of the *-ri* enlargement. The latter development is particularly interesting, as by means of the conventionalization of *-ri* endings, the middle paradigm effectively becomes more complex than the active ones in terms of length of the endings. It is therefore questionable whether by NH times, not only is voice alternation increasingly associated with valency reducing derivations, but also the pattern becomes oriented, with middle forms being more complex and more marked than active ones.

Similar developments, whereby active and middle paradigms become increasingly integrated, and voice becomes a full-fledged inflectional category, have also been reported in other ancient IE languages, such as Vedic (e.g. Lazzeroni 1990, 2004 with references) and Homeric Greek (cf. Sausa 2016 with references).¹⁴ As I discuss in sec. 3.4., evidence from these languages combined can shed light on the reconstruction of the voice system of the proto-language (cf. Luraghi forthc.b).

The diachronic approach pursued in this section has the advantage that it provides a plausible explanation as to how the synchronic pattern of polyfunctionality of the Hittite middle came about as the outcome of the convergence of different diachronic processes. Following this approach, there is no need to postulate the existence of a single underlying functional motivation that accounts for all the functions of the middle voice in synchrony. Rather, the distribution of the middle voice among different situation types is the by-product of a series of local diachronic processes of extension that

¹⁴ In post-Homeric Greek, an increase regularization of voice oppositions also concerns those two-place predicates that originally featured a non-accusative second participant and were later reanalyzed as fully transitive verbs, as shown by the increase possibility of their second argument to undergo passivization and its shift to accusative coding (see Conti 1998, Luraghi 2010c for details).

are based on semantic similarity between pairs of individual functions. This explains, for example, the synchronically puzzling use of the middle voice to encode semantically very different types of events, such as both the passive voice and transitive *media tantum*. Again, the reason why the same marker encodes apparently incompatible situation types is that the processes that lead to the association of the middle voice to each happened independently to one another and are based on different motivations.

Overall, the diachronic perspective adopted here partly challenges traditional typological explanations of the middle voice as being a unitary domain grounded on a single functional motivation such as participant distinguishability (e.g. Kemmer 1993). Instead, it suggests that similarities that one observes in middle voice systems cross-linguistically are the by-product of recurrent patterns of local meaning extensions of individual grammatical markers. In other words, regularities that can be detected among middle voice systems cross-linguistically might be the result of *mutational constraints* (Haspelmath 2018). More research on the diachronic typology of middle voice systems is however needed to achieve a better understanding of this issue.

3.3.3. The Hittite middle voice and grammaticalization

As outlined in the previous sections, a plausible diachronic scenario that accounts for the distribution of the middle voice in Hittite is that middle inflection was originally restricted to the *media tantum*. Among these, those encoding spontaneous change-of-state events were liable to be opposed to causative active forms, thereby establishing the core of the anticausative alternation. Out of the anticausative function, other related valency reducing functions developed, including passive, reflexive, and reciprocal.

In this section, I single out some aspects of this historical development and frame them in the current debate on grammaticalization theory. In particular, I evaluate whether Kulikov's (2012b) claim that the middle voice in Vedic has undergone a degrammaticalization process can also be applied to the Hittite data, and what this tells us about the reconstruction of voice in PIE (see further sec. 3.4). In short, Kulikov (2012b) argues that already in Vedic, i.e. the oldest attested stage of Indo-Aryan, the middle voice plays only a minor role in the encoding of valency changing derivations. In particular, whereas middle forms sporadically encode the passive, the reflexive, the reciprocal, and, to a more considerable extent, the anticausative function, they are largely outnumbered by dedicated constructions that are specialized for the encoding of these situations. For example, beside sporadic bare middle forms with passive meaning, the passive of transitive verbs is systematically encoded by Class IV *-yá-* verbs in the present stem, whereas the few reflexive middle forms are ousted by the use of dedicated reflexive pronouns issued from the nouns *tanū́-* 'body' and *ātman-* 'breath'. Historically,

whereas the middle voice is an older inherited pattern, all the other competing constructions clearly constitute Indo-Aryan innovations. The only function in which the middle inflection does not compete with other means of encoding is the domain of self-benefactives. As Kulikov argues, all this evidence points to the fact that “the *grammaticalization* of new valency-changing categories [...] runs parallel with the *degrammaticalization* of the diathesis (active/middle) opposition.” (2012: 186, emphasis original).

Kulikov’s approach presents a number of shortcomings. In the first place, the author does not commit to any specific definition of degrammaticalization (or of grammaticalization). This is unfortunate, as in the absence of a clear definition of what Kulikov takes as degrammaticalization, it is hard to evaluate the validity of his claim against current theories of degrammaticalization. As a matter of fact, the notion of degrammaticalization itself is a matter of ongoing dispute, and scholars often employ it to refer to different kinds of phenomena (see Norde 2009, 2011 and Viti 2015b for recent surveys on the topic). Generally speaking, degrammaticalization can be conceived as the reverse process of grammaticalization, and can thus generally be defined as “a composite change whereby a gram in a specific context gains in autonomy or substance on more than one linguistic level (semantics, morphology, syntax, or phonology)” (Norde 2009: 120).

As discussed at length by Norde (2009), changes subsumed under the heading of degrammaticalization fall within three large groups. To *degrammation* belong those changes in which a function word is reanalyzed as belonging to an open word class, to the effect that it gains the syntactic properties of that class and increases its semantic substance (e.g. Mandarin Chinese deontic modal *děi* > lexical verb meaning ‘need, require’). The second type is *deinflectionalization*, whereby an originally inflectional affix shifts to a less bound morpheme type and acquires a new function (e.g. Old Swedish inflectional ending *-er* NOM.SG.M > Modern Swedish derivational nominalization suffix *-er*). Finally, the last type is *debonding*, that is, the change by which a bound morpheme becomes a free morpheme (e.g. Irish 1st person plural ending *-muid* > personal pronoun ‘we’).

It is unclear how the diachronic process of degrammaticalization of the middle voice in Vedic as described by Kulikov can be subsumed under any of these three patterns. Indeed, the middle paradigm does not develop more substantial meanings, does not acquire a derivational function, and the endings do not show any sign of becoming less bounded, i.e. clitics. The process described by Kulikov is rather one of functional decay of a grammatical construction in favor of newly created ones that specialize for the encoding of a given grammatical domain. As such, this development does not qualify as a case of degrammaticalization in any of Norde’s terms. Moreover, according to Kulikov, degrammaticalization is also confirmed by the existence of idiosyncratic active vs. middle pairs that go back to an original grammatical alternation which was subsequently made opaque by a shift in

meaning of either of the member, as in *śap-* ‘curse’ vs. *śápate* ‘swears (< curses himself)’. However, what these verbs attest to is not a process of degrammaticalization, but rather the lexicalization of verb pairs due to unpredictable semantic shifts. Notably, this process is not uncommon, and can also be observed in Hittite, as in the case of e.g. *weriye/a-^{zi}* ‘call’ vs. *weriye/a-^{ttari}* ‘join’ (see Chap. 2 sec. 2.2.2.7).

More generally, Kulikov’s descriptions of the Vedic middle rests upon the assumption that the middle voice had a much larger extension in terms of intransitivizing functions in the proto-language, and these gradually got lost, thereby explaining their relatively low frequency in Vedic. Of course, this is a non-trivial assumption, as it entirely depends on one’s reconstruction of the precise functional extent of the PIE middle voice, a matter on which there is still no unanimous agreement (cf. sec. 3.4). In principle, a different scenario is also conceivable, in which the middle voice was under-developed in PIE, and in some daughter languages never developed to its full extent because other constructions had already been (or were being) grammaticalized for the encoding of valency operations. This could well be the case for Vedic, and I argue that this is precisely the case of Hittite, where the development of the middle voice can be more appropriately described in terms of grammaticalization.

Since Kuryłowicz’s (1965: 69) seminal definition, in historical linguistics the term *grammaticalization* has been used to refer to a complex grammatical change, which “consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one.” (1965: 69).¹⁵ Kuryłowicz’s approach to grammaticalization can be described as bipartite, as he describes two different types of change: on the one hand the change whereby a lexical item enters the domain of grammar, and on the other hand, the development of new grammatical functions of an already grammaticalized item. These two components of grammaticalization usually go under the headings of ‘primary’ and ‘secondary’ grammaticalization, and feature in most later descriptions of grammaticalization and its mechanisms (e.g. Heine *et al.* 1991, Traugott 2002, Hopper & Traugott

¹⁵ The term grammaticalization was used as early as in Meillet (1912). In current linguistic theory, grammaticalization is a complex notion that encompasses different domains in historical linguistics, and has given rise to a wealth of literature on the topic. I do not wish here to enter in the intricacies of the debate, and refer to the handbook treatments in Heine *et al.* (1991), Lehmann (2016 [1995]), Hopper & Traugott (2003 [1993]), and Heine & Narrog (2011) for complete overviews with further references. Useful contributions on the notion of grammaticalization, featuring both discussion of theoretical issues and empirical case studies, can also be found in edited volumes including Traugott & Heine (1991), Giacalone-Ramat & Hopper (1998), Wischer & Diewald (2002), Bisang *et al.* (2004), Fischer *et al.* (2004), Stathi *et al.* (2010), and von Mengden & Simon (2014).

2003; see now Breban 2014, 2015 for an overview on the use of the term ‘secondary grammaticalization’ and its relevance for historical linguistics).

The development of middle voice systems has often been treated as instantiating a typical grammaticalization process. For instance, Lehmann (2016 [1995]: 45-52), followed by Hopper & Traugott (2003), refers to the development ANAPHORIC NOUN > REFLEXIVE NOUN > REFLEXIVE PRONOUN > VERBAL REFLEXIVE as a typical example of a grammaticalization cline. In a similar vein, changes whereby lexical items develop into markers of valency operations have also been discussed as instances of grammaticalization, such as e.g. the shift from noun meaning ‘body, person, self’ into reflexive markers, verbs meaning ‘eat, get, buy’ into passive markers (cf. Heine & Kuteva 2002 *passim*; see also Chap. 1 for a brief discussion). When it comes to the relationship among different valency changing functions, they have been described in terms of ‘secondary grammaticalization’ by Givón (1991: 305), who points out that the shift from reflexive to passive can be understood as the rise of a grammatical meaning out of an already grammaticalized one.

Turning to the Hittite middle voice, as already remarked, it consists of a set of inflectional endings, i.e. highly bounded inflectional morphemes that attach to the verb base, and for which it is not possible to reconstruct an original lexical source (see sec. 3.4). As a consequence, there is no easy way to assess the pre-history of the middle inflection in terms of primary grammaticalization. However, at least signs of ‘secondary’ grammaticalization can be detected.

In the first place, the meaning extensions whereby the anticausative function develops into the passive, the reflexive, and the reciprocal can be described in terms of semantic widening, following Weltereit (2011: 411). To put it differently, the middle voice underwent *regrammation* in Andersen’s terms, i.e. “a change by which a grammatical expression through reanalysis is ascribed a different grammatical context” (2006: 251; on the role of reanalysis in syntactic change see already Harris & Campbell 1995 and De Smet 2009). As discussed in the previous section, this process can be described in terms of semantic extension from a source to a target domain that occurs only in specific bridging contexts, in which the construction is ambiguous between the source and the target meaning and the latter is taken over. Semantic extension does not entail the loss of the source meaning, in our case the anticausative function, leading to what Hopper (1991: 22) labels *layering*, i.e. the coexistence of older and newer layers of meaning of a given form.

In the second place, one observes that as the outcome of the semantic widening the middle voice starts to be used in contexts that were previously incompatible with its original meaning. This is especially true if one compares the anticausative with the passive function. On the one hand, one observes a *host-class expansion* (Himmelman 2004: 32), inasmuch as the middle inflection with passive function extends to previously unavailable predicates, chiefly stative/atelic predicates and

ones featuring agent-meaning components. On the other hand, one also observes signs of *syntactic context expansion* in the sense of Himmelmann (2004: 32), since middle verbs with passive function start occurring in syntactic contexts previously unavailable to anticausative verbs, chiefly the construction with ablative/instrumental overt agent phrases denoting animate volitional agents. Notably, both host-class and syntactic context expansion are often considered hallmarks of grammaticalization (cf. Himmelmann 2004, Haas 2007).

Concerning the morphological status of the middle voice, even though there is no alteration in the boundedness of the morphemes, one can still detect a change in the morphological status of the middle voice, as already suggested by Kuryłowicz (1964: 72). As argued above, the distribution of the *media tantum* suggests that in origin the middle voice was lexically determined, i.e. it was based on the inherent semantics of the verb, thus behaving similarly to a derivational strategy. Once transitive alternations become established, at least for transitive verbs voice alternation becomes fully paradigmaticized, with verbs freely occurring both in the active and in the middle voice, the choice being entirely dependent on the syntactic context, which is a typical feature of inflection. Notably, paradigmaticization and changes from derivational to inflectional status are regarded as typical of grammaticalization already by Lehmann (2016 [1995]).

To conclude, the process whereby anticausatives develop further intransitivizing function can also be described in terms of subjectification, which is often taken as a salient property of grammaticalization processes. Subjectification can be defined as the process whereby “speaker-based, subjective meanings may become salient in certain types of communication as a result of certain interactional practices” (Traugott 2010). Anticausative verbs differ from their causative counterpart in that the two denote different types of events, i.e. spontaneous vs. induced ones. This is reflected by the fact that these two groups have a different semantic valency, that is, only a Patient for anticausatives and a Patient and an Agent for the causatives. In this respect, anticausative and causatives basically differ in their lexical properties, as also evidenced by the fact that the anticausative function can also be frequently encoded by different verb pairs through suppletion e.g. *die* vs. *kill* (cf. Nichols *et al.* 2004). By contrast, reflexive, reciprocal, and passive operations, do not affect the lexical semantics of the base predicate, and do not alter its semantic valency. Passive further differs from reflexive and reciprocal in that the latter, even though preserving the semantic valency of the base verb, denote a somewhat different event by virtue of their signaling participants coreference. By contrast, passive verbs depict the same situation as their transitive counterpart, but they profile the event from the perspective of the Patient. This is why passive constructions have been characterized as being more pragmatically oriented (cf. Givón 2001: 91), since their occurrence is notoriously linked to specific discourse configurations, e.g. the introduction of new referents or the

establishing of topic chains (e.g. Sansò 2006; see Chap. 1). Therefore, one can argue that the development from anticausative to passive, and to a lesser extent to the reflexive and the reciprocal, involves an increasing degree of subjectification, in that the operations are less dependent on the semantics of the predicates and more on the speaker’s choices of events profiling in discourse.

Summing up, the development of the Hittite middle voice from the *media tantum* to oppositional functions can be described as one of grammaticalization, as it features semantic widening, host-class and syntactic context expansion, and increased paradigmaticization, as well as complying with Traugott’s subjectivity cline.

3.4. Voice in PIE: formal and functional reconstructions

In sec. 3.3, I have proposed a trajectory of evolution that may account for the development of the Hittite middle voice. This account is based only on language internal evidence gathered from the corpus of Hittite original texts combined with insights from the diachronic typology of middle voice systems. In this section, my goal is to evaluate to what extent the language internal reconstruction pursued in sec. 3.3 holds against recent views about the reconstruction of the PIE voice system. In order to do so, I briefly illustrate possible models of reconstruction of the voice system of PIE, taking into account both formal and functional aspects. This is of course a complex issue that more generally intersects with different models of the reconstruction of the PIE verbal system (the received view on the PIE verbal system can be found in *LIV*² and in several textbooks, such as Clackson 2007, Meier-Brügger 2010, and Fortson 2010; see Lundquist & Yates 2018 for a recent overview with extensive references). For reasons of space, I cannot here survey the entirety of the scholarship on these matters, and rather single out points of the current debate that are relevant to understanding the history of the Hittite middle. I begin by discussing the formal side of the reconstruction in sec. 3.4.1, and then move on to the semantic reconstruction in sec. 3.4.2.

3.4.1. The formal reconstruction of the PIE middle paradigm

As remarked in Chap. 1, there is a general agreement that the bulk of the Hittite middle inflection is inherited from PIE. As a matter of fact, most textbooks of IE linguistics agree that comparison between ancient IE languages allows the formal reconstruction of (at least part of) a set of endings dedicated to the middle voice, as shown in Table 43.

Table 43: Middle endings in ancient IE languages (adapted from Clackson 2007: 144, PIE from Fortson 2010: 93)

	Hittite	Tochar. A	Sanskrit	Greek	Latin	Old Irish	Gothic	PIE
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PRIMARY ENDINGS								
1	<i>-ha(ri)</i>	<i>-mār</i>	<i>-e</i>	<i>-mai</i>	<i>-r</i>	<i>-ur</i>	<i>-da</i>	*-h ₂ e-r
2	<i>-ta(ri)</i>	<i>-tār</i>	<i>-se</i>	<i>-oi</i>	<i>-ris</i>	<i>-ther</i>	<i>-za</i>	*-th ₂ e-r
3	<i>-(t)a(ri)</i>	<i>-tār</i>	<i>-te</i>	<i>-toi</i>	<i>-tur</i>	<i>-thir</i>	<i>-da</i>	*-(t)o-r
4	<i>-wasta</i>	<i>-mtār</i>	<i>-mahe</i>	<i>-metha</i>	<i>-mur</i>	<i>-mir</i>	<i>-nda</i>	*-med ^h h ₂ ?
5	<i>-tuma</i>	<i>-cār</i>	<i>-dhve</i>	<i>-sthe</i>	<i>-mini</i>	<i>-the</i>	<i>-nda</i>	*d ^h (u)we- ?
6	<i>-anta(ri)</i>	<i>-ntār</i>	<i>-nte</i>	<i>-ntoi</i>	<i>-ntur</i>	<i>-tir</i>	<i>-nda</i>	*-ro, *-nto-r
SECONDARY ENDINGS								
1	<i>-hat</i>	<i>-e</i>	<i>-i</i>	<i>-mān</i>				*-h ₂ e
2	<i>-tat</i>	<i>-te</i>	<i>-thās</i>	<i>-o</i>				*-th ₂ e
3	<i>-at</i>	<i>-t</i>	<i>-ta</i>	<i>-to</i>				*-(t)o
4	<i>-wastat</i>	<i>-māt</i>	<i>-mahi</i>	<i>-metha</i>				*-med ^h h ₂ ?
5	<i>-tuma</i>	<i>-c</i>	<i>-dhvam</i>	<i>-sthe</i>				*d ^h (u)we- ?
6	<i>-antat</i>	<i>-nt</i>	<i>-nta</i>	<i>-onto</i>				*-ro, *-nto

The reconstruction of the individual endings is somewhat controversial, partly because, as Fortson (2010: 93) remarks, in the individual languages the middle paradigm shows signs of having undergone restructuring based on the active paradigm (cf. as an example the extension of the 1st primary active ending *-m- in Ancient Greek *-mai*). I do not discuss here the details of the different reconstructions, for which I refer to standard textbooks of IE linguistics (for different views and models of reconstructions see among others Stempel 1996: 43-67, Jasanoff 2003: 47, 2018, Clackson 2007: 143-148, Meier-Brügger 2010: 313-314, Fortson 2010: 93-95, Beekes 2011: 267-273, Adrados *et al.* 2016: 348-355; see also discussion in Cotticelli Kurras & Rizza 2015 and Lundquist & Yates 2018), nor I wish to discuss the etymology of the individual Hittite endings (cf. Chap. 1). It suffices here to say that scholars agree that at some point the proto-language must have featured an inflectional paradigm, different from the active, used both with present and aorist stems and with a distinction between primary and secondary endings (cf. Jasanoff 2003: 45), that later on gave rise to the historical middle paradigm in the daughter languages. I return below on the possible function this PIE middle paradigm.

A matter of still ongoing debate is the pre-history of this PIE middle paradigm. As Kulikov puts it “historical connections of the (early) PIE middle with such categories as stative and perfect are very likely, but the exact scenario of the emergence of the middle and the evolution of PIE voices remains

the subject of vigorous debate” (Kulikov 2013: 276). Clearly, the prehistory of the middle has bearings on the present discussion, since only a proper assessment of the prehistory of the middle can shed light on its functional development.

Various proposals have been put forward concerning the origin of the middle paradigm in PIE, which are mostly based on internal reconstruction. For reasons of space, I do not discuss here all possible reconstructions, and focus mostly on the relationship between the PIE middle, the perfect and the Hittite *-hi* conjugation. It has long been observed that striking morphological similarities exist between these three categories, especially for what concerns the endings, as shown in Table 44. Morphologically, a common denominator is the 1st person singular ending in **-h₂-* as opposed to the **-m* of the active paradigm, hence the name *h₂-series* (Clackson 2007: 148).

Table 44: The reconstructed endings of the PIE middle, the PIE perfect, and the Hittite *-hi* conjugation (from Clackson 2007: 148)

	PIE Middle	PIE Perfect	Hittite <i>-hi</i> conjugation	
			PRIMARY	SECONDARY
1	<i>*-h₂-</i>	<i>*-h₂e</i>	<i>-hi < *-h₂ei</i>	
2	<i>*-th₂-</i>	<i>*-th₂e</i>	<i>-ti < *-th₂ei</i>	
3	<i>*-o</i>	<i>*-e</i>	<i>-i < *-ei</i>	
6	<i>*-ro</i>	<i>*-r-</i>		<i>-ir</i>

As Clackson (2007: 148-150) discusses, nowadays two main theories regarding the origin of the middle voice can be detected in IE linguistics. They differ in the number of voices that are reconstructed for PIE and in the different diachronic processes that they envisage.

The first approach is what Clackson labels ‘middle theory’ (see also Jasanoff 2018: 137-138 with ref.). The main insights at the basis of this theory is that PIE had a two-fold opposition between active **-m* conjugation and a single conjugation characterized by **-h₂-* endings, from which the PIE perfect, the middle and the Hittite *hi*-inflection are somehow derived. Individual accounts strongly differ in the reconstruction of the historical relationship between these three categories, but they share the basic tenet that they ultimately stem from a single common source. I momentarily leave aside the issue of the origin of the *-hi* conjugation, since it has relatively less bearing to the present discussion (see Jasanoff 2003: chap. 1). Briefly, scholars debate whether the Hittite *-hi* conjugation derives from the perfect (cf. Eichner 1975, see also Lazzeroni 2011 for a reappraisal) or from the middle (cf. Rosenkranz 1953; on the putative connection between the middle and the *-hi* conjugation see also Rose 2006), or whether all three forms ultimately stem from a common source.

Leaving the *-hi* conjugation aside, the relationship between the perfect and the middle has often been observed in IE studies. Formally, as independently observed already by Kuryłowicz (1932) and Stang (1932), the strong similarities between the two sets of endings suggest that both the perfect and the middle go back to a common historical source (cf. Jasanoff 2003: 58; see also Di Giovine 1996: Part Two, esp. pp. 235-244 with further references; Di Giovine himself explicitly rejects a common origin of the perfect and the middle). Semantically, this relationship is not problematic, both verbal forms being intransitive, the perfect being associated with resultative semantics and the middle to change-of-state semantics. A further often mentioned piece of evidence for the close relatedness of the middle and the perfect comes from the fact that in e.g. Ancient Greek, present *media tantum* are coupled with active perfects (e.g. *gígnetai* vs. *gégone*), with middle perfects being a later development (cf. Jasanoff 2003: 44-45). In other words, as Clackson (2007: 148) puts it, both the middle and the perfect are subject-oriented, in that they either refer to a process that happens to the subject, or in its own interest, or to the state of the subject resulting from a change-of-state event.

As already mentioned, similarities between the middle, the perfect and the Hittite *-hi* conjugation have led scholar to postulate a pre-PIE common ancestor of the three. This approach can be traced back as early as in Neu (e.g. 1968b) and Meid (e.g. 1974), who in a series of publications both posit the existence of a pre-PIE *protomiddle* category as the ancestor of the middle, the perfect, and the *-hi* conjugation (these accounts differ in their details; see Jasanoff 2003: 23-26 and Willi 2018: 45-50 for discussion). The more elaborate formulation of this theory can be found in Jasanoff (2003, 2018). According to Jasanoff, the pre-PIE featured a two-fold morphological distinction between a *m-* and a *h₂e-*conjugation. At the time, the synchronic functional difference between the two was already bleached, and whether verbs belonged to either was conditioned by their “inner-IE history rather than by functional factors” (Jasanoff 2003: 215). In this respect, the pre-PIE situation described by Jasanoff can be roughly compared with the synchronic difference between the four *-āre*, *-ēre*, *-ere*, and *-īre* inflectional classes in Latin. Unsurprisingly, given its functional equivalence with the *m-*conjugation, the *h₂e-*conjugation was progressively abandoned, unless in Anatolian where it surfaces as the *hi*-conjugation. Specific formations that originally belonged to the *h₂e-*conjugation underwent changes that led to two different outcomes. Jasanoff describes this process as follows: “when refurbished through processes like the addition of *-r* and the generalization of *-o*, these endings became the endings of the classical PIE middle [...] when not so renewed, the *h₂e-*endings lost their productivity and came to be confined to a specialized category, the perfect.” (Jasanoff 2003: 59; see also Jasanoff 2018). In other words, “the true middle emerged from the protomiddle by a process of functional specialization and formal renewal within PIE” (Jasanoff 2018: 138). It must be stressed that Jasanoff’s approach diverges from the ones by e.g. Meid and Neu in the semantic content

attributed to the reconstructed *h*₂-series. Whereas for Jasanoff the latter simply constitutes a conjugation class to which no specific semantics can be attributed, Meid and Neu variously describe *h*₂-series as being functionally opposed to the *m*-series, the former being associated with verbs indicating states and the latter with dynamic processes (see also Cotticelli Kurras & Rizza 2013, 2015 for discussion; but see Jasanoff 2018 with an update on the semantics of the protomiddle).

The second approach is the one labelled by Clackson (2007: 149) ‘stative theory’. According to its proponents (cf. e.g. Oettinger 1976, Rix 1988, Kümmel 1996 among others) the stative theory essentially diverges from ‘middle theory’ in that alongside the active and the middle, a third diathesis is reconstructed for the protolanguage, i.e. the stative (cf. Meier-Brügger 2010: 396). Semantically, the stative paradigm contrasts with the middle paradigm in that the former, as its name suggests, is associated with the encoding of stativity, hence hinging upon the semantics of the perfect, whereas the latter is associated with dynamic events entailing some sorts of subject’s involvement. In Chap. 1, I have already discussed some of the morphological evidence adduced by proponents of the stative theory, chiefly the reconstruction of two distinct endings **-o* vs. **-to*. I would like here to take a closer look at Rix’s account (1988), since it constitutes one of the most detailed attempt to describe the relationship between the stative and the middle. Rix starts by observing that in Vedic triplets such as *brávīti* ‘speaks’ (active): *brūté* ‘invokes for himself’ (middle): *bruve* ‘is called’ the third item constitutes a separate inflectional type, which denotes a state of the subject, hence the ‘stative’ name. Thus, morphologically the Vedic situation points towards a distinction between the domain of the middle and the domain of the perfect (stative), which are thus unlikely to be etymologically related. Rix goes further and points out that such a tripartite system can also more easily accounts for the semantic inhomogeneity displayed by middle forms in IE languages. Specifically, he observes that the middle voice is by and large associated with three different functions, i.e. the reflexive, the passive, and the *media tantum* (labelled in his work ‘deponent’). Whereas the passive can easily be shown to derive from the reflexive (to back up this claim, he compares it with the development of reflexive **sik* in Germanic to passive *-sk* in Scandinavian languages), Rix maintains that “the deponent and the reflexive function can hardly be derived from each other” (1988: 104-105). Finally, as a conclusive argument, he observes that the endings of the perfect/stative on the one hand and those of the middle are phonetically incompatible, the former being characterized by *e*-vocalism the latter by *o*-vocalism. According to Rix, *o*-endings cannot simply be regarded as a variant of *e*-endings, which he attributes to the stative inflection, and rather suggests that the endings of the middle are based on those of the active plus an element *-o-*, giving a threefold pattern for the 3rd person secondary ending active **-t*, stative **-e*, middle **-t-o*. This **-o-* item would originally be a reflexive pronoun that

became part of the inflectional paradigm, etymologically cognate to the Hittite enclitic anaphoric pronoun =*a-*.¹⁶

Various scholars have already pointed out a number of shortcomings of the ‘stative’ theory, and questioned the need to reconstruct for PIE a full-fledged stative paradigm alongside the active and the middle to explain what is essentially a feature that can only be observed in Indo-Iranian (cf. e.g. Di Giovine 1996: 244-247). Specifically, as already discussed in Chap. 1, the alternation between the endings *-*o* and *-*to* can also have a different explanation, whereby the two forms represent a process of ongoing morphological renewal. Notably, as also remarked by Yoshida (2007, 2013) and Villanueva Svensson (2014), inner-Hittite facts clearly suggest that the relationship between the two endings is essentially one of different chronology, and that they were not originally functionally distinct. A closer look reveals that not only the morphological, but also the phonological and, more seriously, the semantic argument put forward by Rix do not withstand scrutiny. Concerning the reflexive origin of the -*o*- morpheme, this is clearly an *ad hoc* assumption, and is rather circular: since Rix attributes a reflexive function to the middle voice, this is best explained if the -*o*- component was reflexive to begin with. There is however no evidence in support of this claim, also based on the fact that potential cognates such as Hitt. =*a-* are clearly anaphoric in nature and never have a reflexive interpretation, as Rix himself mentions (1988: 115).¹⁷ More seriously, Rix’s semantics argument is untenable. As per Rix, the main reason to posit two distinct categories in the protolanguage, viz. the stative and the middle, that later merged into the middle voice of the historical languages, is that this is the only way to explain the apparently aberrant semantics of the historical middle voice, featuring both *media tantum* and reflexive/passive oppositional middles. This argument is however unwarranted. As I have discussed in sec. 3.3.2, reflexive and middle voice morphemes have a diachronic bidirectional relationship, as both cases of reflexives extending into the middle voice domain, including *media tantum*, and *media tantum* giving rise to oppositional middles are attested cross-linguistically. Therefore, there is in principle no reason to assume that the PIE *media tantum* and the oppositional middles must derive from two distinct sources.

¹⁶ Alternatively, the vowel *-*o* in the middle voice has also been connected to that of the thematic conjugation as early as in Watkins (1969). Despite displaying still some vitality in recent works (cf e.g. Adrados *et al.* 2016: 350), this theory is nowadays mostly discarded in IE linguistics (see Jasanoff 2003: 26-27, 224-227).

¹⁷ Note further that in order to explain how the *-*o*- pronoun became integrated into the verbal paradigm, Rix has to devise a rather complex syntactic change that assumes that pre-PIE had ergative alignment, which is another controversial assumption at best. Attempts to reconstruct the middle inflection as going back to the integration in the verbal paradigm of reflexive pronouns can be traced as early as in works by Bopp (see Benedetti 2016 for discussion), and include more recent formulations such as Shield (1992: 106).

To sum up, in this section I have surveyed various theories about the formal origin of the PIE middle voice. The most important point is that whereas the reconstruction to late PIE of a more or less consistent set of ‘middle’ endings is uncontroversial, the pre-PIE prehistory of this paradigm and its relationship to categories such as the perfect are still controversial issues. What stands out however is that whatever scenario one adopts, the ancestor of the middle voice was an already highly grammaticalized morpheme, so that not even etymological considerations can help us in understanding the grammaticalization path that led to the creation of the middle inflection to begin with. Notably, Rix’s hypothesis that the middle voice originated out of a reflexive anaphoric pronoun should be discarded for the reasons discussed above. Moreover, even if one opts for a ‘middle theory’, the semantics of the reconstructed h_2 -series remains highly abstract and underspecified, as in the models discussed by Neu (1968b), Meid (1974), Cotticelli Kurras & Rizza (2013), and Jasanoff (2018).

Theories of the prehistory of the middle voice in pre-PIE remain quite speculative and mostly yield extremely abstract reconstructions of its semantics. This is why, if one is interested in reconstructing the semantic core of the PIE middle, it makes more sense to focus as a starting point on late PIE, i.e. the first stage accessible via direct reconstruction based on comparative data from the earliest IE languages, as I discuss in the following section.

3.4.2. Reconstructing the PIE middle: semantic considerations

As compared to the morphology, the reconstruction of the semantics and the function of the PIE middle voice has proven even more challenging.¹⁸ As discussed in Chap. 1 and 3, scholars have variously tried to describe the middle voice in historically attested IE languages as conforming to highly abstract parameters such as subject-affectedness or subject involvement, and the same goes for attempts to describe the original semantics of the PIE middle, as we shall see below. The assessment of the original range of functions of the PIE middle voice is also important in that it allows us to achieve a proper understanding of whether IE languages attest to an increase in the number of functions associated with this class of verbs as compared to a narrow PIE core, or if, on the contrary, PIE had a full-fledged middle voice which later underwent decay and was replaced in most (grammatical) functions by language specific markers (cf. Kulikov 2012b and sec. 4.3.3).

¹⁸ The reconstruction of the function of the PIE middle and its pre-PIE prehistory is also intimately connected with the reconstruction of the alignment system of pre-PIE and its origin. Since these constitute a matter of speculation among specialists, I do not discuss them further here (see Drinka 1999, Viti 2015d, Matasović 2017, Jasanoff 2018: 141-143 and Willi 2018: chap. 9 for diverging views and extensive references).

Based on comparison from the earliest languages that show active and middle paradigms, chiefly Anatolian, Greek, and Indo-Iranian (cf. Chap. 1), the proto-language is commonly reconstructed as featuring at some point a group of *media tantum* and possibly one of oppositional middles. It should be remarked that serious attempts at explaining how the two groups are to be historically related are rare. This is clearly unfortunate, since, as correctly pointed out by Clackson (2007: 143), one can say something about the function of the middle voice only by combining insights from the semantics of the *media tantum* and of the oppositional middles.

Comparison between *media tantum* in IE languages shows that at least some of these verbs can be safely reconstructed as going back to the proto-language (see further Meiser 2010 for an overview). A case in point is e.g. PIE **kei-* ‘lie’, reflected in Hitt. *ki-^{ta(ri)}*, Skt. *śay-*, and Gr. *keîmai* (cf. LIV²). As discussed in Chap. 1, the first systematic study of the *media tantum* in ancient IE languages goes back at least to Delbrück (1897). Ever since, there has been a long-lasting consensus that already in the proto-language some predicates must have belonged to either the active or the middle inflection only, the distinction between the two being lexically determined by some features of individual verbal roots (thus e.g. Clackson 2007: 142, Meier-Brügger 2010: 396).

However, pointing out the precise semantic traits that determine whether individual predicates belong to the *activa* or the *media tantum* has proven a challenging task, also owing to the at times conflicting evidence from the behavior of similar verbs in individual IE languages, as in e.g. Lat. *morior* vs. Hitt. *āk-ⁱ* both meaning ‘die’ but the former inflecting in the middle and the latter in the active (cf. Fortson 2010: 89). A very drastic position is voiced for instance by Adrados *et al.* (2016: 354), who observe that “whatever attempts may have been made, it is impossible to establish a systematic difference in meaning between the ‘active only’ forms and the middle voice only’ ones”. Similarly, Fortson (2010: 89) states that “it is not fully clear whether their middle inflection [of *media tantum*] stemmed from some aspect of their meaning, or whether it was purely arbitrary.”

In addition, syntactic transitivity has also been claimed not to be a good predictor for the inflectional behavior of individual verbs, since “the active and middle diathesis does not seem to be connected with an opposition between transitivity and intransitivity, or with a reduction in the valency of the verb... the distinction between active and middle is therefore not a syntactic one, but a semantic” (Clackson 2007: 143). That a weak connection between transitivity and voice exists is also partly supported on the one hand by the occurrence of transitive deponent *media tantum*, some of which can be rightfully reconstructed already for the protolanguage (cf. Grestenberger 2016), and on the other hand by the widespread labile use in Ancient Greek and Indo-Aryan of middle verbs in transitive constructions of the type *lúomai tàs kheîras* ‘I wash.MID my hands.ACC’ (cf. Kulikov 2014).

Despite Clackson's (2007) skepticism, if one takes a semantic definition of transitivity *à la* Hopper & Thompson (1980) as a starting point instead of a purely syntactic one, there is a clear general tendency for late PIE active inflection to be associated with semantically highly transitive two-participant events, whereas the late PIE middle voice seems to be preferred for those predicates that rank low on the scale of semantic intransitivity. Moreover, an association of the middle voice with syntactic intransitivity can still be upheld if one follows Grestenberger (2016) in regarding deponents as a non-productive archaism already in the proto-language. Still, even though transitive verbs are mostly associated with the active inflection, the functional rationale between the distribution of the intransitive ones between the two inflectional classes is not entirely clear. Scholars have variously tried to individuate a core of intransitive *activa* vs. *media tantum* by pointing out different semantic parameters that might account for this distribution already in PIE: 'internal' (middle) vs. 'external' (active) diathesis (Benveniste 1960), stative (middle) vs. dynamic (active) lexical aspect (Lazzeroni 1990), unaccusative (middle) vs. unergative (active) semantics (Benedetti 2002), control (middle, e.g. 'think', 'say') vs. lack of control (active, e.g. 'be', 'vomit') (Clackson 2007), just to name a few. Clearly, these accounts all partly diverge because of the different distribution of the *media tantum* in individual historical languages. For instance, as discussed in Chap. 2, whereas the *media tantum* in Ancient Greek include a large amount of verbs that indicate emotional and mental processes, this class is virtually non-existing in Hittite. Nevertheless, one can still remark that the *media tantum* reconstructable for PIE largely fall within the semantic middle situation types established by Kemmer (1993), as discussed by e.g. Stempel (1996: 25-26) and Meiser (2010).

Whereas the reconstruction of the *media tantum* in the proto-language is *per se* unproblematic, the difficulties in pinning down its precise semantic core notwithstanding, the reconstruction of oppositional middle verbs has proven more controversial. More generally, issues in the reconstruction of oppositional functions such as the passive relate to the wider discussion about the place of syntactic reconstruction in historical comparative linguistics (see e.g. Viti 2015a: chap. 6, 2015c, and Seržant 2015 with references).

Turning to the individual functions of oppositional middle forms, most recent textbooks agree in reconstructing at least the following: reflexive (direct and indirect), reciprocal, anticausative, and possibly passive (cf. Clackson 2007, Meier-Brügger 2010, Fortson 2010, Lundquist & Yates 2018). Moreover, concerning the individual functions, it is a common opinion that in the proto-language the reflexive (and anticausative) function was older and that the passive constitutes a later development (thus Meier-Brügger 2010: 397). Notably, the impersonal function with intransitive verbs of the type Lat. *itur* 'one goes' is unlikely to be of PIE date and possibly constitutes a common innovation of Italic and Celtic (thus Cowgill 1983). Given that this function is not attested in Hittite, I will not

discuss it any further. In the remainder of this section, I revise the evidence adduced for the reconstruction of the individual functions and discuss to what extent comparative data allow to project them back into PIE.

Let us begin with the reflexive and the reciprocal functions. Whereas there is a general consensus that the reflexive (direct and indirect) function constitutes a feature of the middle voice of ancient IE languages that is likely to be inherited from PIE, scholars disagree on the extent to which reflexivity was the main function of oppositional middle forms. A received view, that goes back at least to Wackernagel (1950²), considers the reflexive (and self-beneficent) function the core of the semantics of the middle voice (see more recently Cotticelli Kurras & Rizza 2013; for a reassessment of the evidence for reflexive strategies in PIE see Grestenberger 2018a). For instance, Lehmann (1974: 124) clearly states that “it is the function of the middle to indicate that the verbal meaning, whether action or state, is to be interpreted with reference to the subject”. In the same vein, Meier-Brügger (2010: 396) explicitly claims that “the middle voice originally had a reflexive meaning”.¹⁹ By contrast, Watkins (1976: 309), whereas acknowledging the possibility of the middle voice to function as a marker of reflexivity, points out that “the semantic value of the Indo-European middle was NOT merely to express reflexivization or reciprocity”. Such different assessments are partly based on the primacy that one accords to Ancient Greek and, especially, Indo-Aryan data, both languages in which the direct and indirect functions of the middle voice are abundantly attested (cf. Allan 2003 on Greek and Kulikov 2012b on Vedic). Moreover, the erroneous classification of anticausative events as belonging to the reflexive domain has also led to a misleading overestimation of the actual extent of the reflexive function of the middle (cf. Kulikov 2009: 81; see below). As a matter of fact, besides the widespread use of the self-beneficent function in Ancient Greek and Indo-Aryan, ancient IE languages offer only very limited evidence for the use of bare middle forms in direct reflexive function. I have already shown that in Hittite reflexivity only plays a minor role (Chap. 2), and that the self-beneficent function is unattested altogether. This trend is confirmed by evidence from other IE languages as well. For instance, in Homeric Greek, direct reflexivity is mostly encoded by the dedicated reflexive pronoun *é*, and only rarely by bare middle forms (cf. Puddu 2005: 171, Romagno 2010: 431; for a useful comparison between Latin and Ancient Greek reflexives see also Viti 2009). Similarly, in Vedic true direct reflexive usages of bare middle forms are rare, and reflexivity is mostly encoded by newly created reflexive anaphors based on the nouns *tanū́-* ‘body’ and *ātman-* ‘breath’ (Kulikov 2007, 2012b). Also in Tocharian, middle forms with reflexive use are ousted by dedicated pronominal formations (cf. Hackstein 2003). Based on these observations, Puddu goes further and

¹⁹ “Das Medium hat ursprünglich reflexive Bedeutung” (transl. mine).

claims that it is highly unlikely that the main strategy to encode reflexivity in PIE was the middle voice, as evidenced by its very restricted use with transitive verbs that indicate prototypically non-self-directed actions, e.g. ‘hit’ (Puddu 2005: 224).²⁰

The reciprocal function of the middle voice is often discussed together with the reflexive one. As Meier-Brügger (2010: 396), puts it, a reciprocal interpretation of middle verbs is generally preferred with verbs in the plural, which otherwise in the singular trigger a reflexive interpretation instead. Reciprocity is generally considered a marginal function, which is unexpected given the general low frequency that reciprocal construction display in texts of the world languages (cf. Evans 2008). An overview of reciprocal construction in ancient IE languages can be found in Krisch (1999), where the author also briefly touches upon the role of the middle voice. As Krisch (1999: 284) discusses, ancient IE languages inherited from PIE the use of the middle voice with *media tantum* that indicate inherently reciprocal situations, i.e. proper lexical reciprocals. This is for instance the case of verbs of hostile relationships, as comparison between Lat. *proelior* ‘fight’, Gr. *agōnízomai* ‘fight’, Ved. *sprdh-* ‘compete’ and Hitt. *zahhiye/a-^{ta(ri)}* ‘fight’. However, the only lexical reciprocal middle verb that can be securely reconstructed based on comparative evidence is the PIE form **sek^w-e-MID* ‘follow’ (cf. *LIV² s.v.*), which is a reciprocal event of the chaining type (Kemmer 1993: 100). Less compelling is the evidence for reconstructing to PIE the use of the middle voice to derive grammatical reciprocal events proper in opposition to active non-reciprocal transitive verbs. This pattern is attested in OH, where the form *zahhanda* ‘they hit.MID each other’ occurs, and possibly in Vedic *tṝ-* ‘overrun’ vs. *tarete* ‘overrun one another’ (Kulikov 2007). Bare middle verbs in grammatical reciprocal function are unattested in Homeric Greek (cf. Inglese & Zanchi 2018), and only sporadically occur later on in Classical Greek (Allan 2003). Considered together, this evidence suggests that whereas

²⁰ If the encoding of reflexivity was not the primary function of the middle voice, this leaves open the question of how this function was encoded in PIE to begin with. Since this issue lie beyond the scope of this work, I will not discuss the matter further here. A likely candidate is the root PIE **se-/swe-*, which served as basis for the creation of full-fledged reflexive pronouns in several IE languages, including Latin, Balto-Slavic, and Germanic, but has reflexes in e.g. Greek and Indo-Iranian as well. The form has been reconstructed as having reflexive function in the proto-language since Brugmann & Debrück’s *Grundriss* (1893-1916), but recently scholars have suggested that the stem **se-* was originally anaphoric, possibly signaling coreference with the *topic*, whereas **swe-* was possessive, and that the reflexive function of both is only a later development. See Mendoza (1984), Petit (1999), Puddu (2005, 2007), Dunkel (2014: 751-762), and Viti (2015a: 94-96) for a full discussion with references. Notably, under the assumption that **se-/swe-* was a dedicated reflexive morpheme in the proto-language, one can speculate that PIE featured a two-form middle voice system in Kemmer’s term (1993), with **se-/swe-* encoding reflexivity proper, and the middle voice the other middle situation types.

lexical reciprocals might have been inherited from PIE, the grammatical use of the middle voice as a reciprocal marker may also have been an independent innovation of the languages where it occurs.

The use of the term *anticausative* constitutes a relatively recent acquisition in the field of IE linguistics. It is thus unsurprising that it only features in some of the standard textbooks (cf. Stempel 1996: 23, Fortson 2010, Lundquist & Yates 2018), whereas is entirely ignored by others (cf. Clackson 2007, Meier-Brügger 2010). Besides the terminology, the problem with the proper individuation of anticausative verb pairs involving voice opposition is that anticausatives, especially those belonging to the autocausative type, have often been confused with reflexives proper (see e.g. the treatment of the Hittite data in Neu 1968b, cf. Chap. 2). Nevertheless, the fact that middle intransitive forms denoting spontaneous events could stand in opposition with active transitive forms indicating induced ones has been long noticed by scholars working in individual IE languages, such as in Ancient Greek (cf. Chantraine 1953: 179; see further Sausa 2016 for discussion). The realization of anticausativization patterns in ancient IE languages has received renovated attention in the last decades (see Luraghi *forthc.b* for a summary with references). As Luraghi (*forthc.b*) observes, the most widespread means of encoding the anticausative alternation in ancient IE languages is the use of dedicated transitivizing suffixes that derive transitive induced verbs from plain intransitive ones. This pattern is attested e.g. Hittite *ze-^{a(ri)}* ‘cook (intr.)’ vs. *za-nu-^{zi}* ‘cook (tr.)’ and Sanskrit *pávate* ‘becomes clean’ vs. *punáti* ‘makes clean’. However, voice alternation is attested as an anticausativization strategy in most IE languages, including Hittite (cf. Chap. 2), Greek (Sausa 2016), Latin (Cennamo *et al.* 2015), Indo-Aryan (Kulikov 2009), and Tocharian (Mahlzan 2010). Despite the preference accorded to transitivizing strategies over voice alternation in the individual language, the existence of a group of anticausative middle verbs in most ancient IE languages strongly suggests that this function is inherited from PIE (cf. Luraghi 2012, *forthc.b*).

Finally, the existence of the passive voice in PIE constitutes a notoriously debated issue (cf. Hettrich 1990; see Kulikov & Lavidas 2013, Viti 2015a: 420-421, Grestenberger & Fellner 2017 for recent overviews with extensive references). Scholars have repeatedly pointed out that PIE most likely lacked a grammatical marker specialized for the encoding of the passive function (cf. Meier-Brügger 2010: 397). Dedicated passive morphological markers, such as the Indo-Aryan *-ya-* passive presents or the Greek *-(th)ē-* aorist passive, are a later creation of individual branches (see Luraghi *et al.* *forthc.* for an overview on the development of specialized passive morphology in IE languages). Lack of dedicated morphology does not however entail that the passive function could not be expressed in PIE altogether. As a matter of fact, there is evidence that the use of Patient-oriented nominal forms of the verbs, i.e. **-nt-* participles and **-to-*, **-no-*, and **-lo-* verbal adjectives, combined with the verb ‘be’ in a periphrastic construction was already available as a means to encode

the passive as early as in PIE (cf. Drinka 2009, Kümmel forthc.). Moreover, middle forms with passive function are attested in most ancient IE languages, so that one cannot rule out that already PIE featured the possibility for the middle voice to be used in passive function when opposed to active transitive verbs (see Grestenberger & Fellner 2017, Grestenberger 2018b for a recent reassessment of the evidence). Nevertheless, there is evidence that in languages in which the middle voice is used in passive function, passive constructions display a relatively limited distribution in older texts and only later on become more frequent, as in Hittite (sec. 3.2.4) and in Ancient Greek (cf. Romagno 2010, Luraghi 2010c). The extension of the passive construction in IE languages, coupled with the creation of derivational and periphrastic passives, are both suggestive that the use of the middle voice with passive function was relatively limited if anything in the proto-language, and even if it can be dated to PIE, it possibly constituted a later development and not the original function of the middle voice.

Let us summarize the main points of this brief overview on the semantics of the PIE middle voice. As repeatedly pointed out by several scholars, the original core of the PIE middle voice is to be sought in the *media tantum*, since the formation of this group must go back to a phase in which verbal voice was determined lexically for individual predicates. This group features a fairly different range of predicates, but they seem to be associated with intransitive events that feature low distinguishability among participants (Kemmer 1993), often display a stative construal (Lazzeroni 1990), and can be generally associated with unaccusative semantics (Benedetti 2002), i.e. these are predicates whose argument does not display the properties of a prototypical Agent. Out of this group, voice opposition started to be established when some of these verbs could be opposed to transitive counterpart that inflected in the active voice, thereby paving the way for the development of a full-fledged voice opposition with various functions, including passive, reflexive, anticausative, and reciprocal.

It is admittedly difficult to sort out the exact timing in which these functions developed, and whether they all should be reconstructed as going back to a PIE stage already, or rather constitute developments that independently took place individual daughter languages in later times. On the one hand, the fact that the oppositional functions are attested in most branches since their earliest record suggests that the functions might have been inherited, as also supported by some near word equations such as Hit. *damastari* and Gr. *dámnatai* both ‘is tamed, subdued’ from PIE **demh₂-* and Hit. *karstari* and TochB. *kārsnātār* both ‘is cut’ from PIE **kers* (cf. Grestenberger 2018c). On the other hand, the fact that the increasing grammaticalization of voice oppositions can still be detected in the daughter languages, as in e.g. Hittite (sec. 3.3), Vedic (Lazzeroni 2004), and Ancient Greek (Luraghi 2010c, Sausa 2016) provides evidence that, even though its seeds can go back to the parent language, the paradigmization of voice is a process still ongoing in historical times.

Moreover, the diachronic relationship between the different functions remains a matter of speculation. Nevertheless, comparative evidence discussed in this section seems to point at least towards a primacy of the anticausative function, and a late development of the passive. Also, against the *communis opinio* that reflexivity constitutes the core of the middle voice, there is evidence that the reflexive and the reciprocal functions were possibly underdeveloped in the proto-language and never gained much ground, possibly because the individual languages started to develop alternative dedicated reflexive and reciprocal constructions from a very early date. This is a point worth stressing, because it strongly disfavors a possible reflexive origin of the middle voice as a whole (*pace* Rix 1988). If this is true, the development from PIE to the daughter languages would constitute a typologically rare case of a middle voice systems that develops out a non-reflexive original source, and also marginally extends to the reflexive domain, thus going against Kemmer's (1993) predictions.

Note that this scenario is compatible with most internal reconstructions of the prehistory of the PIE middle inflection. Indeed, whether the *media tantum* represent a class of verbs that was created out of the demise of the originally non-functionally motivated **-h₂e-* conjugation (Jasanoff 2003), or continues an original distribution of the **-h₂-* with stative verbs (cf. Cotticelli Kurras & Rizza 2013), the important fact is that at some point in the proto-language a semantically coherent group of verbs that formally inflected in the ancestor of the middle voice was formed, and that out of this group, oppositional middle forms were eventually created via a series of grammaticalization processes.

3.5. The middle voice from PIE to Hittite: a summary

We are now in a position to sketch a tentative history of the middle voice from PIE to New Hittite, based on the material presented throughout this chapter.

Irrespective of the details of one's reconstruction of the pre-history of the PIE middle and its relationship to the perfect and the Hittite *hi-* conjugation, based on comparative evidence it seems safe to assume a late stage in which there was a group of verbs which only inflected in the middle voice, i.e. the *media tantum*, which was already distinct from both the immediate ancestors of the Anatolian *hi-* conjugation and the classical PIE perfect. Whichever origin the middle voice had in pre-PIE, Anatolian clearly inherited a fully functionally and formally distinct middle voice (cf. Melchert 2017a: 188). Among the PIE *media tantum*, there was a possibly large group of predicates that indicated spontaneous change-of-state events, such as PIE **g^{wh}er-* 'become warm' (cf. Meiser 2010: 329). This class was continued in Anatolian, as the high percentage of OH *media tantum* with good IE cognates show (cf. sec. 3.2.2). Moreover, in Anatolian, or at least in pre-Hittite the group of *media tantum* must still have had some degree of productivity, as it was able to attract newly created non-inherited predicates such as denominal *-iye/a-* verbs, as in e.g. *kistanziye/a-^{ta(ri)}* 'become hungry'.

Remarkably, as compared to other IE languages, OH shows a much narrower distribution of *media tantum* in terms of Kemmer's (1993) situation types. Classes typical in Ancient Greek, Indo-Iranian, and Latin, such as verbs of emotions, cognition, and speech are entirely unattested, and the largest part is rather constituted by *media tantum* that encode spontaneous uncontrolled events. This might well have been the original situation, with the other languages having innovated in the expansion of the lexical domain of the *media tantum*.

The *media tantum* that encode spontaneous events are likely to be opposed to active verbs that indicate the corresponding externally induced events. This is how, by creating oppositions within the lexicon, voice alternation starts to be grammaticalized in anticausative function. Since the anticausative function of the middle voice is attested in many ancient IE languages, this pattern was possibly inherited from PIE into Hittite. However, even if its roots go back to the PIE stage already, the anticausative pattern is still expanding in Hittite historical times, as the creation of new active transitive forms out of intransitive *media tantum* shows, as in e.g. *lazziye/a-^{ta(ri)}* 'be(come) good' (OH) >> *lazziye/a-^{zi}* 'set straight' (NH). From the anticausative function, other intransitivizing functions developed via different diachronic processes of semantic extensions. Note that I do not claim here that this is exactly how these functions arose in all other IE languages, but simply observe that these are the processes that best account for the Hittite data. Among oppositional functions, the passive is clearly secondary, as it shows an extremely limited distribution in OH but becomes the most widespread function of the middle voice by NH times.

The development undergone by Hittite thus fully supports the idea that originally, i.e. already in PIE, verbal voice was lexically distributed, and that the development of oppositional functions can be understood in terms of an ongoing grammaticalization and paradigmaticization process that spans from late PIE to the daughter languages. Specifically, Hittite data disfavors the 'degrammaticalization' scenario suggested for Vedic by Kulikov (2012b). Indeed, if one accepts Kulikov's approach, or more generally, if one believes that PIE already featured a full-fledged system of voice opposition with grammatical function (cf. e.g. Cotticelli Kurras & Rizza 2013), one has to assume that this system partly broke down in late PIE already, since, as discussed in sec. 3.4.2, most grammatical functions are only sporadically attested in the earliest stages of the most ancient IE languages, only to later regain ground in the individual languages through the documented expansion of functions such as the passive and the reflexive.

This scenario, which envisages a phase of decay followed by one of renovated productivity of the middle voice, requires several stipulations and unnecessary complications: a more economical solution is the one pursued in this chapter, whereby the middle inflection was mostly associated with *media tantum* and functionally underdeveloped as far as grammatical functions were concerned in

PIE, and that the latter were only fully developed later on in the daughter languages. Therefore, lack of individual functions in IE languages, instead of being attributed to loss, could also be interpreted otherwise. For example, the further development of intransitivizing functions might have not fully taken place because other alternative competing constructions had been already created to encode a specific domain. Again, Hittite provides clear evidence for this development: as discussed in sec. 3.2.5, the marginal role of the reflexive function in Hittite can be explained if one considers that this domain was already covered by the ‘reflexive’ particle =*za* since the earliest phase of the language.

Conclusions

The Hittite middle voice between synchronic description and diachronic explanations

In this work, I have presented the results of a new study of the middle voice in Hittite. Taking Neu's monograph (1968a, 1968b) as a starting point, I have undertaken a systematic analysis of middle verbs in original Hittite texts, with a two-fold aim. In the first place, I have provided a new synchronic description of the Hittite middle, the verbs it applies to, and the functions it performs. In doing so, I have framed the discussion of the Hittite data within the current linguistic typology of middle voice system and of valency changing operations. In the second place, thanks to the precise chronological dating of Hittite texts, I have set out to explore the history of the middle voice in Hittite, with the goal of explaining how the polyfunctionality that one observes in synchrony is rooted in the historical processes whereby this category came about in the first place. The analysis is based upon a thorough investigation of occurrences of 105 middle verbs attested in original Hittite texts, but verbs attested in copies have also been frequently taken into account. Therefore, even though the study inevitably suffers from the intrinsic limitations of a relatively small corpus such as the Hittite one, the analysis at least covers the entirety of the available data. As such, this work results from the combination of insights of modern linguistic theory coupled with a fine-grained analysis of textual sources.

In Chapter 2, I have presented a new description of the Hittite middle voice from a synchronic perspective. Middle verbs have been sorted out into three main groups, based on their synchronic relationship with the active voice. The first group includes the *media tantum*, or non-oppositional middle verbs, i.e. those verbs that only inflect in the middle voice, such as *ar-ta(ri)* 'stand'. With these verbs, voice is often considered lexically determined. A closer inspection of this class reveals that Neu's assumption that *media tantum* are primarily connected with stativity cannot be upheld. Rather, the core of this class consists of verbs that indicate spontaneous change-of-state events or uncontrolled states. The second group is made up by oppositional middle verbs, i.e. those that stand in opposition to an active counterpart and give rise to meaningful patterns of voice alternation. With these verbs, the middle voice is associated with the encoding of various valency reducing functions. These include anticausatives, e.g. *zinni-zi* 'bring to an end' vs. *zinna-ta(ri)* 'end', passives, e.g. *dā-i* 'take' vs. *da-ta(ri)* 'be taken', reflexives, e.g. *das(sa)nu-zi* 'make strong' vs. (=za) *das(sa)nu-ta(ri)* 'make oneself strong', and reciprocals, e.g. *zahh-i* 'hit' vs. *zahhanda* 'they hit each other'. A look at the distribution of the individual functions shows that the passive function is synchronically the most

widespread, closely followed by the anticausative, with the reflexive and reciprocal functions playing a limited role only. As I have remarked, this distribution complies with the fact that there exist more productive alternative constructions for the encoding of the reflexive and the reciprocal domains, chiefly the particle =*za* and polyptotic reciprocal markers. A common feature of both oppositional and non-oppositional middle verbs is that they are almost invariantly intransitive (with the exception of the few transitive *media tantum*) and display unaccusative syntax, i.e. they require clitic subject pronouns. The third group of verbs consists of those verbs that attest to both active and middle forms, without any noticeable difference in syntax and semantics between the two, e.g. *weh*^{-zi/ta(ri)} ‘turn (intr.)’. With these verbs, there appears to be no principled synchronic motivation for their voice selection. In addition, by operating a careful distinction between morphologically underived and derived verbs, I was able to detect interesting patterns of interaction of the middle voice with different derivational morphemes, chiefly causative and factitive *-nu-* and *-ahh-*, denominal *-ye/a-*, and imperfective *-ske/a-*.

The picture that emerges from data discussed in Chap. 2 is one of high complexity, whereby the Hittite middle inflection is associated with a wide array of grammatical functions, including anticausative, passive, reflexive, and reciprocal, as well as with different classes of *media tantum*. Interestingly, the data collected shows that Hittite features a less canonical middle voice system as compared to the typology of the middle voice laid out by Kemmer (1993) and to the middle voice of other ancient IE languages such as Ancient Greek (cf. Allan 2003). Oppositional functions typically associated with the middle voice in IE languages such as the direct and indirect reflexive play a marginal role only, and classes of *media tantum* typical of e.g. Latin and Ancient Greek, such as emotion and perception middles, are unattested altogether. I have discussed how this complexity can hardly be reduced to one or more general synchronic functional motivations, and have advocated for a diachronic approach, whereby the synchronic distribution of the middle voice can be ultimately explained by understanding the historical processes that led to its emergence.

Chapter 3 has been devoted to such historical investigation. This represents a major novelty as compared to Neu’s work, which remained essentially synchronic in nature. As the data presented in this chapter shows, by adopting a diachronic perspective I have been able to better account for a number of apparently puzzling facts. In the first place, I have described how middle verbs distribute over time in the Hittite corpus of original texts. The main finding of this part has been that the various groups of middle verbs individuated in Chap. 2 show an uneven distribution in time. Whereas in OH the *media tantum* constitute the most prominent group from a quantitative standpoint, in later stages of the language this group loses ground to oppositional middle verbs. In other words, there is a shift from a system in which verbal voice was mostly lexically distributed, with most verbs almost

exclusively occurring either in the active or in the middle, to one in which verbs can more freely occur in the two voices to signal a number of valency changing operations, i.e. anticausative, passive, reflexive, and reciprocal. Among these, the passive function shows a significant increase in time as compared to the other ones. I have also pointed out how corpus data from OH to NH clearly demonstrates that this development is still taking place in historical times, and suggested to describe it in terms of increasing paradigmaticization. More generally, the distribution of the data strongly suggests that changes undergone by the middle voice spans over a long period of time, as one fails to pinpoint sudden break offs. Thus, the history of the middle voice in Hittite provides a further piece of evidence in favor of the assumption that language change operates gradually and that innovations spread through the lexicon at different speed rates.

In addition, I have shown that the fluctuation of verbs that show functionally identical active and middle forms, which is entirely unpredictable from a synchronic standpoint, can be understood as the outcome of historical processes of transfer of original *media* or *activa tantum* to the opposite inflectional class. Such fluctuations are not entirely random, and two main trends can be detected. Among *media tantum*, deponents and intransitive *-ske/a-* verbs show a tendency to be increasingly transferred to the active inflection. By contrast, intransitive *activa tantum*, mostly unaccusative ones, sporadically start appearing in the middle voice, possibly on analogy with semantically similar *media tantum*.

In the second part of the chapter, I have focused on elucidating how the groups of *media tantum* and oppositional middles are historically related, which is a topic that has so far received comparatively less attention. Following Luraghi's (2012) earlier findings, I have suggested that the *media tantum* constitute the original core of the middle voice, and I have provided a plausible scenario that accounts from the development of oppositional functions out of this group. Specifically, I have singled out the anticausative function as being the most likely bridge between the two groups. Once *media tantum* that indicate spontaneous change-of-state event start being coupled with active transitive verbs that indicate the causative counterpart, the anticausative alternation is established. The anticausative function can later on give rise to the passive, the reflexive, and the reciprocal functions, via different paths of semantic extension. This account also easily explains how the somewhat puzzling synchronic distribution of the Hittite middle is ultimately motivated by the specific local diachronic processes of semantic extension that relate pairs of different source and target usages/meanings. Finally, I have discussed how the diachronic scenario that I propose to account for the Hittite data turns out to be fully compatible with more recent hypotheses about the development of the PIE voice system into the daughter languages. Specifically, the distribution of middle verbs in OH and their subsequent development supports those reconstructions of the PIE

verbal system in which voice was originally lexically distributed and restricted to the *media tantum*, and the rise of oppositional functions is only fully achieved in the individual branches through independent processes of language change.

The results of this work are not only relevant for the field of Hittite and Indo-European linguistics. As a matter of fact, this work also contributes to enriching the diachronic typology of middle voice systems, which still remains a relatively understudied topic. From a typological perspective, it is worth noticing that Hittite attests to a lesser known path of development of middle voice systems, in which oppositional functions of the middle are derived from non-oppositional usages. In this respect, the history of the Hittite middle is more similar to the processes that lead to the emergence of the middle voice system in Bantu languages (cf. Dom *et al.* 2016) than to the ones that have been observed in Romance and Germanic languages (cf. Kemmer 1993), where reflexive markers spread to the class of *media tantum*. Concerning the historical relationship of oppositional functions, I have also argued that Hittite provides evidence for hitherto less discussed and typologically rarer patterns of development, that is, the development of the reflexive, and possibly also the reciprocal, function out of the anticausative one.

Part Two

Middle verbs in original Hittite texts: a corpus analysis

5.1. Corpus analysis

In this chapter, I provide a thorough analysis of middle verbs attested in the corpus of Hittite original texts. Data for this description consists of sentences featuring verbal forms in the middle voice which have been manually retrieved from the corpus, using Neu's (1968a) and Yoshida (1990) data collection as a guide (see the Appendix for the complete list). The verbs are organized in three different groups depending on their relationship with voice (see Chap. 2 for a discussion of the reasons behind this grouping): *media tantum* (Section 5.1.1), verbs that show functionally equivalent active and middle forms (Section 5.1.2), and verbs that display a functionally motivated voice alternation (Section 5.1.3). Within each group, verbs are given in the alphabetical order common to Hittite dictionaries. For consistency's sake, lemmas are cited after Kloekhorst (2008).

The description of each lemma is organized in different subsections, and covers various parameters that are relevant for the understanding of the verb's syntax and semantics, as well as its relationship with voice. The subsections are:

- a. *Semantics and aspectual construal*: in this section, an overview is given of the verb's meaning and of its possible aspectual construal(s), framed within the cognitive linguistic approach to verbal aspect laid out by Croft (2012) and discussed in Chap. 1. The interaction with the suffix *-ske/a-* is also taken into account, as well as the semantics of the participle for intransitive verbs. Note that since in Hittite all transitive verbs have resultative participles (cf. Chap. 1), I do not discuss the semantics of the participles of these verbs in detail.
- b. *Etymology*: this section contains a brief recapitulation of the verb's etymology as provided in etymological dictionaries, mainly Kloekhorst (2008) and *LIV*², as well as other sources. This section is occasionally omitted when irrelevant, e.g. for derived denominal verbs.
- c. *Argument structure and relationship with voice*: this section features the description of the different argument structure constructions in which the verb occurs, with special attention to the syntax of clitic subjects with intransitive verbs. Also, a detailed account of the interaction of the verb with voice is provided. For verbs that display a functional

opposition between active and middle forms, the different functions are discussed in the framework of the typology of valency changing operations discussed in Chap. 1. Where possible, a tentative relative chronology of different functions is established. Noticeable diachronic developments undergone by individual verbs are also discussed in this section. As anticipated in Chap. 3, in this chapter the constructions in which verbs occur are represented loosely following the conventional layout of Construction Grammar (e.g. Goldberg 1995, 2006).

- d. *Interaction with the particle =za*: this section is only available for verbs that occur with the particle =za, and describes the relationship between the verb and the particle.

5.1.1. *Media tantum*

The group of *media tantum* features verb that are only attested in the middle voice throughout the attested history of the language, and can be further divided into non-derived (Section 1.1.1) and derived verbs (Section 1.1.2). Moreover, in Section 1.1.3, I discuss verbs that are attested only in the middle voice in OH/OS, but that also display post-OS active forms identical in syntax and semantics to middle ones.

5.1.1.1. Underived *media tantum*

ar-^{ta(ri)} ‘stand’

Semantics and aspectual construal:

The verb *ar*-^{ta(ri)} ‘stand’ indicates the location in space of an entity together with a specific vertical orientation ‘stand upright’. As such, the verb belongs to the group of *positional verbs* (Brosch 2014: 34-35), i.e. predicates that indicate a “configuration of the body or – by extension – object with relation to another, often supporting, object” (Kemmer 1993: 269).

The event denoted by the verb is consistently construed as stative (cf. Bechtel 1936: 89), and the verb belongs to the class of inactive actions (Croft 2012: 98-101). Neu (1968a: 6) explicitly groups it together with stative predicates including *es*-^{a(ri)} ‘sit’ and *ki*-^{ta(ri)} ‘lie’. Stativity of this predicate is confirmed by several linguistic clues. First, the verb only occurs with static local adverbs and adpositional phrases based on static local adverbs, as in example (1), in which it occurs with stative *andan* ‘in’ and with the postpositional phrase *sarhuliyas peran* ‘in front of the pillar’ (Starke 1977: 49):

- (1) DAM ^{LÚ}GUDÚ *andan siunas É-ri sar[(huli)]yas pe[ran*
 wife priest inside god.GEN.PL house.DAT pillar.GEN in.front.of
 (*arta*)]
 stand.PRS.3SG.MID
 “The wife of the priest stands in front of the pillar inside in the house of the god.” (KBo 17.15 rev. 13 OH/OS)

Further evidence for a stative reading comes from the occurrence of temporal adverbs and from contextual cues, as in (2) and (3):

- (2) [*namma=a*]t UD-*an hūmandan arantari*
 then=3PL.NOM day.ACC all.ACC stand.PRS.3PL.MID
 “Then they stand the entire day.” (KUB 29.49 iv 48, MH/MS)

- (3) *n=as UD-ti GE-ti=ya ANA PANI DINGIR^{MES}*
 CONN=3SG.NOM day.DAT night.DAT=CONJ to front god(PL)
artari
 stand.PRS.3SG.MID
 “He stands in front of the gods day and night.” (KUB 14.4 ii 13, NH/NS)

In (2), the occurrence of the accusative UD-*an hūmandan* ‘the whole day’ indicating duration in time is only compatible with an unbounded reading of the predicate (Bertinetto & Cambi 2006: 214). Similarly, in (3) the expression UD-*ti GE-ti=ya* ‘day and night’ indicate extension in time (for this use of the dative-locative see Hoffner & Melchert 2008: 262).

Finally, evidence for the atelic nature of this predicate comes from its participle *arant-*, which indicates an ongoing state, and means ‘standing’ (cf. *HED s.v.*, Frotscher 2013: 204).

It is worth observing that for some scholars the verb *ar-^{ta(ri)}* can also indicate a motion event ‘take one’s place, step in’, thus implying an achievement construal (cf. Neu 1968a: 7). Let us review the evidence for this interpretation, starting from (4):

- (4) 2 ^{LÚ.MESŠ}SUKUR.DUGUD=*ma=kan LUGAL-i menahhanda ZAG-az*
 2 heavy.spear.man(PL)=CONN=PTC king.DAT in.front.of right.ABL
ara[anta]
 stand.PRS.3PL.MID

“Two heavy-spear men take their places/stand opposite to the king to the right.” (IBoT 1.36 ii 9, MH/MS)

In (4), the verb is translated by Miller (2013: 109) dynamically as ‘they take place’. However, this interpretation is unwarranted, as there is no linguistic or contextual evidence in support of a motion reading of the verb. It is thus safer to interpret the verb as profiling a temporary state even in this case, following Güterbock & van den Hout’s (1991: 15) translation as ‘they stand’. As a matter of fact, similar argumentations hold for all instances of *ar-* translated by Miller as ‘take place’. To support this interpretation, the opposition between stative *ar-* and the motion verb *tiya-^{zi}* ‘step in’ can be observed in (5), where however the reading *tiyazzi* proposed by Miller (2013: 108) is not entirely sure (cf. Güterbock & van den Hout 1991: 16).

(5) ^{LÚ}ŠUKUR.KÙ.SIG₁₇=*ma=smas* *kuis* *kattan* *artat*
 gold.spear.man=CONN=3PL.DAT REL.NOM beside stand.PST.3SG.MID
tiyazzi[?]
 step.PRS.3SG

“The gold-spear man who stood next to them steps up.” (IBoT 1.36 ii 20, MH/MS)

Similarly, the combination of *ar-^{ta(ri)}* with certain preverbs has been interpreted as adding dynamicity to the event (see also *HED* and *HW*² for details on the occurrence of preverbs with this verb. A case in point is the combination *anda ar-^{ta(ri)}*, which is treated by Neu (1968a: 6-8) as dynamic and translated accordingly as ‘step in (Germ. *eintreten*)’. However, if one takes a closer look at occurrences of *ar-^{ta(ri)}* with the preverb *anda*, there is no compelling evidence that in these passages the verb indicates a motion event, as a stative construal is also perfectly compatible with the context. Consider example (6):

(6) [(*n*)]=*nnas=kan* DINGIR^{LUM} *anda* *artat*
 CONN=1PL.DAT=PTC god inside stand.PST.3SG.MID

“(And which house we have built), there steps in the god for us/ there the god stands in for us.” (KUB 1.1 iii 7 NH/NS)

Example (6) is treated by Neu (1968a: 8) as indicating a motion event, ‘step in’, but here a stative interpretation ‘stand (inside)’ is also possible. Note further that in this case *anda* might not be considered a preverb, but rather an adposition combined with the dative =*nnas* ‘inside us’, which

stands metonymically for ‘inside our house’. All things considered, whereas spatial preverbs clearly modify the verb’s meaning by further specifying the spatial configuration indicated by the verb, I would be more careful in evaluating their impact on altering the default construal of the verb.

The only occurrences in which a change-of-state reading of the verb are possibly at play are the ones in which the verb is inflected in the imperative (already Neu 1968a: 7). This is hardly surprising, as the imperative mood, which usually entails control by part of the agent subject, tends to impose a dynamic construal when applied to stative predicates. Consider example (7):

- (7) *nu=ssan ANA* ^dUTU-[*ŠI wa*]*rri lammar arhut*
 CONN=PTC to my.majesty help.DAT promptly stand.IMP.2SG.MID
 “Promptly stand by My Majesty for help.” (KBo 5.4 i 20, NH/NS)

In example (7), the verb in the imperative profiles both the change-of-state component and the subsequent maintenance of the ensuing state. Note that a dynamic reading is supported by the adverbially used dative-locative *lammar* ‘promptly, instantly’ (*CHD s.v.*), which indicates a point in time, and is therefore more compatible with an achievement construal of the event.

However, this shift in the aspectual construal with the imperative is by no means compulsory, as in certain contexts the imperative is semantically compatible with a stative reading of the event. A case in point is example (8), in which the order simply refers to the controlled maintenance of a state already established in the past, as coordination with indicative *artati* in the previous sentence shows, and is therefore compatible with a stative construal of the event. Notably, the possibility to be controlled makes *ar-^{ta(ri)}* a less-prototypical state, as common to most *inactive actions* discussed by Croft (2012: 98-101).

- (8) *IŠTU ŠÁ* ^dUTU-*ŠI m[ahhan] artati nu IŠTU ŠÁ*
 from inside my.majesty as stand.PST.2SG.MID CONN from inside
^dUTU-*ŠI=pat EGIR-an arhut*
 my.majesty=FOC back stand.IMP.2SG.MID
 “As you have stood by the side of the king, so stand hereafter equally by the side of My Majesty.” (KBo 5.13 ii 7-8, NH/NS)

Etymology:

According to Kloekhorst (2008 *s.v.*) the verb derives from PIE **h₃er-*, that indicates vertical movement ‘rise, move vertically’ (Oettinger 1979: 523). The Hittite form is issued from the zero-

grade root **h₃r-*, as the original OS *ar-* spelling cannot represent anything but underlying /ʔr-/, which is the expected phonetic outcome of the zero grade. Plene spelling as *a-ar-* is a sporadic NH innovation (cf. Oettinger 1979: 523). Alternatively, Hittite *ar-* may derive from PIE **h₁er-*, which indicates horizontal movement (*LIV*² *s.v.*). Under the first reconstruction, other IE cognates are Lat. *orior*, and the aorist forms Gr. *ôrto* and Skt. *ārta*. All these verbs display middle inflection and denote vertical movement ‘rise’. According to *HED* (1984 *s.v.*) the stative meaning is an innovation and “the stative sense of Hitt. *ar-* inheres rather in the mediopassive diathesis which has been fully developed and marked in Hittite” (see further Luraghi 2012: 12). However, since the link between stativity and the middle voice is in Hittite a tenuous one at best (see Inglese *forthc.*, Chap. 2), this interpretation is not without problems.

Argument structure and relationship with voice:

The verb *ar*-^{ta(ri)} belongs to the class of *media tantum* and shows no correspondent active forms (Neu 1968b: 52, Melchert *forthc.*b: 14). Even though a historical connection with active *ar*-ⁱ ‘arrive’ cannot be entirely ruled out, the two verbs are clearly not synchronically related in any according to most scholars (see Kloekhorst 2008 *s.v.*). As for the stative meaning, Luraghi (2012: 12) suggests that the middle verb, which indicates a motion event in all other IE languages, acquired stative semantics due to analogy with stative *ki*-^{ta(ri)} ‘lie’ (see below). At this point, the telic meaning was preserved by the creation of an active *ar*-ⁱ. Though the semantic shift due to analogy is plausible, the picture is complicated by the fact that the etymological relationship between *ar*-^{ta(ri)} ‘stand’ and *ar*-ⁱ ‘arrive’ is controversial, as Luraghi (2012: fn. 13) herself observes. Note further that in principle the causative verb *arnu*-^{zi} ‘make move’ can be interpreted as going back to either *ar*-^{ta(ri)} ‘stand’ or *ar*-ⁱ ‘arrive’ (Kloekhorst 2008 *s. arnu*-^{zi}).

According to Neu (1968a: 7), the verb can also have a passive interpretation ‘be brought in, hingebracht werden’ (this overlapping with stative ‘hingebracht sein’ fn. 118), whereas a passive function is explicitly rejected in *HW*² “*ar*- [...] ist nie Pass(ive)”. Clearly, since the verb lacks a corresponding active counterpart, a passive function proper can be safely ruled out, also on the ground that alleged examples of passive usage all lack overt agent phrases. What Neu treats as passive example of *ar*-^{ta(ri)} are better interpreted as cases of stative construal of the verb with reference to inanimate entities, for which it is known that they were previously situated in a certain location by an external agent, as in the case of (9).

- (9) GIŠ.^dINANNA^{HI.A} *andurza karū* *arantari*
 instrument.Istar(PL) inside already stand.PRS.3PL.MID

“The instruments of Istar are already in position (not: they have been already brought in).” (KUB 2.6 iii 1, NS)

The event frame of the verb *ar-^{ta(ri)}* features two participants, a Theme and a Location. Whereas in OH the Theme role, which is encoded as subject, is only associated with humans, or at least animate referents, in post-OH texts one also finds inanimate subjects. Notably, human participants differ from inanimate ones as they can partly exert control over the event, as discussed for (7) and (8). Syntactically, the verb is intransitive and takes a nominative subject. The verb consistently displays unaccusative syntax (Garret 1996: 95), and requires a clitic subject pronoun, as in (3). The Location can be left unexpressed, or where specified it is variously encoded as an oblique (adverb, adpositional phrase, NPs in the locative).

In my corpus, there is one single occurrence, quoted under (10), in which the verb apparently displays transitive syntax.

- (10) *n=at=kan* *ANA* ^dUTU-ŠI *warri* *lammar* ***arhut***
 CONN=3PL.ACC=PTC to my.majesty help.DAT promptly stand.IMP.2SG.MID
 “(Send forth infantry and chariotry), let them stand in help by My Majesty promptly.”
 (KBo 5.13 iii 10, NH/NS)

What is problematic in example (10) is the interpretation of the clitic pronoun *=at*, which is plural and anaphorically refers to two previously mentioned entities, viz. ‘infantry and chariotry’. Notably, in this case the verb inflects in the 2nd person singular imperative, thereby excluding the interpretation of the clitic pronoun *=at* as a clitic subject. The only other option is to interpret the clitic as an accusative object pronoun, but such transitive syntax of *ar-^{ta(ri)}* is unattested elsewhere. Tentatively, we can explain the aberrant syntax of this passage as an erroneous use of the semi-idiomatic intransitive construction *warri lammar ar-.IMP* ‘promptly stand in help!’, which frequently occurs in the text of this treaty, possibly on account of similarity of the form *arhut* with transitive *arnut* ‘bring.2SG.IMP’ occurring in the same context earlier in the text (*n=at=kan ANA* ^dUTU-ŠI *lammar arnut* ‘bring them promptly to My Majesty’, KBo 5.13 iii 3).

es-^{a(ri)} ‘sit down’

Semantics and aspectual construal:

The verb *es-^{a(ri)}* indicates the act of sitting down. This verb is employed in a variety of different constructions, and it undergoes notable changes in the history of Hittite.

In OH, the verb cannot possibly be taken as encoding a state ‘be seated’ (cf. e.g. Starke 1977 *passim*), and rather indicates a dynamic change of configuration in the body posture with a clear endpoint, as already discussed by several scholars (see discussion in Bechtel 1936: 90-92, Neu 1968a: 25-31, Goedegebuure 1999, Oettinger 2004, Cambi 2007: 79-90, Luraghi 2012: 14 and reference therein). For instance, the verb can occur with NPs indicating Direction in the allative case, as in (11) (see Starke 1977: 50 for an alternative explanation).

- (11) *n=as=san* ^{GIŠ}*hulikanniya* *esa*
 CONN=3SG.NOM=PTC carriage.ALL sit.prs.3SG.MID
 “And he sits down on the carriage.” (KBo 20.18+ rev. 7, OH/OS)

Another occurrence which favors a dynamic reading is (12):

- (12) *paiwani=wa* *esuwasta*
 go.PRS.1PL=QUOT sit.PRS.1PL.MID
 “We will sit down.” (KUB 31.143 ii 36, OH/OS)

Example (12) features a possible early OS example of the ‘serial’ *pai-* construction (see further Luraghi 1998, forthcoming, van den Hout 2003, 2010, Rieken 2010; the context of the passage is admittedly too fragmentary to ascertain the ‘serial’ status of the construction). If this interpretation is correct, the semantics of the motion verb *pai-* ‘go’ as well as the immediate future meaning encoded by the construction fit better the dynamic meaning of *es-^{a(ri)}*.

Turning to the relationship with local adverbs, the interpretation is more complex. As a matter of fact, *es-^{a(ri)}* occurs with a number of adverbials indicating Location, rather than Direction (note that it never occurs with a bare locative NP in OS), as in examples (13) and (14):

- (13) LUGAL *INA* ^{GIŠ}ŠÚ.A *esa*
 king to throne sit.PRS.3SG.MID
 “The king sits down on the throne.” (KBo 20.10+ i 7, OH/OS)
- (14) *n=e* *hassas* *katta* *esanta*
 CONN=3PL.NOM brazier.GEN next.to sit.PRS.3PL.MID
 “They sit down next to the brazier.” (KBo 17.36+ iii 10, OH/OS)

In (13), the verb *es*-^{a(ri)} occurs with a prepositional phrase introduced by the Akkadian preposition *INA*, whereas in (14) the postposition *katta* occurs. These adpositions normally encode Location rather than Direction, and should favor a static reading of the verb, as observed by Starke (1977). However, if one takes a closer look at the discourse contexts, it turns out that a dynamic interpretation of the verb is largely favored. This is unsurprising, as verbs indicating change of configuration/location can also be associated with static adpositional phrases that profile the resulting endpoint of the movement.¹ Therefore, in (13) the occurrence of the postposition *INA*, which commonly encodes Location (Starke 1977: 109-110, Hoffner & Melchert 2008: 441), can be interpreted as signaling the final Location once the act of sitting has been performed, rather than the Direction (cf. Starke 1977: 113; 50-51, Francia 2002a: 7 and fn. 15 on the use of locative case and static local adverbs with verbs of motion).

More generally, it has been observed that in Hittite the dative-locative case with inanimate nouns may encode either Direction, thus competing with the directive case, or Location already in OS (Hoffner & Melchert 2008: 259, Brosch 2014: 3-4). Overall, it seems that the occurrence of spatial expression indicating Location cannot be taken as conclusive evidence in favor of a stative reading of *es*-^{a(ri)}.

The only OH occurrence of a *-ske/a-* derived form of *es*-^{a(ri)} shows an achievement construal of the verb, as it features a prepositional phrase introduced by *ANA*, which always encodes Direction, as shown in (15).

- (15) *AHI LUGAL ANA PANI ABI LUGAL kuiēs ēskanta*
 brother king to front father king REL.NOM.PL sit-IMPf-PRS.3PL.MID
 “(Here are) the brothers of the king, who sit in the presence of the king.” (KBo 3.34 iii
 15, OH/NS)²

¹ This construction is not only attested in Hittite, but rather reflect cross-linguistic tendencies in the encoding of motion events, as shown by e.g. Ancient Greek. In Greek linguistics, the term *constructio pregnans* is used to indicate constructions in which a dynamic motion verb is associated with a stative expression, most commonly a Location encoded in the dative or with *en* plus dative. This type has been recently surveyed by Nikitina & Maslov (2013: 118-124), to which I refer for further references.

² Following Luraghi (1990) and Inglese (2016), among others, I regard as genuinely OH data from the so-called ‘Palace Chronicle’ text (CTH 8 and 9), edited by Dardano (1997). This text is reported on a single OS fragmentary tablet (copy D, KUB 36.104), whose content can be integrated with several post-OS copies, chiefly with KBo 3.34 (copy A), which appears to be a very conservative and reliable copy of KUB 36.104.

As for the semantics of the *-ske/a-* suffix, in (15) it seems to add a habitual reading to the base verb (Cambi 2007: 84), but since the verb takes a plural subject it could also indicate plurality of participants.

Summing up, OS evidence shows that the verb *es-^{a(ri)}* consistently displays the default construal of a directed reversible achievement. In this respect, the verb contrasts with active *ēs-^{zi}* ‘be seated’, which is always construed as a transitory state, as shown in (16), in which the inanimate subject ‘soldier bread’ coupled with the locative indicating Location points towards a non-agentive non-dynamic interpretation of the verb, and in (17), in which the context strongly favors a stative reading.

- (16) ^{NINDA}*sarrui=m[(a=ss)]an* ^{ÉRIN^{MEŠ}}*-az* ***ēszi***
 s.bread.DAT=CONN=PTC enemy.NOM sit.PRS.3SG
 “The ‘soldier bread’ is sitting on the *sarruwa*-bread.” (KBo 17.11+ i 30, OH/OS)

- (17) ^{LÚ.MEŠ}*UBĀRU* ^{L[Ú.MEŠ}*DUGUJD* *kuis* *kuis* *LUGAL-was* *peran*
 u.man(PL) commander(PL) REL.NOM REL.NOM king.GEN in.front
ēszi
 sit.PRS.3SG
 “Whichever *ubaru*-man and commander is sitting in the presence of the king (they stand up.)” (KBo 17.11+ i 5- 6, OH/OS)

Note that the participle *esant-* ‘sitting’ of the verb points towards a stative meaning of the verb (Frotscher 2013), but this is inconclusive as the participle is likely to be derived from the active counterpart *es-^{zi}* ‘be seated’ rather than from the middle.

In MS times, forms of *es-^{a(ri)}* can still be used to refer to a dynamic event, as in 0.

- (18) *LUGAL-us=san* ^{GIŠ}*hulug[anni]* ***esa***
 king.NOM=PTC carriage.DAT sit.PRS.3SG.MID
 “(The bodyguard sets up the *step-stool*, the king comes out, while the chief of the palace personal holds his hand,) and the king sits down in the carriage.” (IBoT 1.36 ii 16-17, MH/MS)

In addition to sporadic continuation of the OH usage of the verb, in MH the verb begins to occur in a rather different construction, exemplified in (19).

- (19) *mān=za san-[xxx] URU-an ZI-it esari*
 if=REFL city.ACC mind.INST sit.PRS.3SG.MID
 “If [...] willingly occupies a city.” (KUB 26.19 ii 14, MH/MS)

In (19), the verb *es^{-a(ri)}* is used in conjunction with the particle *=za* and takes a direct object in the accusative case (cf. Boley 1993: 73).³ Despite the different syntax and semantics, the verb still refers to a dynamic rather than to a static event.

The interpretation of the only MH/MS *-ske/a-* suffixed form is unclear:

- (20) ^m*Pihinakkis=za mahhan* ^{URU}*Lisipr[a]n* *ēski[tt]ari*
P.NOM=REFL how L.ACC sit-IMPf-PRS.3SG.MID
 “(Concerning what you wrote me about) how Pihinakki is (re)settling the town of Lisipra (‘he has already settled 30 houses’).” (HKM 10 obv. 4-5, MH/MS)

According to Hoffner’s (2009: 112) translation, the form *ēskitari* could be profiling the event as a directed activity, i.e. as a change-of-state event whose endpoint is left unprofiled (see Bertinetto & Cambi 2006: 219 for a different interpretation). Alternatively, since the event is referring to the occupation of a city, which can be conceived as made up of multiple items (as the following sentence shows), the *-ske/a-* suffix might be simply indicating plurality of objects. In (20) the verb instantiates the transitive construction with *=za*.

Finally, NH material shows the endpoint of the development undergone by *es^{-a(ri)}*. In the first place, in NH one finds the transitive construction with *=za* in the meaning ‘occupy’, as in 0.

- (21) *nu=za ANA PANI ABI ABI=YA kuis* ^{URU}*Gasgas*
 CONN=REFL to front father father=1SG.POSS REL.NOM K.NOM
^{HUR.SAG}*Tarikarimun* *GEŠPU-az esat*
T.ACC force.ABL sit.PST.3SG.MID
 “The Kaskean who at the time of my grandfather had seized with force Mount Tarkalmu.”
 (KBo 3.4+ iii 60-61, NH/NS)

³ A possible occurrence of transitive use of middle *es^{-a(ri)}* without *=za* is KBo 16.25 i 81-82, which is translated by Miller (2013: 175) “we too, [...] the enemy in the land [...] we will oppose”. However, the gap in the manuscript is too wide to be sure that the form *esuwasta* syntactically belongs to the sentence in the previous line (cf. Giorgieri 1995: 114-115).

In the second place, forms of *es*-^{a(ri)} accompanied by the particle =*za* start to be used to indicate the dynamic (achievement) event of sitting down. This use is most frequently instantiated in the recurrent sentence ‘sit down on one’s throne’, which is a metaphorical expression to indicate the acquisition of kingship. Therefore, in this case a change-of-state event is profiled, as exemplified in (45), in which dynamicity is further supported by the use of the Akkadian directional preposition *ANA* ‘to’.

- (22) ^dUTU-ŠI=*ma=za=kan* *ANA* ^{GIŠ}GU.ZA *ABI=YA* ***ēshahat***
 my.majesty=CONN=REFL=PTC to throne father=1SG.POSS sit.PST.1SG.MID
 “I, the sun king, sat down on my father’s throne.” (KBo 4.7 i 11, NH/NS)

The same construal is also at play in other occurrences, such as in (23), in which the event refers to one’s settling down in a city, here encoded in the dative-locative case, and in (24), in which the occurrence of the dynamic place adverb *katta* ‘down’ favors a dynamic reading of the event (see also Neu 1968a: 29).

- (23) *n=as=za=kan* [xxx] ^{URU}*Sapiddui* [xxx] ***esat***
 CONN=3SG.NOM=REFL=PTC S.DAT sit.PST.3SG.MID
 “And he settled down in Sapidduwa.” (KBo 5.8 iii 5, NH/NS)
- (24) *nu=za* MUNUS.LUGAL *katta* ***eshahat***
 CONN=REFL queen down sit.PST.3SG.MID
 “And I, the queen, sat down.” KUB 31.71 ii 2 NH/NS

When combined with the preverb *appan* the verb acquires the metaphorical meaning ‘become arrogant, rebel’, and the event is construed as dynamic as well. Consider example (25), in which dynamicity is suggested by the occurrence of the adverb *dān* ‘for the second time’, which indicates repetition hence completion of the event.

- (25) *nu=za* KUR ^{URU}*Tapāpanuwa* *kuit* *dān* EGIR-*pa* ***esat***
 CONN=REFL land *T.* because twice back sit.PST.3SG.MID
 “And because the land of Tappanuwa rebelled (lit. sat back) for the second time.” (KUB 19.37 iii 28, NH/NS)

By contrast, in NH active forms of *es*-^{zi} disappear, and are replaced in indicating the stative event ‘be seated’ by middle forms of *es*-^{a(ri)} without the particle =*za*. This use is exemplified in (26), in which the imperative profiles maintenance of the state denoted by the verb, as also suggested by the locative expression ‘in his place’, and in (27), in which the occurrence of an inanimate subject suggests a stative interpretation of the verb. Notably, the use of the imperative suggests that the verb is construed as an inactive action, where the participant is conceived as exerting control on the event (see discussion under *ar*^{ta(ri)}).

(26) *nu=wa=si* *kās* ^{LÚ}*KARTAPPU* *pedi=si*
 CONN=QUOT=3SG.DAT DEM.NOM charioteer place.DAT=3SG.POSS.DAT

esaru

sit.IMP.3SG.MID

“Let this charioteer remain seated in his place.” (KUB 14.3 ii 72, NH/NS)

(27) *nu* KUR ^{URU}*Tūmanna kuit* *PANI* *ABI=YA* ***ēstat***
 CONN land *T.* because front father=1SG.POSS sit.PST.3SG.MID

“And because the land of T. was loyal to my father (lit. was sitting in front of my father.)”
 (KBo 5.8 ii 15, NH/NS)

Etymology:

Kloekhorst (2008 s.v.) traces back the verb to the PIE root **h₁eh₁s-*, which is the etymology proposed by *HED* and *LIV*² as well (see however Oettinger 2004 for a different interpretation). According to Kloekhorst, the root is most likely a reduplicated form of the root **h₁es-* ‘be’, and in order to explain the Hittite meaning, he assumes a semantic shift from ‘be present’ > ‘sit’. Whereas I do not contest the formal details of the reconstruction, I would like to suggest that the meaning ‘sit’ could be the original one. Active forms, based on the simple stem **h₁es-*, were stative in meaning and could easily develop the meaning ‘be’ following a well-known pattern of semantic change, e.g. Lat. *sedēre* ‘sit’ > Span. *ser* ‘be’ (Heine & Kuteva 2002: 278; I would like to thank Daniel Kölligan for this suggestion). Note that in Hittite, one finds active forms of *ēs*-^{zi} meaning both ‘sit’ and ‘be’, and the two are treated as two distinct lemmas in most dictionaries of the language. However, if the original meaning of the root was ‘sit’ to begin with, then one could simply set up a polysemous verb *ēs*-^{zi} ‘sit, be’ in Hittite. In this respect, OH would indeed prove extremely archaic, as the meaning ‘sit’ of active forms of the verb is lost by NH times and the meaning ‘be’ is the only one attested for active forms of **h₁es-* in all IE languages (data from *LIV*² s.v.).

In other IE languages, the stative meaning ‘sit’ was only preserved for forms based on the root **h₁eh₁s-* inflecting in the middle voice, as shown Skt. *áste* and Gr. *êmai*, both meaning ‘be seated’. The dynamic meaning of Hittite *es-^{a(ri)}* should thus be regarded as a Hittite innovation. This provides a nice counterexample to the proposal by *HED* to derive the stative meaning of Hittite *ar-^{ta(ri)}* ‘stand’ vs. other non-stative IE cognates as depending on the middle inflection of the verb, since here the pattern is reversed.

Argument structure and relationship between the active and the middle voice:

Despite Neu’s (1968b: 52) claim that *es-^{a(ri)}* is an original *medium tantum*, in OS the verb synchronically alternates with an active counterpart, which follows the *mi*-inflection, and indicates a state ‘be seated’ (Oettinger 2004). Middle *es-^{a(ri)}* is sometimes considered a reflexive verb (e.g. Cambi 2007), but this is partly misleading, and it is better to interpret the verb as indicating a spontaneous event of the autocausative type. The induced causative counterpart is provided in OH by the transitive verb *asās-ⁱ* (Luraghi 2012: 10), an old reduplicate formation which by MH times was renovated as a formally more explicit *nu*-causative *asesanu-^{zi}* (see further Kloekhorst 2008 s. *asās-ⁱ*, Dempsey 2015: 62-65, Covini 2018).

Neu’s claim that the active voice is a secondary development might be true from a diachronic point of view, since we are dealing with two etymologically distinct forms, viz. **h₁eh₁s-o*, reflected in cognates middle verbs in other IE languages, and **h₁es-ti* (see Kloekhorst 2008 s.v.). However, the two stems merged into a single paradigm in pre-Hittite times, as outcome of regular sound changes. By the time of our recordings, one synchronically finds a single stem *es-* that inflects according to both voices, making its inclusion among the *media tantum* at least problematic. The fact that voice alternation with this verb is connected to the merging of two distinct verbs which originally inflected according to one voice only explains why only this verb shows a connection between voice alternation and alternating aspectual construals, with active forms associated with stative events in the oldest stages of the language.

Concerning voice selection of *-ske/a-* forms, since the base verb inflects as middle (semantically it is clear that the base verb is not stative *es-^{zi}*), it is unlikely that voice selection is triggered by the occurrence of the *-ske/a-* suffix (cf. Neu 1968b: 86 ff., Melchert 2017b).

As discussed above, the verb is involved in different constructions, and a significant diachronic development can be detected.

In the first place, the verb can indicate a one-participant event that involves a volitional and animate Agent and inanimate Direction/Location. Syntactically, in this construction the verb is used intransitively and displays unaccusative syntax, as it almost invariantly takes clitic subjects, as in (11)

above. Luraghi (2010a: 139), referring to Goedegebuure (1999), remarks that in OS the verb occasionally still occurs without a subject clitic (e.g. KBo 17.15 rev. 20), consistently with the behavior of other motion verbs which fail to show consistent unaccusative syntax in the earliest phase of the language.

In post-OH times, the intransitive construction of the verb undergoes a noticeable change. Active forms with stative meaning are progressively eliminated, possibly because of homophony with forms of $\bar{e}s^{-zi}$ ‘be’ (Oettinger 2004), or to put it differently, because the semantic shift of the form $\bar{e}s^{-zi}$ ‘be seated’ > ‘be’ was fully achieved. As a result, MH attests to a transitory phase, in which no finite form is attested with the meaning ‘be seated’, whereas middle forms continue to be used with the dynamic meaning ‘sit down’.⁴ This asymmetry leads to a restructuring of the use of the verb in NH, with simple $es^{-a(ri)}$ becoming associated with the stative construal of the verb, and $es^{-a(ri)}$ with the dynamic construal ‘sit down’ was renovated through addition of the particle =za (cf. Cotticelli Kurras & Rizza 2013: 16-17). That this is an ongoing change in NH is partly confirmed by some inconsistencies in the use of the particle, as one finds sporadic cases in which the event is most likely to be interpreted as dynamic even in absence of the particle. This usage is attested for instance twice in the same text (KBo 22.56 +), as shown in (28). Compare the occurrence of the particle in a sentence with a similar structure in (29).

(28) *mahhan=ma* ¹*Hattusi-DINGIR*^{LIM}-*is* LUGAL.GAL UR.SAG (...)
 when=CONN *H.NOM* great.king hero
 MUNUS²*Puduhepass=a* MUNUS.LUGAL.GAL LUGAL-*anni esantat*
P.NOM=CONJ great.queen kingship.DAT sit.PST.3PL.MID
 “When Hattussili, great king, hero (...) and Pudu-Hepa, great queen, sat down in kingship.” (KBo 22.56 rev. 10, NH/NS)

(29) *nu=za=kan* LUGAL-*iznanni* ***ēshahari***
 CONN=REFL=PTC kingship.DAT sit.PST.3PL.MID
 “Will I sit down in kingship?” (KBo 16.98 ii 12, NH/NS)

It is not clear to what extent the new =za $es^{-a(ri)}$ construction reflects a more general expansion of the particle =za with other middle verbs.

⁴ Note that this gap might just be accidental. In any case the meaning ‘be seating’ could be expressed by a stative construction involving the participle *esant-* and the verb ‘be’ (cf. Inglese & Luraghi forthc.).

In the second place, starting with MH/MS times the verb is used in a transitive construction with the meaning ‘occupy, settle’ (cf. also Covini 2018). In this case, the verb is associated with a volitional human Agent and a Patient, which refers to inanimate entities, mostly cities or countries. These two participants are encoded as subject and accusative direct object respectively. As pointed out in the *HW*² (p. 109), in this construction the verb *es*-^{a(ri)} is syntactically and semantically equivalent to the OH causative verb *asās*-ⁱ ‘settle’. Diachronically, one observes changes in the transitive construction of this verb. As already said, with this verb causative alternation is expressed through suppletion in OH, with *es*-^{a(ri)} ‘sit down (intr.)’ opposed to *asās*-ⁱ ‘settle (tr.)’. Note that even though the two verbs display different voice morphology – the former is a *medium tantum* the latter an *activum tantum* – voice alternation *per se* is not relevant in the encoding of the causative alternation. In MH, two facts contribute to the reshaping of the system. On the one hand, *asās*-ⁱ ‘settle (tr.)’ is recharacterized as a more transparent *nu*-present *asesa-nu*-^{zi} ‘settle (tr.)’, which is the most productive transitivizing strategy in Hittite (Luraghi 2012). On the other hand, a transitive construction =*za es*-^{a(ri)} ‘occupy (tr.)’ make its first appearance in texts (as Cambi 2007: 86 correctly observes, this is not a NH constructions, unlike what suggested by Neu 1968a).

The occurrence of the accusative in this case could be explained as originating from the directional use of the accusative (so Cambi 2007: 86). However, this use of the accusative case likely a marginal recessive archaic feature and tends to be replaced by the directive case, which is already attested with *es*-^{a(ri)} in OS (cf. Zeilfelder 2001: 25-39, Hoffner & Melchert 2008: 248-249). By contrast, the use of the accusative with *es*-^{a(ri)} in the meaning ‘occupy’ is attested since MS only, and could be modeled on the causative transitive verb *asās*-ⁱ. Note that there is no MH/MS evidence for use of =*za* with the motion intransitive middle verb *es*- ‘sit’ (the example discussed by Boley 1993: 73 is OH/MS).

It should be observed that in NH, the construction =*za es*-^{a(ri)} is syntactically labile, as it can either be used transitively and intransitively, as comparison between (21) and (22) shows.

The changes undergone by OH *es*-^{a(ri)}/*ēs*-^{zi}/*asās*-ⁱ are summarized in Table 45: Diachrony of the constructions of *es*-^{a(ri)}/*ēs*-^{zi}/*asās*-ⁱ.

Table 45: Diachrony of the constructions of *es*-^{a(ri)}/*ēs*-^{zi}/*asās*-ⁱ

OH	MH	NH
[N _{1(NOM)} <i>es</i> - ^{a(ri)}] = [SEM _{1.AG} sits down]	[N _{1(NOM)} <i>es</i> - ^{a(ri)}] = [SEM _{1.AG} sits down]	[N _{1(NOM)} <i>es</i> - ^{a(ri)}] = [SEM _{1.AG} is seated]
[N _{1(NOM)} <i>ēs</i> - ^{zi}] = [SEM _{1.AG} is seated/is]	[= <i>za</i> N _{1(NOM)} N _{2(ACC)} <i>es</i> - ^{a(ri)}] = [SEM _{1.AG} occupies SEM _{2.LOC}]	[= <i>za</i> N _{1(NOM)} <i>es</i> - ^{a(ri)}] = [SEM _{1.AG} sits down] [SEM _{1.AG} sits down]

[N _{1(NOM)} N _{2(ACC)} <i>asās-^ī</i> = [SEM _{1.AG} makes sit/settle SEM _{2.PAT/LOC}]	[N _{1(NOM)} N _{2(ACC)} <i>asesanu-^{zī}</i> = [SEM _{1.AG} makes sit/settle SEM _{2.PAT/LOC}]	[= <i>za</i> N _{1(NOM)} N _{2(ACC)} <i>es-^{a(ri)}</i>] = [SEM _{1.AG} occupies SEM _{2.LOC}]
		[N _{1(NOM)} N _{2(ACC)} <i>asās-^ī</i> = [SEM _{1.AG} makes sit/settle SEM _{2.PAT/LOC}]

Interaction with the particle =za:

As discussed above, the verb *es-^{a(ri)}* displays a remarkable interaction with the particle =*za* (see also Cotticelli Kurras & Rizza 2013: 16-17). In OH texts, the verb never occurs in conjunction with the particle. The first occurrences of the verb with the particle =*za* come from MH texts, where the particle occurs in transitive constructions of *es-^{a(ri)}* meaning ‘occupy’. In NH, the usage of =*za* expands to the intransitive construction with dynamic meaning ‘sit down’ of the verb.

***hiswai-^{ta(ri)}* ‘(be) open’ and *hās-/hass-^ī* ‘open’**

Semantics and aspectual construal:

The verb *hiswai-^{ta(ri)}* is attested only once in a MH/MS text. It possibly means ‘be open’, and this interpretation is suggested by the fact that the verb occurs once in contrast to *istāp-^ī* ‘close’ in the same context, as shown in (30). Concerning its aspectual construal, it is treated as stative by Neu (1968b: 94), and translated accordingly by most scholars (cf. Laroche 1960, *HW*², Hoffner 2009: 176-178). It must be stressed that, though appealing, the interpretation of the meaning and the aspectual construal of the verb based on this single occurrence.

- (30) *nu=wa=smas* KASKAL^{HLA} *ŪL* EGIR-*pa* *hiswandari*
 CONN=QUOT=3PL.DAT way(PL) NEG back be.open.PRS.3PL.MID
anzas=ma=war=at=kan *istappandari*
 1PL.DAT=CONN=QUOT=3PL.NOM.N=PTC close.PRS.3PL.MID

“(If they build a fortress,) will not the roads lie open to them? But to us they will be closed.” (ABoT 1.60 obv. 17-18, MH/MS; transl. Hoffner 2009: 176)

In principle, this example could also be read as denoting a dynamic spontaneous event, ‘they open up’. However, a closer look at the context suggests that the verb does not indicate a spontaneous

change of state, but rather the maintenance of the state of ‘being open’. Indeed, the passage is about the fact that if the Hittites will build a fort to guard the roads, then they will continue to have free passage, while at the same time preventing their enemy from passing (see discussion under *istāp-ⁱ*).

To gain a better understanding of this verb, let us compare it to the semantically similar verb *hās-ⁱ* ‘open’. This verb is mostly used in the active voice in transitive constructions, denoting a causative telic event (cf. *HW²* and *HED* for attestations), as in (31):

- (31) *hāsta* LÚ_{NI}.DUH 7 GIŠ_{IG}
 open.PST.3SG door.keeper 7 door
 “The door-keeper opened 7 doors.” (KUB 17.10 iv 14, OH/MS)

The verb is also used in connection with the noun KASKAL ‘way’, as in (32) and (33):

- (32) [*nu* KASKAL-*an*] ŪL *hassuweni*
 CONN way.ACC NEG open.PRS.1PL
 “Will we not open the matter (lit. way)?” Translation after van den Hout (1998: 188)
- (33) [xxx] KI-*as* KASKAL^{HL.A} *tuk* *hēsateis*
 earth.GEN way(PL) 2SG.DAT open.PTCP.NOM.PL
 “The ways of the earth are open to you.” (KUB 31.136 iii 5, NS)

In (32), the noun KASKAL is the direct object of the transitive active form *hassuweni* ‘we (will) open’. Conversely, in (33), the noun KAKSAL is the subject of the clause featuring a stative construction with the participle *hēsateis*. Due to the lack of context, it is not clear whether the participle has a stative or a resultative meaning in this case. Middle forms of *hās-ⁱ* are attested only twice (Neu 1968a: 54), and in too fragmentary contexts to provide a reliable interpretation.

As already hinted by Neu (1968a: 56 fn. 1), comparison between (31) and (33) suggests that finite forms of the verb *hiswai-^{ta(ri)}* share the same aspectual construal of the participle of *hās-ⁱ* used predicatively in a periphrastic construction.

Etymology:

The verb *hiswai-^{ta(ri)}* is possibly related to *hās-ⁱ* ‘open’ on formal and semantic grounds, but the details of this connection are still controversial, also on account of the problematic etymology of the latter (see Kloekhorst 2008 for discussion). According to Puhvel (*HED* s.v.), the form might be taken as

derived from a Hittite adjectival base **hes-u-* ‘open’, and it is semantically compared to Latin *patēre* (also Neu 1968a: 56).

Argument structure and relationship with voice:

The verb *hiswai-*^{tt(ri)} indicates a one-participant event involving a Theme only. The verb is syntactically intransitive, as example (31) shows. On semantic grounds, it is likely to pattern with unaccusative verbs, but there is no positive evidence from clitic subjects to confirm this hypothesis.

The verb occurs only once in the entire Hittite corpus, and is inflected in the middle voice. Therefore, Neu’s classification of this verb as belonging to the *media tantum*, though descriptively accurate, must be taken as tentative. Semantically, the verb is likely to denote a stative event ‘stay open’, the passive meaning ‘be open’ possibly being conveyed by the periphrastic passive involving the participle of *hās-*ⁱ. Note further that a passive interpretation of this verb in (31) is unlikely, as the context does not entail the presence of an external agent.

The verb *hās-*ⁱ is attested as middle only once in a very fragmentary context, in which only the verbal form *he-es-ta-at* (KUB 13.34 iv 3, NH/NS) can be read (to this, one can possibly add the forms *ha-a-sa-an-ta*[in KBo 10.7 ii 25 and *ha-a-sa-r[u]*, likewise in fragmentary contexts, cf. *HW*² s.v.). As already pointed out by Neu (1968a: 54), this occurrence does not provide any evidence for the syntax and semantics of middle forms of *hās-*ⁱ.

***ye/a-*^{tt(ri)} ‘go, march’**

Semantics and aspectual construal:

The verb *ye/a-*^{tt(ri)} indicates a motion event ‘go, march’. As pointed out by several scholars (cf. Bechtel 1936: 99-100, Tjerkstra 1999: 23-40, Luraghi 2010a, 2012, Brosch 2014: 33, Daves 2017: 123 with further references), the verb denotes a non-directional motion event and indicates manner of motion. As a consequence, its default aspectual construal is one of undirected activity.

Let us review the linguistic evidence in support of this interpretation. First, atelicity of this predicate is confirmed by the fact that the participle *iyant-* means ‘going’, thus differing from the behavior of the participle of directed-motion verbs such as *pant-* ‘gone’ from *pai-*^{zi} ‘go’. Moreover, the verb is notoriously incompatible with the iterative suffix *-ske/a-*, which is another property of stative predicates. In fact, *ye/a-*^{tt(ri)} can take the iterative suffix *-anna/i-* but in this case, it receives an ingressive reading ‘set out, start to walk’ (Hoffner & Melchert 2008: 318; on derived *iyanna/i-* see

also Pisaniello 2017: 132-163), and profiles the inceptive phase of the event only (for the aspectual construal of inceptive constructions see Croft 2012: 106).

In addition, as already remarked by (Neu 1968b: 87), the verb is most often used without Goal/Direction expressions (see also Tjerkstra 1999: 24) as in (34).

- (34) EGIR=ŠU ^{LÚ}*meneyas* ***iyētta*** *kētt=a* *kētt=a* G[I-*an*]
 behind officer.NOM go.PRS.3SG.MID here=CONJ here=CONJ arrow.ACC
huttihannāi
 draw-IPMF-PRS.3SG
 “Behind marches the cult officer, he keeps drawing the arrow there and there.” (KBo 17.43 i 10, OH/OS)

Even though the verb seldom occurs with Direction expressions, it can occur with NPs indicating a Path, especially when combined with the double preverb *istarna arha* (cf. Brosch 2014: 27), as in (35), which is compatible with an atelic reading of the event.

- (35) *nasma=kan* [(^{LÚ}KÚR=*m*)]*a* KUR=*KA* *istarna arha* ***iyatari***
 or=PTC enemy=CONN land=2SG.POSS among away go.PRS.3SG.MID
 “Or if the enemy marches through your land.” (FHL 57+ iii 53, NH/NS)

Occurrences with temporal adverbs further suggest an undirected activity construal of this verb. A case in point is the occurrence of the accusative *ispandan hūmandan* ‘for the whole night’ in (36) that indicates duration in time (Francia 1997, Bertinetto & Cambi 2006: 214):

- (36) *nu* *ispandan hūmandan* ***iyahhat***
 CONN night.ACC all.ACC go.PST.1SG.MID
 “And I marched the whole night.” (KBo 5.8 iii 21, NH/NS)

To sum up, the verb consistently shows the default construal of undirected activity. Quantitative data from my corpus sample support this interpretation, as the verb occurs with an overt Direction expression only in 15 occurrences out of 93.

It should be observed that there are occurrences in which the verb seems associated with a telic motion reading. Consider example (37):

- (37) *namma=ta=kan ŠA KUR^{URU}Hatti kuiēs LÚ.MEŠ^{pitteyantes anda}*
 or=2SG.DAT=PTC of land *H.* REL.NOM.PL fugitive(PL) in
iya[ntat]
 go.PRS.3PL.MID
 “And which fugitives of Hatti who marched to you, (you kept taking them).” (KUB 14.1
 + KBo 19.38 rev. 34-35, NH/NS)

In example (37), a telic reading of *iyantat* fits better the context, since the fugitives are conceived as arriving at a given place, where they are being kept. Note that in this case a contextually telic interpretation is triggered by the occurrence of the preverb *anda* and the particle *=kan*, which are usually used in combination with terminative motion events including *pai^{-zi}* ‘go’ (cf. Hoffner & Melchert 2008: 368). Unsurprisingly, as discussed at length by Tjerkstra (1990: 23-40), this is often the case when the verb *ye/a^{-tta(ri)}* occurs with different preverbs, which all contribute to the profiling of a specific spatial configuration, and may consequently add telicity to the base predicate in some cases. Notably, occurrence of preverbs often trigger the occurrence of Direction expressions as well.⁵

Etymology:

Kloekhorst (2008 *s.v.*) connects the verb with the root **h₁ei-*, which is continued by motion verbs in several IE languages, such as Ved. *éti*, Gr. *eîmi*, Lat. *eo*, all meaning ‘go’. However, the Hittite form is not entirely parallel to other IE formations, as it shows middle inflection, whereas the other cognates are inflected as active, and moreover it does not reflect an athematic formation, but is rather based on a **h₁i-ye/o-* stem. Note further that the Luwian *i-*, which is the closest cognate to Hitt. *ye/a^{-tta(ri)}* is also inflected as active (Neu 1968b: 86). Moreover, even in Hittite, the directed motion verbs *pai^{-zi}* and *we^{-zi}*, which derive from the univerbation of the root **h₁ei-* with the preverbs *u-* and *pe-*, inflect as active.

Argument structure and relationship with voice:

The *ye/a^{-tta(ri)}* is consistently attested in the middle voice throughout the history of Hittite and belongs to the class of *media tantum*.

⁵ The possibility of *ye/a^{-tta(ri)}* to be construed either as atelic or telic depending on the context shows that the difference with *pai^{-zi}* ‘go’ is a matter of different default aspectual construal. Daues’ (2017) suggestion that the two verbs constitute a suppletive pair in which the former constitute the imperfective counterpart of the latter remains rather unconvincing, as there is clearly no grammaticalized aspectual distinction between the two.

The verb indicates a one-participant motion event, and is syntactically intransitive. In OS, it always takes a nominal subject (cf. Luraghi 2010a: 142), and evidence for unaccusative syntax comes from MS times (Garret 1996: 97), as shown by the occurrence of the clitic subject in (38):

- (38) *n=at* *taksan* *iyanta*
 CONN=3PL.NOM together go.PRS.3PL.MID
 “They march together.” (IBoT 1.36 ii 45, MH/MS)

Luraghi (2010a: 142) remarks that unaccusativity of this verb was possibly a post-OH innovation, in line with an ongoing process of extension of unaccusative syntax.

Notably, according to Tjerkstra (1999: 26-27), the verb can occur in a transitive construction with the internal accusative object KASKAL ‘way’, as shown in (39). However, internal objects in Hittite are mostly limited to cognate accusatives (Hoffner & Melchert 2008: 248, see also under *hanna-ⁱ*), so that occurrences of the accusative KASKAL in contexts such as (39) should be better interpreted as an adverbial use of the so-called ‘accusative of the way’ than as encoding a direct object (cf. Francia 1997: 145, Hoffner & Melchert 2008: 249).

- (39) *ūk=za* *ammel* *SIG₅-andan* *KASKAL-an* *iyahhat*
 1SG.NOM=REFL 1SG.GEN good.ACC way.ACC go.PST.1SG.MID
 “I kept going my own good way.” (KUB 17.28 ii 58-60, OH/NS)

Middle inflection for this verb is not of PIE inheritance. In fact, in IE languages all forms stemming from the root **h₁ei-* display active inflection, including Luwian *i-* and the Hittite compound forms *pai-^{zi}* ‘go’ and *uwa-^{zi}* ‘come’. The middle voice can be hardly linked to the default aspectual construal as undirected activity of the verb, since the only other manner of motion verb *huwai-ⁱ* ‘run’ mostly inflects as active (cf. Luraghi 2012: 15). Overall, it remains unclear why *ye/a-^{ta(ri)}* inflected as middle. Clearly, connections with impersonal forms showing middle inflection such as Lat. *itur* are not particularly revealing (cf. *LIV*²), since the Hittite verbs is always used in a personal construction with a nominative subject.

It should be noted that in one OS text one finds an active verbal form *ya-an-zi*, which cannot but indicate a motion event, as in example (40):

- (40) DUMU.NITA^{MEŠ} [*āpp*]a ^{URU}*Nēsa* *yanzi*
 son(PL) back N.ALL go/do.PRS.3PL

“The sons go back to Nesa.” (KBo 22.2 obv. 7, OH/OS)

In principle, this form can be interpreted in two ways. According to Otten (1973: 25), the form should be taken as an instance of the active transitive verb *ye/a-^{zi}* ‘do’ with ellipsis of a direct object meaning ‘way’. As an alternative, the form could be taken as evidence of the fact that the verb *ye/a-* ‘go’ once inflected as active, as the active inflection of the imperative 3sg *ūt* suggests (Oettinger 1979: 349, *HED*, Zeilfelder 2001: 66, Holland & Zorman 2007: 46, van den Hout 2010). This inner-Hittite evidence, combined with active cognates in Anatolian and Indo-European languages, is suggestive of the fact that the verb was originally active, and for some reasons it was later (but before the beginning of our textual records, the form *iyanzi* being an isolated example) transferred to middle inflection.

***istu-^{ā(ri)}* ‘get out, become known’**

Semantics and aspectual construal:

The verb *istu-^{ā(ri)}* means ‘be revealed, become known’, and is often translated as referring to a change-of-state event whereby an entity becomes manifest, or a secret is unveiled. The meaning of the verb is particularly clear in example (41), in which it is used in opposition to *sanna-ⁱ* ‘hide’. The same construal is possibly at play in the only original MH/MS occurrence of the verb, in (42). Based on this evidence, the verb can tentatively be interpreted as being construed as an (irreversible) achievement, lacking incrementality and temporal unfolding.

(41) [ta]kk[u] sannāi EGIR-zian=ma=at **isduwāri**
 if hide.PRS.3SG later=PTC=3SG.ACC.N become.know.PRS.3SG.MID
 “If he conceals (it), but it is subsequently gets out.” (KUB 13.4 iii 82, NH/LNS)

(42) nu=smas=(s)ta uttar arha **isduw[at]i**
 CONN=3PL.DAT=PTC word(N).ACC away become.known.PST.3SG.MID
 “Their plot (?) was revealed.” (KUB 23.11 iii 7, MH/MS)

Etymology:

Formally, the verb inflects like *tukkāri*, and reflects a zero grade root (Kloekhorst 2008 *s.v.*). The verb is connected with Gr. *steūtai* ‘announces solemnly, promise’ and Skt. *stav-* ‘honor, praise,

invoke'. The Gr. form reflects a **steu-* root, whereas the Hittite form is based on the zero grade **stu-ó-ri*.

Argument structure and relationship with voice:

The verb refers to an experiencer perceptual event in which only a Stimulus participant is involved. Syntactically, the verb is intransitive, with the Stimulus encoded as subject, and displays unaccusative syntax, as the occurrence of the clitic subject =*at* in (41) shows.

The verb is classified by Neu (1968b: 96) as belonging to the *media tantum*. Since the verb synchronically lacks an active counterpart, it can hardly be attributed a passive function, as translations such as 'be exposed' might suggest, but rather indicates a spontaneous change-of-state event. This is also consistent with the fact that the verb never occurs with agent phrases.

The prehistory of this verb is however more complicated and worth discussing. The Greek cognate middle verb *steûmai* is basically restricted to Epic Greek (cf. *LJS*), where it is often construed with a participle. The construction *steûmai* plus participle has the meaning 'be manifest (doing something), do plainly', e.g. *steûto dè dipsáōn* 'he was plainly thirsting'. When used with a future participle or with an infinitive, the verb acquires the meaning 'declare, state', and patterns with verbs of saying. Moreover, the default aspectual construal of the Gr. verb seems to be stative rather than dynamic. Similarly, the Indo-Iranian cognate verb *stu-* 'praise, celebrate', is attested in the RV as a stative form *stáve* 'is praised' (Narten 1969).⁶

The best way to account for this scenario is to assume that **steu-* was originally a *medium tantum* with the meaning 'be(come) manifest' and not a *verbum dicendi*, with the latter being a later innovation in Greek and Sanskrit. As the Hittite evidence suggests, it is more likely that the PIE root denoted a spontaneous event that could be construed either as a state or as a change of state. This would also be in accordance with the original middle inflection of the form. The former construal was continued in the Hittite verb *istu-^{āri}*, whereas Gr. and Skt. selected the stative construal. Note that according to *LIV*², referring to Kümmel (2000: 579-580), there is no compelling evidence to judge whether the stative or the active present of this form was earlier.

⁶ Based on the stative form *stáve*, a thematic middle *stávate* 'is praised.MID' was created, which is one of the very few base middle forms consistently used with passive function since earlier Vedic texts (Kulikov 2006: 72), and based on this passive form an active transitive counterpart was created via backformation (see also *HED* s. *istuwa-*).

***ki*^{-tta(ri)} ‘lie; be laid’**

Semantics and aspectual construal:

The verb *ki*^{-tta(ri)} means ‘lie’ and indicates a spatial configuration whereby an entity is placed in contact onto another one. In this respect, it is similar to *ar*^{-tta(ri)} ‘stand’, but the two differ in the spatial orientation profiled, with the former roughly indicating a horizontal orientation of the entity involved with respect to the surface, and the latter a vertical orientation (cf. Brosch 2014: 34-35).

According to Neu (1968a: 6), the verb indicates a state (already Bechtel 1936: 88-89). Evidence for a stative interpretation of *ki*^{-tta(ri)} comes from the occurrence with static local adverbs, as in (43), and with Location expressions, either adpositional phrases, as in (44), or bare noun in the locative case, as in (45) (cf. Starke 1977: 53).

- (43) *tarmas=san* 9-*an andan* ***kitta***
nail.NOM.PL=PTC nine inside lie.PRS.3SG.MID
“Nine nails lie inside.” (KBo 17.1+i 9, OH/OS)
- (44) ERIN^{MES̄}-*ti=ma=san* *sēr* GÍR ZABAR ***kitta***
troop.DAT=PTC=PTC upon knife bronze lie.PRS.3SG.MID
“And on the troops, lies a knife made of bronze.” (KBo 17.1+ii 33, OH/OS)
- (45) 2 NINDA.KUR.RA KU.KU ^{GIS̄}BANSUR-*i* ***kiyanta***
2 bread brown table.DAT lie.PRS.3PL.MID
“Two sweet brown bread lie on the table.” (KBo 20.8 i 15, OH/OS)

Further evidence in favor of a static default aspectual construal of the verb comes from its incompatibility with iterative suffixes. As corpus data shows, the verb *ki*^{-tta(ri)} consistently displays the default aspectual construal of transitory state. Specifically, it belongs to the class of *inactive actions* (Croft 2012: 98-101). The participle of this verb is unattested, possibly because it semantically overlaps with the resultative participle of *dai*⁻ⁱ ‘put’.

A dynamic reading of the verb is possibly at play in some MS occurrences, such as (46):

- (46) [*namma*]=*as=ta=kan* EGIR-*an=pat* ***kittat***
then=3SG.NOM=2SG.DAT=PTC back=FOC lie.PST.3SG.MID
“Then he harassed you.” (KUB 14.1 + KBo 19.38 obv. 2, MH/MS)

When combined with *appan* and a pronoun in the dative case, the verb is usually translated as ‘harass, keep after’, from a base meaning ‘stay behind’. Note however that even in this case, the verb does not profile a change of state, but rather an atelic situation.

The verb can also profile a change-of-state event when used in the imperative. Consider example (47).

- (47) *linkiya=nas=at* *katta* *kittaru*
 oath.GEN=1PL.DAT=3SG.NOM.N down lie.IMP.3SG.MID
 “This matter shall be placed under oath for us.” (KBo 16.50 obv. 20-21, MH/MS)

In (47), as common with stative predicates (see *ar-^{ta(ri)}* for discussion), the imperative forces an inceptive reading of the verb, so that both the change-of-state component and the resulting state are profiled.

Etymology:

Since Hrozný (1917: 35) the verb has been connected with Skt. *śay-* and Gr. *keîmai*, which must reflect PIE **kei-*, a stative root meaning ‘lie’ (cf. *LIV*²). Middle inflection is well attested in other IE languages, and is therefore likely to be inherited. Remarkably, Hittite shows a short stem vowel throughout the paradigm, which is not the expected outcome of the PIE root and must reflect a pre-Hittite innovation – note further that Palaic attests to *kītar* with expected long vowel (Eichner 1973, Kloekhorst 2008). In Sanskrit one finds two different forms *śáye* and *śéte*, stemming from **kei-o* and **kei-to* respectively (cf. Kloekhorst 2008). Both formations were inherited in Anatolian, the former was generalized in Luwian whereas the latter in Palao-Lydo-Hittite.

Argument structure and relationship with voice:

The verb *ki-^{ta(ri)}* belongs to the *media tantum*, as it never displays active inflection throughout the history of the language.

The verb indicates a one-participant spatial event involving a Theme and optionally a Location. The Theme role is mostly associated with inanimate entities, even though animate ones are possible as well, as in (46). Syntactically, the verb is intransitive and takes a nominative subject encoding the Theme participant. The Location, when expressed, is variously encoded as an oblique.

In absence of an overt 3rd person subject, the verb obligatorily takes a clitic subject pronoun, as in (48) and belongs to stative unaccusative verbs (Garret 1996: 95).

- (48) *n=as=san* ^{GIŠ}*pūriyas* **BABBAR** *kitta*
 CONN=3SG.NOM=PTC *p*.DAT.PL white lie.PRS.3SG.MID
 “And it lies in the white *puriyas*.” (KBo 20.8 iv 5, OH/OS)

According to Neu (1968b: 110), Hoffner & Melchert (2008: 305), and Luraghi (2012: 15), *ki-tta(ri)* can be used as a suppletive lexical passive to *dai-i* ‘put’. Evidence for this alternation comes from pairs of sentences such as (49) and (50):

- (49) *nu=za* *link[i]a* *kattan* ERÍN^{MEŠ}-*an* *daiēr*
 CONN=REFL oath.DAT down troop.ACC put.PST.3PL
 “They placed their own troops under oath.” (KBo 16.27 iii 9, MH/MS)
- (50) *kās=ta* *memias* ŠAPAL NIŠ DINGIR^{LIM} *kittaru*
 DEM.NOM=2SG.DAT matter.NOM oath lie.IMP.3SG.MID
 “This matter shall be placed under oath for you.” (KUB 23.1 ii 7, NH/NS)

In (49), the active transitive verb *daiēr* encodes an induced event involving an Agent and a Patient, encoded as subject and direct object respectively. By contrast, in (50), although the context is very similar, the middle verb *ki-tta(ri)* is used. In this case, the verb is intransitive and its subject corresponds to the direct object of transitive *dai-i*, thus providing evidence for a passive alternation.

Passive use of *ki-tta(ri)* is mostly restricted to contexts such as (50), with the meaning ‘be put under oath’. This restriction can be tentatively explained as follows. Since the verb *ki-tta(ri)* shows the default aspectual construal of a state, it can only provide the passive counterpart of dynamic *dai-i* in contexts in which it is construed as dynamic. This happens only when the verb occurs in the imperative, for the reasons discussed above. This clearly shows that passive-like use of *ki-tta(ri)* represents a secondary development restricted to specific contexts. Note that NH/NS occurrences of the verb mostly instantiate passive function, but this is likely a by-product of the corpus selection (the meaning ‘put under oath’ is typical of treaties, mostly dating to NH times).

A single NH/NS occurrence which clearly speaks in favor of a passive interpretation of *ki-tta(ri)* is reported in (51):

- (51) *nu* *mān* IŠTU^{LÚ}KÚR *katta* *kittari*
 CONN when by enemy down lie.PRS.3SG.MID
 “When the region is being oppressed by the enemy.” (KUB 25.23 i 12, NH/NS)

In (51), the stative event ‘lay down’ indicated by the verb *kittari* in combination with the preverb *katta*, has been reinterpreted by speakers as a passive situation ‘be oppressed’, as evidenced by the occurrence of the agent phrase *IŠTU*^{LÚ}*KÚR* ‘by the enemy’. Notably, in this case the verb does not indicate an eventive passive but a stative passive at best, ensuing from the default aspectual construal of *ki-ta(ri)* as a transitory state (see Bechtel 1936: 88).

***kīs-*^{a(ri)}, *kikkis-*^{ta(ri)} ‘become, happen’**

Semantics and aspectual construal:

The verb *kīs-*^{a(ri)}, and its derivative *kikkis-*^{ta(ri)}, show the two basic meanings ‘happen’ and ‘turn out to be, become’, and both indicate change-of-state events.

The verb *kīs-*^{a(ri)} can be used in the meaning ‘occur, happen, come into being’, as in examples (52) to (56):

(52) *kuis* *sagaīs* *kīsari*

REL.NOM sign.NOM happen.PRS.3SG.MID

“Whichever sign occurs (we report it to the king and the queen).” (KBo 17.1+iv 9, OH/OS)

(53) [*kāsa=y*]a *kuit* *marsastarras* *uttar* *kīsat*

here=CONJ because sacrilege.GEN word happen.PRS.3SG.MID

“Concerning the fact that an act of sacrilege has now occurred.” (HHCTO 1 11, MH/MS)

(54) *mān* *appezziyan* *kurur* *kīsat*

when later hostility.NOM happen.PST.3SG.MID

“When later on the hostility begun.” (KBo 3.38 obv. 7, OH/NS)

(55) [*hē*]us *kīsanta*

rain.NOM.PL happen.PRS.3PL.MID

“Rains will fall (lit. happen).” (KUB 8.27 left ed. 1, NH/NS)

(56) *mahhan=ma* *hameshanza* *kīsat*

when=PTC spring.NOM happen.PST.3SG.MID

“But when it became spring (lit. when spring happened).” (KBo 4.4 iv 42, NH/NS)

Examples (52) to (56) can be grouped under the meanings identified by Neu (1968a: 93-97) as ‘werden, entstehen, geschehen, stattfinden’. In these examples, the verb profiles the coming into being of an entity. Therefore, the default aspectual construal of the verb is that of an irreversible directed achievement. This interpretation is further supported by example (57):

- (57) [xxx] *hudāk* ***kīsa***
suddenly happen.PRS.3SG.MID
“[...] suddenly becomes/occurs.” (KBo 25.139 rev. 7, OH/OS)

In (57), the occurrence of the temporal adverb *hudāk* ‘suddenly, all of a sudden, at once’ clearly indicates that the event denoted by the verb does not span over time, but it is conceived as punctual. The resultative participle *kisant-* ‘appeared, happened’ supports the telic reading of the verb (Frotscher 2013).

Note that, depending on the inherent properties of the subject, the verb *kīs-^{a(ri)}* profiles different events, hence the different translations provided by Neu. When the subject is a (concrete or abstract) bounded entity, the verb profiles the entire coming into being of such entity, as in (52) and (53). When the subject refers an unbounded process the verb simply profiles the beginning of the process and not its duration, as in examples (54) to (56). In this sense, Neu’s translation as ‘stattfinden’ is partly misleading as it seemingly implies an atelic interpretation of the verb.

The verb can also be used with a predicative complement with the meaning ‘become X’. Examples of this pattern are given below in examples (58) to (60):

- (58) *ūk=wa* LUGAL-*us=smis* ***kisha***
1SG.NOM=QUOT king.NOM=2PL.POSS.NOM become.PRS.1SG.MID
“I will become your king.” (KBo 22.2 rev. 15, OH/OS)
- (59) *man=e* ^{LÚ.MEŠ}NI.ZU ***kīsantati***
if=3PL.NOM thief(PL) become.PRS.3PL.MID
“(If they gave theft, they would all be dishonest,) or they would become thieves.” (KBo 6.2 ii 56, OH/OS)
- (60) *namma=as=za* ^{URU}KÙ.BABBAR-*si* *hargas* ***kisat***
then=3SG.NOM=REFL H.DAT danger.NOM become.PST.3SG.MID
“He became a danger for the city of Hattusa.” (KBo 3.4+ iii 62, NH/NS)

In cases such as (58) to (60), the verb profiles the change of state of an entity which comes to acquire the status indicated by the predicative complement. In both cases, the change of state has to do with the social status of the animate subject, so that the event can be conceived as an irreversible directed achievement.

The same construal is also at play even in case a predicative complement is missing as in (61):

- (61) *nu=za* *[a]mmuk māhhan kishat*
 CONN=REFL 1sg.NOM as become.PST.1SG.MID
 “As for how I reacted (lit. I became, as I read the tablet).” (KBo 12.62 10-12, MH/MS)

The derived verb *kikkis-^{ta(ri)}* indicates a change-of-state event as well, but it always adds a habitual/iterative reading to the verb (see Dempsey 2015: 75-81). As a result, the base event is construed as an undirected activity via structural schematization. Consider example (62), in which habituality of the event indicated by *kikistari* is further supported by the occurrence of a *-ske/a-* derived verb in the previous sentence.

- (62) *unius=za=kan* *kuēs* $\dot{U}^{\text{MEŠ}}$ *HUL-lus* *uskizzi*
 DEM.ACC.PL=REFL=PTC REL.ACC.PL dream(PL) bad.ACC.PL see-IPFV-PRS.3SG
IZKIM^{HI.A}=ya=za *arpuwanta* ***kikistari***
 omen(PL)=CONJ=REFL unfavorable.NOM.PL.N happen.PRS.3SG.MID
 “And the aforementioned bad dreams which he keeps seeing, and the bad omens which keep occurring (...)” (KUB 5.1 iii 49, NH/NS)

Etymology:

According to Kloekhorst (2008 s.v.), the verb derives from PIE **geis-* ‘turn’ (possibly with **g-*), reflected in OHG *kēran* ‘turn’ (which reflects a causative formation **gois-éye-*, cf. *LIV*², for further Germanic *comparanda* see Kroonen 2013: 277). For the semantic shift ‘turn’ > ‘occur, become’ Kloekhorst suggests comparison with Gr. *pélomai* ‘turn, become’ < **k^wel-* ‘turn’, Goth. *wairþan* ‘become, happen’ < **wert-* ‘turn’, and the English complex expression *to turn out to be*. To these, TochB *klawtk-* ‘return, turn into, become’ can be added as well (Adams 2013: 248). Notably, Hittite also features a reduplicated stem *kikkis-* < **gi-géis/gis-* (*LIV*²), created through a process of copy reduplication **ki-kis-* (Dempsey 2015: 264).

Argument structure and relationship with voice:

The verb *kīš-^{a(ri)}* belongs to the *media tantum*, and never displays active inflection. The verb indicates a spontaneous one-participant change-of-state event involving a Patient. The Patient can either be animate or inanimate, abstract or concrete, and is always encoded as the subject of the verb. The verb is used intransitively and shows unaccusative syntax (Garret 1996: 94), as demonstrated by its occurrence with the 3rd person clitic =*as* in (63):

- (63) *t=as* ^{GIŠ}TUKUL-*li kīš[a]*
 CONN=3SG.NOM artisan.NOM become.PRS.3SG
 “He becomes an artisan.” (KBo 6.2+ ii 22, OH/NS)

As discussed in the previous section, the verb occurs in two different constructions. First, it can be used in an intransitive construction $[N_{1(NOM.CL)} kīš-^{a(ri)}] = [SEM_1 \text{ happens}]$.

Secondly, the verb can be combined with a predicative complement in a double nominative construction $[N_{1(NOM.CL)} kīš-^{a(ri)} ADJ/N_{2(NOM)}] = [SEM_1 \text{ becomes } SEM_2]$ (Hoffner & Melchert 2008: 243, who use also the term ‘subject complement’), as in example (58). In some cases, the predicative complement can also be expressed with an independent genitive (see Yakubovich 2006, Hoffner & Melchert 2008: 256). In this case, the verb often profiles a change in alliance of the subject, as in example (64). This construction can be schematized as $[N_{1(NOM.CL)} kīš-^{a(ri)} N_{2(GEN)}] = [SEM_1 \text{ becomes (one) of } SEM_2]$.

- (64) [*nu=z*]*a* ŠA LUGAL KUR ^{URU}*Mizri* *kistati*
 CONN=REFL of king land Egypt become.PRS.2SG.MID
 “You become (one) of the King of the land of Egypt.” (KBo 22.39 ii 8, NH/NS)

To this construction belongs also the sub-construction ‘join someone’ from the original meaning ‘become someone’s’. In this case, the event involves two human participants, one encoded as a nominative subject, and the other as a dative oblique. Notably, in this construction the verb is often accompanied by preverbs such as *anda* (Neu 1968a: 96). This $[N_{1(NOM.CL)} kīš-^{a(ri)} N_{2(DAT)}] = [SEM_1 \text{ joins } SEM_2]$ construction is instantiated in example (65).

- (65) *nu=za=kan* *apēdani* *anda lē* *kistati*
 CONN=REFL=PTC DEM.DAT in NEG become.PRS.2SG.MID
 “You shall not join that person.” (KBo 5.13 ii 6, NH/NS)

Notably, when involved in the double nominative construction the verb never occurs with adjectival predicates denoting gradable properties as predicative complement. As such, the construction $[N_{1(\text{NOM.CL})} \textit{k\bar{i}s}^{-a(ri)} \text{ADJ}/N_{2(\text{NOM})}] = [\text{SEM}_1 \text{ becomes } \text{SEM}_2]$ seems restricted to predicates indicating the attainment of social statuses/ non-gradable properties of sorts. In this respect, the verb partly stands in complementary distribution with other strategies to denote a change of state, that is, deadjectival verbs in *-ēss-* and some denominal/deadjectival verbs in *-iye/a-*.

Occasionally, forms of *kikkis*-^{ta(ri)} occur without a clitic subject, as in (66). In this case, absence of the clitic subject is due to the impersonal interpretation of the verb, which lacks a referential subject.

- (66) *nu kikki[st]ā[ri] QATAMMA*
 CONN become.PRS.3SG.MID as.follows
 “It (always) happens as follows (the sin of the father reaches his son).” (KUB 14.8 rev. 12, NH/NS)

Summing up, the verb *k\bar{i}s*-^{a(ri)} occur in the following constructions:

- A. $[N_{1(\text{NOM.CL})} \textit{k\bar{i}s}^{-a(ri)}] = [\text{SEM}_1 \text{ happens}]$
 B. $[N_{1(\text{NOM.CL})} \textit{k\bar{i}s}^{-a(ri)} \text{ADJ}/N_{2(\text{NOM})}] = [\text{SEM}_1 \text{ becomes } \text{SEM}_2]$
 a. $[N_{1(\text{NOM.CL})} \textit{k\bar{i}s}^{-a(ri)} N_{2(\text{GEN})}] = [\text{SEM}_1 \text{ becomes (one) of } \text{SEM}_2]$
 b. $[N_{1(\text{NOM.CL})} \textit{k\bar{i}s}^{-a(ri)} N_{2(\text{DAT})}] = [\text{SEM}_1 \text{ joins } \text{SEM}_2]$

Some scholars argue that *k\bar{i}s*-^{a(ri)} can be used as a suppletive lexical passive of the active verb *ye/a-zi* ‘make’ (Neu 1968a: 97, 1968b: 110, *HED*, Hoffner & Melchert 2008: 305). Whereas in some cases a passive meaning fits the context better, as in e.g. the expressions *natta kisari* ‘it cannot be done, it is impossible’ and not ‘it does not happen’, in others an anticausative meaning can also be at place, as Neu (1968a: 97) himself observes. For instance, the active transitive construction *EZEN-an ye/a-zi* ‘celebrate a festival.ACC’ shows an intransitive middle counterpart *EZEN-as kisari*, which can be in principle interpreted either as passive or as anticausative, i.e. ‘a festival.NOM is celebrated/happens’. If this is the case, the pair *k\bar{i}s*-^{a(ri)} ‘happen’ vs. *iya-zi* ‘cause to happen’ are better regarded as instantiating anticausative alternation, the former indicating the plain event and the latter the induced counterpart, rather than passive alternation. Note further that the interpretation is complicated by the fact that putative passive examples all come from NS texts, and in these occurrences one never finds overt encoding of the (oblique) Agent.

Interaction with the particle =za:

The history of this verb with respect to the particle =za is particularly interesting (cf. Neu 1968a: 93-98, Boley 1993: 49-52). In OH/OS texts, the verb $k\bar{i}s\text{-}^{a(r)}$ never occurs with the particle. Occurrences with =za start from MH/MS text only. The distribution of the two meanings of $k\bar{i}s\text{-}^{a(r)}$ ‘become’ and ‘happen’ with respect to the particle in MH/MS is shown in Table 46: Distribution of =za with $k\bar{i}s\text{-}^{a(r)}$ in MH/MS.⁷

Table 46: Distribution of =za with $k\bar{i}s\text{-}^{a(r)}$ in MH/MS

Meaning	With =za	Without =za
‘become’	3	1
‘happen’	0	7

As the table shows, the particle never occurs with the meaning ‘happen’, whereas occurrence with the meaning ‘become’ show some alternation, with some occurrences such as (61) featuring the particle, but one, quoted in (67), lacking it.

(67) *nu ha[ntezzi] appezzi kisari*

CONN first.NOM last.NOM become.PRS.3SG.MID

“(The spears of the spear-men and the men-of-a-field-batallion turn, so that) the first becomes the last.” (IBoT 1.36 iii 70, MH/MS)

Clearly, given the extremely low frequency of the occurrences, MH/MS data is hardly compelling. NH/NS data offer a much clearer picture, as shown in Table 47: Distribution of =za with $k\bar{i}s\text{-}^{a(r)}$ in NH/NS.

Table 47: Distribution of =za with $k\bar{i}s\text{-}^{a(r)}$ in NH/NS

Meaning	With =za	Without =za
‘become’	46	5
‘happen’	4	60

⁷ The count in Table 2 and 3 is based on non-fragmentary contexts only, where the meaning of the verb is clear and the left sentence boundary is fully preserved.

As NH/NS data shows, there is a strong correlation between the meaning of the verb and the occurrence of the particle. Therefore, at least in NH/NS, the constructions in which the verb occurs can be better described as follows.

- A. $[N_{1(NOM.CL)} k\bar{i}s^{-a(ri)}] = [SEM_1 \text{ happens}]$
 B. $[=za N_{1(NOM.CL)} k\bar{i}s^{-a(ri)} ADJ/N_{2(NOM)}] = [SEM_1 \text{ becomes } SEM_2]$

Interestingly, both the $[N_{1(NOM.CL)} k\bar{i}s^{-a(ri)} N_{2(GEN)}]$ and the $[N_{1(NOM.CL)} k\bar{i}s^{-a(ri)} N_{2(DAT)}]$ occur with the particle =za, thus showing that they should be better understood as sub-construction of the more general $[=za N_{1(NOM.CL)} k\bar{i}s^{-a(ri)} ADJ/N_{2(NOM)}]$ construction.

This variation is discussed by Boley (1993: 49-52), who concludes that the particle =za “originally called attention to the transformation indicated by *kis-*: it in fact usually seems to signal a radical visceral change, in terms of the subject.” (1993: 53). Though the semantic interpretation given by Boley is far from being compelling, it is clear that =za starts to occur mostly with the ‘become’ meaning from MS.

***kist- $\bar{a}(ri)$* ‘perish’**

Semantics and aspectual construal:

The verb *kist- $\bar{a}(ri)$* indicates an event of physical degradation and is commonly translated as ‘perish, die out, be extinguished’, as in example (68).

- (68) *kī=asta* *warān* *pahhur* GIM-*an kistati*
 DEM.NOM.N=PTC burn.PTPC.NOM.N fire(N).NOM as perish.PRS.3SG.MID
 “As this burning fire was extinguished.” (KBo 6.34 iv 5-6, MH/NS)

Since the verb semantically belongs together with predicates of ‘dying’ such as *āk- \bar{i}* , in principle one expects it to either refer to the incremental process leading to the final stage of the degradation process or to the punctual transition (cf. Botne 2003).

Unfortunately, the only OH/OS attestation of *kist- $\bar{a}(ri)$* comes from a highly fragmentary context, shown in (69), so that no compelling evidence can be added in support of either construal.

- (69) [xxx] *kistari=ya*

perish.PRS.3SG.MID=CONJ

“And (it) dies out.?” (KUB 8.41 iii 2, OH/OS)

Post-OS data is not of much help either, as the verb never occurs with temporal adverbs (see *HED* for occurrences). In any case, the resultative participle *kistant-* ‘expired’ supports the telic reading of the verb (Frotscher 2013).

Etymology:

Kloekhorst (2008 *s.v.*) reconstructs the verb as going back to the zero grade of the PIE root **g^hesd-* (or **g^h-*), for which an inner-Hittite cognate is *kāst-* ‘hunger’ (for other etymologies and their critical discussion see Kloekhorst 2008 *s. kāst-*).

Argument structure and relationship with voice:

The verb *kist-^{ā(ri)}* indicates a one-participant change-of-state event involving a Patient. The verb is syntactically intransitive. There is no evidence for the use with clitic subjects, as the verb either occurs with nominal subjects or in otherwise severely fragmentary contexts.

The verb always inflects as middle, and Neu (1968b: 52) groups it with the original *media tantum*. Since it lacks an active counterpart, the verb should not be interpreted as passive, but can be better taken as indicating a spontaneous event. This interpretation is supported by the existence of a causative transitive counterpart *kistanu-^{zi}* ‘exterminate’ (Neu 1968b: 53), which shows that causative alternation with this verb is associated with the transitivizing causative suffix *-nu-* (cf. Luraghi 2010a: 144).

***tarra-^{ta(ri)}* ‘be able, can (+ inf.)’**

Semantics and aspectual construal:

The verb *tarra-^{ta(ri)}* can either indicate a condition of physical strength or well-being of an entity, meaning ‘be able, be powerful’, as in example (70), or it can be used with a more abstract meaning ‘can’ when construed with an infinitive, as in (71). This constitutes a frequent polysemy pattern, see e.g. Lat. *possum* ‘be powerful, be able’, and reflects the well-known ABILITY > POSSIBILITY grammaticalization schema (Heine & Kuteva 2002: 28-29).

(70) *n=as* *ŪL tarraddat*

CONN=3SG.NOM NEG be.able.PST.3SG.MID

“(My father was in another land,) and he was not in strength.” (KUB 6.44 + 10, NH/NS)

(71) *nu kinun kuit arha aniyawanzi ŪL tarrahari*
and now because away do.INF NEG be.able.PRS.1SG.MID

“And because now I cannot undo them (i.e. the curses).” (KUB 15.1 ii 15, NH/NS)

Neu (1968a: 167) argues that *tarra*-^{ta(ri)} consistently indicates a state. A stative construal of the event is possibly at play in occurrences such as (70), where the context supports this interpretation: *tarra*-^{ta(ri)} occurs in a sequence of stative predicates, and is preceded by stative *es*-^{zi} ‘be’. The participle *tarrant*- ‘being capable’ provides evidence for an atelic default construal of the verb (Frotscher 2013: 203).

Etymology:

The verb *tarra*-^{ta(ri)} goes back to a PIE root **terh₂-*, reflected in Skt. *tiráte* ‘overcome’ and also has an inner-Hittite cognate in *tarhu-* ‘prevail’. Even though the etymological connection is clear, the details of the verb’s formation remain somewhat problematic (see Kloekhorst 2008 *s.v.* and Villanueva Svensson 2010: 18-19 for discussion).

Argument structure:

The verb *tarra*-^{ta(ri)} indicates a physical property of an Experiencer participant. The verb is syntactically intransitive, and requires a clitic subject, as shown by the occurrence of =*as* in (70). In addition, when meaning ‘be able to, can’, the verb can also be construed with an infinitive, as in (71).

The verb *tarra*-^{ta(ri)} always shows middle inflection, and is consequently classified by Neu (1968a: 52) among the original *media tantum*. However, since all occurrences of this verb date to NS times, one should be cautious in using it as evidence for the original distribution of *media tantum* in OH.

***tukk*-^{āri} ‘be visible, be important’**

Semantics and aspectual construal:

The verb *tukk*-^{āri} is associated with at least two basic meanings ‘be visible’ and ‘be important’, as in examples (72) and (73):

(72) *kuis*=*a* *ēsi*=*ma* *sākuwat*=*kan duggāri*

REL.NOM=PTC be.PRS.3SG=PTC eye.INST=PTC be.visible.PRS.3SG.MID

“And what there is, it is visible with the eye.” (KUB 23.72 rev. 15, MH/MS)

(73) [A]N[A K]UR ^{URU}Hatti=ma=kan sāk[l]ais **du[qa]ri**

to land H.=PTC=PTC rule.NOM be.important.PRS.3SG.MID

“In the land of Hatti there is an important rule.” (KBo 19.43+ iii 28, NH/NS)

In both (72) and (73), *tukk-^{āri}* predicates a stable property of an entity, and the event is construed as a permanent state, as already remarked by Neu (1968a: 178-180). Stativity of *tukk-^{āri}* is further confirmed, for instance, by its co-occurrence with the atelic stative predicate *es-^{zi}* ‘be’ in (72). The participle of this verb is unattested.

Etymology:

The etymology of this verb is partly controversial, mostly on account of formal difficulties. The most likely etymology, both on formal and semantic grounds, connects this verb to the noun *tuekk(a)-* ‘body’, cognate with Skt. *tvác-* ‘skin’, both from a root **tuek-* ‘be visible’ (Kloekhorst 2008 *s.v.*, *LIV*² *s.v.*).

Argument structure and relationship with voice:

The verb *tukk-^{āri}* predicates a property of a Theme entity. Syntactically, the verb is always intransitive, with the Theme encoded as subject. Oddly enough, the verb does not require clitic subject, even in case it has a referential subject as in (72). Therefore, the verb displays unergative syntax, in contrast with the unaccusative behavior of other stative predicates discussed by Garrett (1996).

Note that some occurrences of *tukk-^{āri}* without clitic subject do not provide evidence for its unaccusative vs. unergative syntax, as in these cases the lack of clitic subject can be explained as a consequence of the impersonal use of the verb with the meaning ‘it is (not) important’ (Hoffner & Melchert 2008: 281), as in example (74).

(74) *ŪL tuqqār[i]*

NEG be.important.PRS.3SG.MID

“It is not important.” (KUB 19.13+ iv 19, NH/NS)

As pointed out by Neu (1968b: 52) the verb *tukk-^{āri}* always shows middle inflection and thus belongs to the *media tantum*. This observation is at odds with the treatment by Neu (1968b: 122) of the verb as passive, as passives can only be made out of transitive two-place active verbs. The reason

why Neu classifies the verb as passive is the occasional occurrence of the verb in conjunction with an ablative/instrumental NP that he interprets as an oblique agent. This is not however the only interpretation possible. Since these putative agent phrases always denote inanimate referents, mostly ‘eye’ as in (72), they can be easily interpreted as instrument to a stative perceptual disposition encoded by the verb ‘be visible to/through the eye’. Clearly, from such contexts stative predicates could be easily reinterpreted as passives, provided that the agent phrase denotes an animate volitional referent and the verb develops an active counterpart, thereby developing voice opposition (cf. Haspelmath 1990 on the grammaticalization of statives into passives). Interestingly, this verb neatly shows how stative *media tantum* with instrumental phrases probably constituted one of the bridging contexts in which by middle inflection came to be associated with passive proper.

***ur-^{āri}*, *war-^{āri}* ‘burn (intr.)’**

Semantics and aspectual construal:

The middle verb *ur-^{āri}* is commonly translated as ‘burn (intr.)’, as in example (75):

- (75) *kēdani=ma pahhur urāni*
 DEM.DAT=PTC fire.NOM burn.PRS.3SG.MID
 “And near to this one burns a fire.” (KUB 23.59 iii 9, NS)

The event of burning indicated by *ur-^{āri}* can be construed in at least two ways. First, the verb can profile an undirected activity. Usually, this reading is associated with a subject meaning ‘fire’ or similar, as in (75). Alternatively, the verb can be construed as an incremental accomplishment, with a patient argument undergoing an incremental change of state, as in (76):

- (76) *ŪL=as dapianza arha BIL-ni*
 NEG=3SG.NOM entire.NOM away burn.PRS.3SG.MID
 “[If the city of Ankuwa survives], and it does not entirely burn to the ground.” (KUB 15.12 iii 5, NH/NS)

In (76) telicity and completion of the event is further supported by the occurrence of the preverb *arha* and by the adjective *dapianza* ‘entire’.

Notably, the fact that the event denoted by *ur-^{āri}* can be either construed as an activity or as an accomplishment depends on the double nature of combustion events (on the colexification of the meanings ‘emit heat’ and ‘consume by fire’ through the same verbal root see also Alexiadou et al. 2015: 87). When the verb profiles only the visual/perceptual side of combustion, i.e. flames springing from a fire-like entity, e.g. a fire or a torch, the event is construed as an activity. Conversely, when the verb profiles the progressive consumption of the fuel that incrementally undergoes a physical change of state, the event is construed as an accomplishment.

Evidence from the participle *warant-* ‘burning’ support the atelic activity construal of the verb (Frotscher 2013: 204).

Etymology:

Kloekhorst (2008 s.v.) reconstructs the verb *ur-^{āri}* as going back to PIE **urh₁-*, which is reflected in Lith. *virtī*, *vérdu* and OCS *vireti* both meaning ‘cook’. It should be observed that the verb shows two alternative stems, viz. *ur-* and *war-*, the former attested in OS and the latter taking over from MS texts onwards, thus showing an inner-Hittite phonetic development. Therefore, the two stems are unlikely to represent different ablauts grades (see Rieken 2001: 371 for a different interpretation). The 3rd singular forms *w(a)rāni* and *w(a)rānu* shows dissimilation from **w(a)rāri* and **w(a)rāru* respectively.

Argument structure and relationship with voice:

The verb *ur-^{āri}* indicates a spontaneous event involving a Theme, i.e. a source of fire such as ‘flame, torch’, or a Patient participant, i.e. an inanimate fuel entity. The verb is intransitive, and displays unaccusative syntax Garrett (1996: 91), as the occurrence of the clitic subject =*as* in (76) shows.

The verb *ur-^{āri}* consistently occurs in the middle voice and belongs to the *media tantum* (Neu 1968b: 52). Since the verb lacks an oppositional active transitive paradigm, Neu’s (1968a: 189-190) interpretation of middle forms of *ur-^{āri}* as passive is unwarranted. Rather, the verb always indicates a spontaneous combustion event. Its causative counterpart is built through a *-nu-* derivative, *warnu-^{zi}* ‘set fire’ (Neu 1968b: 53, Luraghi 2010a, 2012).⁸ Transitive syntax of *warnu-^{zi}* is further supported

⁸ The text KUB 17.27 (MH/NS) attests to a *hapax* form *wa-ra-i*, which is commonly translated as ‘start, light a fire’ (cf. Haas 2007, the line reads *nu GÍR ZABAR pahhurr=a wārai* ‘and she lights up the fire’ KUB 17.27 ii 26). If this reading is correct, it is tempting to consider this verb as the transitive active counterpart of middle *ur-^{āri}*, hence as a functional equivalent to *warnuzi*. The origin is still disputed. According to Villanueva Svensson (2010: 8-9), the form *wārai* directly continues a PIE middle root aorist **wórh₁-e*, and therefore attest to an ancient pattern of voice alternation for this verb, making the characterization of *ur-^{āri}* as a *medium tantum* inaccurate. However, as Kloekhorst (2008 s. *ur-^{āri}*) points out,

by its occurrence with neuter subject in the ‘ergative’ *-anza* case (Meneghel 2014: 201-202), as shown by *pahhuwenanza* in (77):

- (77) *man=an pahhuwenanza arha warnuzi*
 IRR=3SG.ACC fire.ERG away make.burn.PRS.3SG
 “May the fire burn him (completely).” (KBo 32.14 ii 6-7, MH/MS)

Middle forms of the causative stem *warnu-* can be interpreted as passive (cf. Neu 1968b: 85, Luraghi 2012: 20-21), as the occurrence of the agent phrase *IZI-it* in example (78) shows:

- (78) *KUR-iyas A.ŠÀ kuras IZI-it warnutari*
 land.GEN field field.NOM fire.INST make.burn.PRS.3SG.MID
 “(When a star falls down from the sky), the field of the land will be burnt by fire.” (KUB 8.25 i 8-9, NS)

***wakk-^{āri}* ‘be lacking’**

Semantics and aspectual construal:

The verb *wakk-^{āri}* means ‘be lacking’, as exemplified in (79):

- (79) *nu=ssi=kan ZI-ni ŪL kuitki wakkāri*
 CONN=3SG.DAT=PTC soul.DAT NEG INDF.NOM.N lack.PRS.3SG.MID
NINDA-as=si wātar nu hūman sarā artari
 bread.NOM=3SG.DAT water.NOM CONN all.NOM.N up stand.PRS.3SG.MID
ŪL-a=ssi=san kuitki waggari
 NEG=3SG.DAT=PTC INDF.NOM.N lack.PRS.3SG.MID

the formal analysis of this form remains quite enigmatic, and it is entirely plausible that we are dealing with an *ad hoc* recent formation. In this respect, it must be stressed that the text KUB 17.27 dates to NS, and that it reflects a Hurrian original of MH times (see Haas 2007). Based on these observations, I remain skeptical about the probative value of this form for reconstructing a OH (let alone PIE) pattern of voice alternation with the verb *ur-^{āri}*, and rather prefer to follow the traditional characterization of the latter as a *medium tantum*.

“Nothing is lacking to her desire. There is bread and water for her. Everything is all there. Nothing is lacking to her.” (KBo 4.8 ii 8-10, NH/NS)

Even though we lack evidence from temporal adverbs, contextual cues suggest that the event denoted by *wakk-^{āri}* is construed as a transitory state. For instance, a stative construal is suggested in (79) by coordination with stative *sarā ar-^{ta(ri)}* ‘stand’ (see Waal 2017 on the translation of this expression as ‘be complete’). Note that the participle of this verb is unattested, but the derived verb *wak(ki)siye/a-^{zi}* ‘be lacking’ (a *s*-derived verb from *wakk-*, cf. Kloekohrst 2008 *s.v.*) shows a participle *waksiyanza* ‘missing’ with stative semantics (Frotscher 2013: 203).

Etymology:

According to Kloekhorst (2008 *s.v.*) the verb is connected with PIE **ueh₂g-* ‘break’, reflected in e.g. Gr. *ágnumi* ‘break’, with a semantic development ‘break’ > ‘lack’. See further *HEG s.v.* and Hart (1988: 73-74) for other etymological proposals. Occurrences are limited to NH (*HEG W/Z*: 215). There is a single MH occurrence of the verb, given in (80), which is puzzling for its morphological shape:

- (80) *kuit=a=smas=san* *wakkāriya*
REL.NOM.N=PTC=2PL.DAT=PTC lack.PRS.3SG.MID
“‘And what you are lacking (lit. what lacks to you).” (KBo 53.10 ii 8, MH/MS)

The manuscript (KBo 53.10 ii 8) clearly shows the spelling *wa-aq-qa-a-ri-ya*, which is ambiguous. Unless one interprets the sequence as *wakkāri* plus enclitic *=ya* ‘and what you are ALSO lacking’, which is however doubtful given the clear occurrence of non-geminating *=(y)a* attached to sentence initial *kuit*, the only remaining option is to treat it as a single verbal form *wakkāriya* (thus the online edition by E. Rieken et al. (ed.), hethiter.net/: CTH 375.4 (INTR 2016-01-15)). If the latter interpretation is correct, then the oldest (MH/MS) attestation of the verb surprisingly shows a stem *wakkāri-*, with the stem *wakk-* surfacing in NH times only. Clearly, the early occurrence of this stem partly challenges the traditional etymology of this verb, but since it has less bearing on the discussion of its syntax and semantics, I do not pursue further the matter here and keep in line with the traditional citation of this verb as *wakk-^{āri}*.

Argument structure and relationship with voice:

The verb *wakk-^{āri}* shows middle inflection only and therefore belongs to the *media tantum* (Oettinger 1976: 140 for occurrences; as pointed out by Oettinger the only alleged active form *wa-aq-qa-ri-es* KUB 33.106 ii 8 should be rather read as *wa-aq-qa-ri-es-[ki-u]an*).⁹ The derived verb *wak(ki)siye/a-^{zi}*, which displays the same meaning as simple *wakk-^{āri}*, is consistently active.

As example (79) shows, the verb *wakk-^{āri}* refers to the condition of a human being as being deprived of a certain commodity. As such, the event can be understood as an experiencer predicate involving an Experiencer and an inanimate Stimulus. Syntactically, the verb is intransitive, even though there is no evidence for the use of clitic subjects. The subject of this verb always encodes the Stimulus, whereas the Experiencer is consistently encoded in the Dative, so that this verb can be grouped with experiencer predicates that occur in a Nominative-Dative construction (Luraghi 2010b). The Stimulus can also be a full NP as in (81):

- (81) *nu=ssi=pa* 1-*an* *uttar* ***wakk[ar]i***
 CONN=3SG.DAT=PTC one.NOM.N thing(N).ACC lack.PRS.3SG.MID
 “He lacks just one thing (he does not have a son or a daughter.)” (KUB 24.8+ i 15, OH/NS)

***zē-^{a(ri)}* ‘cook (intr.)’**

Semantics and aspectual construal:

The middle verb *zē-^{a(ri)}* refers to an event of cooking, as in (82):

- (82) *mahhan=ma=at* ***zeari***
 when=PTC=3SG.NOM.N cook.PRS.3SG.MID
 “(They roast the heart and the liver with fire;) when it cooks (they bring it in).” (KBo 15.25 rev. 6, OH/NS)

Similarly to what discussed for *marriye/a-^{ta(ri)}* ‘melt, stew’, in principle one can conceive the event denoted by *zē-^{a(ri)}* as construed either as a directed activity or an incremental accomplishment.

⁹ As kindly pointed out by Melchert (p.c.), other alleged active forms of the verb should be interpreted otherwise. The form [...] *wa-ak-ki* (HSM 3645 i 9) should be likely integrated as [*we*] *wa-ak-ki* ‘ask’, whereas the forms *wa-ag-ga-ta-ta* (KUB 33.120 ii 7) and *wa-ak-ki-is-kan-[zi]* (KUB 34.7 r. col. 15) probably belong to the verb *wāk-ⁱ* ‘bite’.

Unfortunately, the only OS occurrence comes from a very fragmentary text, in which there is not enough context for deciding between the two interpretations. Based on post-OS evidence (cf. Neu 1968a: 206, *HEG s.v.*), it seems that the event denoted by the verb can be used either to profile the incremental process of ‘cooking’ or the resulting state.

The verb occurs with the adverb *hūdak* that in this case means ‘soon/quickly’, and hence entails the presence of an endpoint, as in (83).

- (83) *mān=at hūdak=ma zēyari*
 if=3SG.NOM.N quickly=PTC cook.PRS.3SG.MID
 “But if it cooks quickly.” (KUB 31.49 iii 33, NS)

In addition, the verb occurs within temporal clauses in which the event encoded by the dependent clauses is possibly conceived as brought to completion before the main event can take place:

- (84) *mahhan=ma ^{UZU}ī zēari nu zēyantit sipanti*
 when=PTC fat cook.PRS.3SG.MID CONN cook.PTCP.INST libate.PRS.3SG
 “When the fat cooks (completely), he libates with the cooked (fat)” (KBo 5.1 i 28, NS)

In (84), as well as in (82), the context suggests that the event of cooking the fat is completed before one can libate with it.

Finally, evidence for a telic default aspectual construal of the verb comes from its participle, much in the same way as for *mariye/a-^{ta(ri)}*. Indeed, the participle *zēyant-*, which frequently occurs in ritual descriptions as early as in OS texts, indicates the resulting change of state and not an ongoing process (for OS fragmentary attestations see KBo 17.1+iii 21 and 6 iii 13).¹⁰ According to Frotscher (2013: 206-207), this is the only case of a resultative participle of an activity verb. This peculiar behavior can be connected to the etymology of this verb as related to *zinni-^{zi}* ‘come to an end’ (see below), which regularly displays a resultative participle.

Etymology:

¹⁰ Neu (1968a: 206) translates the participle *zēyantit* in (84), as *kochenden* ‘cooking’, suggesting that it denotes an ongoing process rather than the resulting state, thus patterning with the participle of atelic predicates. However, as the context of example (84) shows, a resultative reading ‘cooked’ is perfectly compatible with this occurrence, and even preferable.

The verb goes back to PIE **tiéh₁-o*, which has no outer-Hittite cognates, as connections with OIr. *tinaid* and Lat. *tītio* (cf. *LIV*²), though semantically appealing, are formally difficult to account for. Kloekhorst (2008 *s.v.*) suggests an inner-Hittite connection with *zinn(a)-* ‘finish’, that probably reflects **ti-ne-h₁-*, and suggests that the middle verb *zē-* originally meant ‘be brought to its end > be cooked, cook (intr.)’.

Argument structure and relationship with voice:

The verb *zē-^{a(ri)}* consistently shows middle inflection throughout the history of the language, and synchronically belongs to the *media tantum* (Neu 1968b: 52). Semantically, it indicates a spontaneous event in which a Patient undergoes an incremental change of state in its physical configuration, and its induced counterpart ‘cook (tr.)’ is the *nu-*derived verb *zanu-^{zi}* (see Luraghi 2010a: 145). Syntactically, the verb is used in an intransitive construction, and displays unaccusative syntax since its earliest occurrences (Garrett 1996: 94), as the use of the clitic subject =*at* in (82) shows.

The prehistory of this verb is of remarkable interest. According to Kloekhorst (2008 *s.v.*), the verb derives from the active root **tiéh₁-* ‘bring to an end’. When used with passive meaning ‘be brought to an end’ the verb developed the specialized semantics ‘cook’. Following Kloekhorst’s account, one has to assume that the spontaneous meaning originated out of the passive one. Though a shift from passive to anticausative is in principle possible, it constitutes an uncommon semantic change that happens only under specific circumstances (cf. Kulikov 2011). More importantly, this reconstruction is also based on the assumption that the verb **tiéh₁-* was originally involved in a passive alternation encoded by active vs. middle voice alternation. This is however hardly the case, as the transitive causative counterpart of the root **tiéh₁-* was the *n-*infix form *zinni-^{zi}*. It is therefore safer to assume that the preform of *zē-^{a(ri)}* had a basic intransitive spontaneous meaning ‘end, be ready’, which could easily specialize into the meaning ‘cooked’ when referred to food (see further under *zinni-^{zi}*). If this is the case, an activity aspectual construal of the verb is possibly later, perhaps on analogy of other consumption verb such as *marrīye/a-^{ta(ri)}* ‘stew’ and *ur-^{āri}* ‘burn’.

5.1.1.2. Derived *media tantum*

***asiwantēsske/a-^{ta(ri)}* ‘become poor’**

Semantics and aspectual construal:

The verb *asiwantēss-^{zi}* ‘become poor’ is a fientive *-ēss-* derivative from an adjectival root *asiwant-* ‘poor’, and as such it indicates a telic change-of-state event. As it is often the case of change-of-state

verbs based on adjectives, the property indicated by the verb might be associated with different degrees of intensity, so that the verb indicates a progressive change along a scale (cf. Bertinetto & Civardi 2015 on *degree verbs*). Overall, the verb is scarcely attested, and we lack linguistic evidence for its actual aspectual construal in texts.

The only middle occurrence clearly profiles a telic event, as shown in (85), where the change-of-state component is particularly clear, since the verb refers to the subject *happinantes* ‘the rich ones’.

- (85) ^{LÚ.MEŠ}*happinantes=pat ŪL asiwanteskantari*
 rich.NOM.PL=FOC NEG become.poor-IMPF-PRS.3PL.MID
 “And would not the rich ones become poor?” (KBo 4.14 ii 52, NH/NS)

The aspectual construal of the active base verb is shown in (86), where the restoration of the verb is further suggested by parallelism with *parā [ha]ppineszi* ‘becomes poor’ earlier in the same text (cf. Imparati 1977: 30, 94-95). Here, a change-of-state reading is suggested by the occurrence of the verb in a ‘serial’ construction with *we-^{zi}*, which highlights the occurrence in the future of an uncontrolled dynamic event (cf. Luraghi *forthc.a*).

- (86) *mān=a É ^dUTU ^{URU}TÚL-[na] uizzi parā*
 IF=CONN house Sun.goddes A. come.PRS.3SG forth
asiwa[nteszi]
 become.poor.PRS.3SG
 “If the temple of the Sun-goddess of Arinna happens to become poorer.” (KUB 26.43
 obv. 57, NH/NS)

Argument structure and relationship with voice:

The verb *asiwantēss-^{zi}* indicates a one-participant event involving a Patient, which undergoes a change-of-state. The verb occurs in an intransitive construction with a nominative subject, and there is no evidence for the use of clitic subjects.

The overall scarcity of attestations of this verb greatly limits our understanding of its relationship with voice. As comparison between (85) and (86) shows, there is apparently no difference in meaning between active and middle forms of the verb. This is consistent with the general behavior of *-ess-* derivatives, whose *-ske/a-* derivatives only occur in the middle voice, without any noticeable difference in meaning with respect to the base verb (Neu 1968b: 88-89). See further Chap. 2 for the discussion of this pattern.

***irmaliye/a-^{ta(ri)}*, *armaniye/a-*, *ermaniye/a-* ‘be(come) ill’**

Semantics and aspectual construal:

The verb *irmaliye/a-^{ta(ri)}*, as well as its equivalent forms *armaniye/a-* and *ermaniye/a-* (see below for the etymology) roughly means ‘be(come) ill’, and belongs to the group defined by Neu (1968b: 101) as *Krankheitverben* ‘verbs of illness’ together with *istar(k)-^{zi}* ‘be(come) ill’. Even though the meaning of this verb is quite uniform in texts, one finds different aspectual construals for the underlying event. Consistently with the behavior of denominal *-iye/a-* verbs elsewhere, the verb can be construed either as a dynamic change-of-state event or as stative, the alternation being based on the cognitive operation of metonymy. Admittedly, it is often difficult to decide which construal is at play in specific contexts. A change-of-state construal is possibly exemplified in (87), in which the situation refers to the unexpected illness of the king. Here, a telic reading is further supported by the occurrence of the adverb *appa* ‘afterwards’ that suggests that the text deals with bounded events occurring in a temporal sequence.

- (87) EGIR-*an=ma=as* *irmaliyattat=pat*
afterward=CONN=3SG.NOM fall.ill.PST.3SG.MID=FOC
“(My brother Arnuwanda was sitting on the throne of his father) but afterwards he fell ill as well.” (KBo 3.4+ i 5-6, NH/NS)

By contrast, a stative reading is more likely in example (88). Here the first sentence clearly refers to the change-of-state event of getting ill, so that the sentence featuring *irmaliye/a-^{ta(ri)}* - possibly profiles only the resulting state of being ill.

- (88) *tukk[=m]a* [*i*]*starakkit* *nu* *irmalliyattat*
2SG.ACC=PTC afflict.PST.3SG CONN fall.ill.PST.2SG.MID
“(But then illness stroke you) and you were ill.” (KBo 5.9 i 14-15, NH/NS)

The participle of this verb, *irmaliyant-* ‘ill’, hardly provides evidence in favor of either of the two construals, since its meaning ‘ill’ is compatible with both a stative and a resultative reading.

Etymology:

The verb *ermaniye/a*-^{ta(ri)} is a denominal *-iya-* derivation from a noun meaning ‘illness’. This noun is cited in dictionaries (e.g. *HED*) as *arma(n)-*, *erma(n)-*, and *irma(n)-*, but as Kloekhorst (2008: *s. erman-*) has shown, the OS spelling points to *erman-* being the base stem of the noun, with *arman-* being an ablaut variant used as base for various derivative formations. The stem *ermal-/armal-* is possibly outcome of later dissimilation from *erman* (see further Kloekhorst 2008 *s.v.* for the etymology of the latter).

Argument structure and relationship with voice:

The verb *irmaliye/a*-^{ta(ri)} inflects only in the middle voice throughout the history of Hittite and belongs to the *media tantum*. Notably, the base noun *erman-* can also be written logographically as GIG, but active forms based on GIG are better interpreted as occurrences of *istar(k)*-^{zi} (cf. *HW*² IV:I 88).¹¹

Semantically, the verb *irmaliye/a*-^{ta(ri)} belongs to the class of experiencer predicates and is therefore associated with an Experiencer and a Stimulus participant. It is almost invariably used intransitively and consistently displays unaccusative syntax (Garrett 1996: 91; on the constructions of verbs of illness see also Dardano 2018), as shown by the occurrence of the clitic subject in (87). When occurring in an intransitive construction, the subject encodes the Experiencer participant, whereas the Stimulus is directly encoded in the verbal base.

In a single occurrence, the verb occurs in an impersonal construction, with the verb in the 3rd person and the Experiencer encoded in the accusative case, as shown in (89). This is the only case in which the verb occurs with an accusative Experiencer, and another copy of the text attests to a nominative clitic subject =*as* in the same passage instead (cf. Dardano 2018: 57). Tentatively, this occurrence should be better taken either as a scribal error or as a sporadic extension of the impersonal construction based on analogy with semantically similar verbs such as *istar(k)*-^{zi}.

- (89) *nu=war=an* *irmaliattat*
 CONN=QUOT=3SG.ACC fall.ill.PST.3SG.MID
 “And he fell ill.” (KBo 3.4+ i 13, NH/NS)

In addition, there is a single occurrence in which the verb is used transitively. In this case, the Stimulus is overtly encoded as subject through a noun meaning ‘illness’, whereas the experiencer is

¹¹ As an example, consider the form GIG-*at* ‘he became ill’ in KBo 3.4+ ii 21, which is written as *ir-ma-li-ya-at-ta-at* in the copy B of the same text.

encoded as a direct object by the accusative clitic pronoun =*mu*, as shown in (90). It is unclear whether this represents an innovative construction, but it patterns with the behavior of other illness verb, chiefly *istar(k)-^{zi}* ‘be(come) ill’, as well as experiencer predicates in general (Luraghi 2010b, Viti 2017).¹²

- (90) *ANA PANI ABU=YA=mu kappin DUMU-an HUL-lu GIG*
 to front father=1SG.POSS=1SG.DAT little.ACC son.ACC bad.ACC.N illness
GIG-at
 fall.ill.PST.3SG.MID

“At the time of my father, a bad illness took me, when I was a kid.” (KBo 4.12 obv. 6, NH/NS)

kariye/a-^{(tt)a(ri)} ‘be(come) gracious towards’

Semantics and aspectual construal:

The verb *kariye/a-*^{(tt)a(ri)} means ‘be gracious towards’ (see *HED* for attestations). This interpretation is mostly based on the meaning of the derivative noun *kariyasha-* ‘mercy’ as well as on etymological considerations. The verb occurs only once in the entire Hittite corpus, shown in (91):

- (91) [*nu=tta a]paddan ser ka[riya]ahhahat*
 CONN=2SG.DAT therefore upon be.gracious.PST.1SG.MID

“(I, the king took pity on you) and therefore I was gracious towards you.” (KUB 19.49 i 47, NH/NS)

Concerning the aspectual construal of this verb, most scholars interpret it as encoding a state (Neu 1968b: 64, *HED*, Kloekhorst 2008). However, it must be remarked that example (91) is entirely compatible with a change-of-state interpretation as well, since the verb can be understood as profiling a change in the attitude of the speaker towards the hearer as a result of the action of the king. That the

¹² The interpretation of example (90) is further complicated by the fact that the Sumerogram GIG, which represent the underlying neuter noun *erman*, fails to show the ‘ergative’ ending *-anza* when used as subject of a transitive verb. Alternatively, one can read the verb as formed by the complex Sumerogram GIG.GIG-*at* and interpret the sentence as impersonal (cf. *HW*² IV:I 89).

event denoted by this predicate can be construed as either a state or a change-of-state event is unsurprising, as it patterns with the behavior of other *-iye/a-* verbs.

Notably, the verb is semantically equivalent to the construction *kāri tiya-*, with the finite verb *tiya-* inflecting only as active, as in (92) (Puhvel *HED*: K 80-81).

- (92) DINGIR^{LUM}=*mu* EN=*YA* *kedani* *memini* ***kāri*** ***tiya***
 god=1SG.DAT lord=1SG.POSS DEM.DAT matter.DAT grace put.IMP.2SG
 “God my lord, be gracious to me in this matter.” (KUB 21.27 iv 35-36, NH/NS)

Etymology:

The verb is mostly attested in NH texts, and shows also a number of derivative formations. It is connected with e.g. Skt. *hāryati* ‘desire’ and Gr. *khairō* ‘rejoice at’, from a PIE root *ǵ^{hr}-ie/o- (Kloekhorst 2008 *s.v.*). Notably, the verb is often considered etymologically related to the synonymous construction *kāri tiya-*.

Argument structure and relationship with voice:

The verb occurs only once and shows middle inflection. Therefore, Neu’s classification of this verb as belonging to the *media tantum* (1968b: 94) should be regarded as tentative.

The verb refers to an experiencer situation involving an Experiencer and a Stimulus. Since the only occurrence of this verb comes from the partly broken passage in (91), it is not easy to assess its syntax. According to Puhvel (*HED*: K 80), in (91) the verb is intransitive, with the Experiencer encoded as subject, and the Stimulus encoded as a dative oblique. It must be stressed that this interpretation is based on the restoration of the left-sentence boundary in KUB 19.49 i 47 as featuring the clitic pronoun =*ta*. Notably, Puhvel’s assumption that the Stimulus is encoded in the dative is based on the parallelism with the construction *kāri tiya-*, which requires a dative Experiencer (see *HED* for occurrences), but in principle the form =*ta* can also be taken as an accusative. Overall, there is not enough evidence to determine the syntax of this verb.

***kistanziye/a-*^{ta(ri)} ‘be(come) hungry’**

Semantics and aspectual construal:

The verb *kistanziye/a-*^{ta(ri)} occurs only once in the entire Hittite corpus. Based on its etymological connection with the noun *kāst-* ‘hunger’, it is often translated as ‘be(come) hungry’. Concerning its

aspectual construal, the verb has been variously interpreted as indicating either a state ‘be hungry, suffer famine’ (cf. *HED s.v.*, Neu 1974: 139, Kloekhorst 2008 *s.v.*, Luraghi 2010b: 238) or a change of state ‘become hungry, starve’ (Garrett 1996: 94). Indeed, both interpretation fit well the only OS occurrence of this verb (already Neu 1968a: 99), as example (93) shows:

- (93) *mān=as* [xxx] *appezziyan=a* ***kistanziyattat***
 if=3SG.NOM later=PTC become.hungry.PST.3SG.MID
 “But when later (the city of Hattusa) became hungry (their Goddesses Halmasuit handed him over).” (KBo 3.22 rev. 46, OH/OS, with integration from Singer 1995)

As a matter of fact, there is no linguistic cue that overly indicates whether in (93) the verb is construed as stative or dynamic. From the discourse context, it is clear that the city of Hattusa at a certain point undergoes a change of state, as indicated by the temporal adverb *appezziyan* ‘later’, which clearly implies a contrast between the current situation described by the sentence in (93) and a previous one, but this does not help us in assessing whether the verb is actually profiling the change of state or the resulting state only. Nor the occurrence of the verb in a temporal clause introduced by *mān* is of help, since these clauses can encode either a simultaneous or a sequential temporal relation (see Sternemann 1965, Inglese 2016). Note that whereas Neu (1968a, 1968b) classifies the verb as Process-middle, in his edition of Anitta’s text (Neu 1974), he translates it as stative. The participle of this verb is unattested.

Argument structure and relationship with voice:

The verb *kistanziye/a-^{ta(ri)}* is an Experiencer predicate, and involves an Experiencer participant encoded as the nominative subject (cf. also Viti 2017), the Stimulus being lexicalized in the verbal root. In the only occurrence, quoted in (93), the verb takes a subject clitic, whence its classification as unaccusative (Garrett 1996: 94).

The verb is a *medium tantum* (Neu 1968b: 98), but this classification is based on a single occurrence, and it must be taken as tentative.

***lēlaniye/a-^{ta(ri)}* ‘be(come) furious’**

Semantics and aspectual construal:

The verb *lēlaniye/a-^{tt(ri)}*, which is possibly a denominal formation based on the unattested noun **lelan-* ‘rage (?)’ (cf. Kloekhorst 2008 *s.v.*), denotes the emotional event ‘be(come furious)’ (see *CHD s.v.* for a thorough treatment of the occurrences; see under *kardimiye/a-^{tt(ri)}* for the semantic relationship between the two verbs).

Scholars disagree on the aspectual construal of the verb, with some authors favoring a change-of-state interpretation (cf. Neu 1968a ‘wütend werden’, *CHD* and Luraghi 2010b: 238 ‘become furious’), and others opting for a stative interpretation (*HED s.v.*, Kloekhorst 2008 *s.v.* ‘infuriate’). Unfortunately, since the verb is only sporadically attested, with only one OH/OS occurrence quoted in (94), any attempt to determine its default aspectual construal must be taken as tentative.

- (94) *takku hannesnas ishās lēlanitta*
 if suit.GEN lord.NOM become.furious.PRS.3SG.MID
 “(If people are under arrest for trial and some supporter shows up), if a litigant becomes furious (and strikes the supporter, and he dies, there shall be no compensation.)” (KBo 6.2 ii 14, OH/OS)

In (94), even in absence of clear linguistic cues, a change-of-state reading of the verb fits the context better, as the verb clearly indicates a change of emotional condition of the subject. The verb can therefore be classified as incremental accomplishment and shares the same aspectual construal of its nearly-synonymous *kardimiye/a-^{tt(ri)}*.

Note however that based on the comparison with other *-iye/a-*verbs, it is entirely plausible that the event encoded by this verb could also be construed as a state. In fact, a stative reading is suggested by the participle *lēlaniyant-* ‘being furious’ (Frotscher 2013).

Argument structure and relationship with voice:

The verb *lēlaniye/a-^{tt(ri)}* encodes a one-participant experiencer event. The verb is used intransitively, as in (94), with the Experiencer encoded as subject. Since the verb always occurs with a subject NP, there is no evidence for the use of clitic subjects. The parallelism with *kardimiye/a-^{tt(ri)}* suggests that *lēlaniye/a-^{tt(ri)}* could have had unaccusative syntax, but this remains speculative.

The verb is a *medium tantum*, as it only occurs in the middle voice (Neu 1968b: 96). In post-OS, including later copies of the OH text of the *Laws* (cf. Hoffner 1997), the verb is replaced by its synonymous *kardimiye/a-^{tt(ri)}*.

***teshaniye/a*-^{ta(ri)} ‘appear in a dream’**

Semantics and aspectual construal:

The verb *teshaniye/a*-^{ta(ri)} indicates the event of ‘appearing (in a dream)’, as exemplified in (95).

- (95) ^dIŠ^hTAR=ma=mu GAŠAN=YA Û-a[(t)]
I.=PTC=1SG.DAT lady=1SG.POSS appear.in.a.dream.PST.3SG.MID
“Istar, my lady, appeared to me in a dream.” (KUB 1.1 i 36, NH/NS)

Attestations of this verb are extremely scarce, so that it is difficult to assess its default aspectual construal. The verb refers to a spontaneous change-of-state event, and based on similarity with verbs meaning ‘happen, appear’ such as *kis*-^{a(ri)} it can be tentatively attributed an achievement construal.

Derived *-ske/a-* forms of *teshaniye/a*-^{ta(ri)} arguably display an iterative reading, therefore construing the event as undirected activity via structural schematization, as in example (96):

- (96) ^dUTU URU.PÚ-na *kuit* *inissan* *tesanieskitari*
sungoddes *A.* because this.way appear.in.a.dream-IPFV-PRS.3SG.MID
“Concerning the fact that the Sungoddes of Arinna keeps appearing as said in my dreams.” (KBo 16.98 ii 10, NH/NS)

Etymology:

The verb is a *-iye/a-* derivative from the noun *tesha-* ‘dream, sleep’, for which see Kloekhorst (2008 *s.v.*). See also Mouton (2007: 5-12) for a discussion on the lexicon of dreaming in Hittite.

Argument structure and relationship with voice:

The verb *teshaniye/a*-^{ta(ri)} shows middle inflection only, and therefore belong to the *media tantum* (Neu 1968b: 97).¹³ The verb denotes an experiential situation involving a human Experiencer, the dreamer, and a Stimulus, the content of the dream. As observed by Mouton (2007: 8) the stimulus is most often a deity, but also an abstract or inanimate entity. Syntactically, the Stimulus of the verb is systematically encoded as nominative subject, whereas the Experiencer is encoded in the dative, as shown in (95). Therefore, this verb can be added to the list of Experiencer predicate occurring in a Nominative-Dative construction (see Luraghi 2010b: 16-18), possibly because, as Mouton (2007: 9)

¹³ Kloekhorst (2008 *s.v.*) refers to the verb as *teshaniye/a*-^{zi}, but there is no evidence of *mi*-inflecting active forms.

points out, in Hittite culture the dreamer is not conceived as actively involved in the experience of dreaming (note that Hittite lacks a transitive verb ‘dream’ with the Experiencer encoded as subject). There is no evidence for the use of clitic subject pronouns with this verb.

***uwaske/a-ta(ri)* ‘come’**

Semantics and aspectual construal:

The middle verb *uwaske/a-ta(ri)* is a derived *-ske/a-* form of *we-zi* ‘come’. The base verb is an *activum tantum* and indicates a directed motion event deictically oriented towards the speaker, as opposed to *pai-zi* ‘go’ (see Tjerkstra 1999: Chap. 3, Brosch 2014: 8, 36-37). Compare examples (97) and (115):

- (97) *mān* ^{URU}*Hattusa=ma uwawen*
 when *H.*=PTC come.PST.1PL
 “When we came to Hattusa.” (KBo 8.42 obv. 5, OH/OS)

Similarly to what discussed for *pai-zi*, the verb *we-zi* can be assigned a default aspectual construal of incremental accomplishment, as the moving agent is conceived as covering a Path in an incremental way. Boundedness of this verb is suggested by the occurrence of expressions profiling the endpoint of the movement, as the noun *Hattusa* indicating Direction in example (97) shows (cf. Starke 1977: 39). Moreover, telicity of this predicate is suggested by its S-oriented resultative participle *uwant-* ‘arrived’.¹⁴

The same construal is at play in middle *-ske/a-* derived forms, as in example (98):

- (98) *kuis=wa=ta=kan* ŠA KUR ^{URU}[*Hatti* ^{LÚ}*huyan**za*
 REL.NOM=QUOT=2SG.DAT=PTC of land *H.* fugitive.NOM
u]wiskittari
 come-IPFV-PRS.3SG.MID
 “Whatever fugitive of Hatti comes to you, (you shall always send him back to His Majesty).” (KUB 14.1 + KBo 19.38 rev. 63-64, NH/NS)

¹⁴ For discussion of possible examples of non-resultative semantics of the participle see *HEG s.v.*, e.g. *mekki uwant-* ‘(a river) abundantly flowing’ KUB 19.9 iv 5 NH/NS).

In (98), the suffix *-ske/a-* is likely to add a habitual reading to the base predicate, and the event is still construed as telic, since the endpoint of the verb is overtly encoded and the completion of the event is profiled, as the context suggests.

Argument structure and relationship with voice:

The base verb *we^{-zi}* indicates a directed motion event involving a moving Agent and optionally a Direction. The verb is intransitive and shows unaccusative syntax (Garrett 1996: 96), both in its base and in its derived forms, as the occurrence of the clitic subject pronoun *=at* in (99) shows. OS evidence for the base and the *-ske/a-* derived verb is limited, so that it is not clear whether unaccusative syntax constitutes a later acquisition, similarly to *pai^{-zi}* ‘go’ (Goedegebuure 1999, Luraghi 2010a: 140-142).¹⁵

- (99) *n[=a]t=kan parā šA ^{LÚ}M[EŠ]EDI ^Éhīlaz **uiskandari***
 CONN=3PL.NOM=PTC forth of bodyguard courtyard.ABL come-IPFV-
 PRS.3PL.MID

“Then they come out from the courtyard of the bodyguard.” (IBoT 1.36 i 74, MH/MS)

The base verb *we^{-zi}* consistently shows active *mi*-endings throughout the history of Hittite. Middle endings are attested only on the derived *-ske/a-* forms, showing a pattern similar to *pai^{-zi}* vs. *paiske/a^{-tta(ri)}* (cf. Melchert 2017b: 480). The middle voice adds no noticeable semantic and syntactic contribution to the verb.

***wesiye/a^{-tta(ri)}* ‘graze’**

Semantics and aspectual construal:

The middle verb *wesiye/a^{-tta(ri)}* ‘pasture, graze’ refers to the act of (supervised) animal grazing, as in (100) and (101):

¹⁵ The absence of *uwaske/a^{-tta(ri)}* in OS contrasts with OS occurrences of *paiske/a^{-tta(ri)}*. This distribution may be linked to a general lesser frequency of the base verb *we^{-z}* as compared to *pai^{-zi}* in OS, cf. Goedegebuure (1999), which in turn is likely to reflect a more general trend for similar pairs of deictic verbs to show an asymmetrical distribution (cf. Brosch 2014: 35-36).

(100) [z]eni=ma GU₄-us **usiētta**
 spring.DAT=PTC bull.NOM graze.PRS.3SG.MID
 “In spring, a bull grazes.” (KBo 17.23 obv. 4, OH/OS)

(101) [(n=asta) GUD^{HI.A}]-us lē **uesiyatta**
 CONN=PTC bull.ACC.PL NEG pasture.PRS.2SG.MID
 “And you should not pasture the bulls.” (KUB 31.84 ii 54, MH/NS)

Based on attestations such as (100) and (101), one can assume that the event denoted by *wesiye/a-ta(ri)* profiles an ongoing undirected activity event, since no (incremental) change component is involved. The participle of this verb is so far unattested.

Etymology:

The verb is a denominal formation from *wesi-* ‘pasture’, which explains the otherwise aberrant *-e*-grade of the root (Kloekhorst 2008 *s.v.*). The name *wesi-* can be connected with the PIE root **ues-*, cf. Lat *vēscor* ‘feed oneself’.

Argument structure and relationship with voice:

As comparison between examples (100) and (101), one should distinguish two constructions in which *wesiye/a-ta(ri)* occurs. In the first place, the verb can indicate a two-participant causative event in which an Agent human participant pastures a Patient participant that denotes cattle or other domestic animals. In this case, the verb occurs in a transitive construction, with the two participants encoded as subject and direct object respectively, as in (101).

In the second place, the verb can be construed as involving one participant only. In this case, its subject can either be the cattle-participant, as in (100), or the transitive verb can be used without a referential direct object, with the human participant as subject, as in (102).

(102) mān LÚkūrur[as xxx] LÚtaksulass=a [LÚ.MEŠSIPA.GU₄ LÚ.MEŠSIPA.UDU]
 if enemy.GEN ally.GEN=conj cowherd(PL) s hepherd(PL)
 taksan **wesyan[d]ari**
 together pasture.PRS.3PL.MID

“And if the cowherds and the shepherds of the enemy [...] and the ally pasture together.”
 (KUB 26.19 ii 18, NH/NS)

There is no evidence for the use of subject clitics with the intransitive verb. In this respect, a problematic MS occurrence, quoted in (103), should be discussed.

- (103) [*nu=war*]=*at* GU₄^{HL.A} UDU^{HL.A} *taksan* *wesiyattari*
 CONN=QUOT=3PL.NOM/ACC? bull(PL) sheep(PL) together pasture.PRS.3SG.MID
 “The cattle and the sheep pasture together.” (KUB 26.19 ii 33, NH/NS; alternatively, ‘he pastures them, namely the cattle and the sheep together’, Gerçek 2012: 230)

The syntax of the verb *wesiyattari* in example (103) is difficult to interpret, also on account of the fact that the first part of the sentence has been restored. Clearly, since clitic subjects notoriously never appear with transitive verbs (Garrett 1996, Hoffner & Melchert 2008: 280), the clitic =*at* cannot be interpreted as subject. If one treats the verb as intransitive, the syntax of the verb is still problematic, since clitic subjects do not occur with explicit nominal subjects. It is therefore better to follow Gerçek’s suggestion (2012: 230) and interpret GU₄^{HL.A} UDU^{HL.A} as direct objects of transitive *wesiya-*, and the clitic =*at* as a non-canonical case of clitic doubling.¹⁶

The verb *wesiye/a-^{ta(ri)}* displays middle inflection only, with the exception of a single active form of the imperative (*ú-<e>-se-ed-du* KUB 30.24 ii 4, MH/NS). With this verb, transitive vs. intransitive alternation is mostly employed to encode the alternation between the supervised and the unsupervised event of grazing, as comparison between (100) and (101) shows. In this respect, one can compare the behavior of this verb with the (anti)causative alternation of animate verbs like ‘eat’ and ‘make eat’ (cf. Nichols *et al.* 2004). If so, in the case of *wesiye/a-^{ta(ri)}*, causative alternation would be encoded by labiality, transitive and intransitive constructions of the verb being both associated with the middle forms of the verb. Note that only the intransitive construction is attested in OS, but given the overall scarcity of the attestation, there is no reason to assume that the transitive construction developed at a later stage. In fact, based on the comparison with Latin *vēscor*, Grestenberger (2014: 251-252) tentatively suggest that this verb was inherited as deponent from PIE, but as she herself remarks, the evidence can also be interpreted otherwise, especially if one assumes with Kloekhorst (2008 *s.v.*) that the verb is an inner-Hittite derivation from the noun *wasi-* ‘pasture’.

¹⁶ In Hittite clitic doubling most often occurs in case of left- or right-dislocations of either direct objects or subjects of unaccusative verbs (cf. Hoffner & Melchert 2008: 408-409; see further Sideltsev 2011, 2014). Notably, interpreting example (103) as an instance of clitic doubling is partly problematic, because the constituent GU₄^{HL.A} UDU^{HL.A} ‘cattle and sheeps’, which should be doubled by the clitic =*at*, does not occur outside of the clause but within it.

5.1.1.3. Verbs with post-OS active forms functionally identical to OS middle forms

ark-^{a(ri)/i} ‘mount’

Semantics and aspectual construal:

The verb *ark*-^{a(ri)} is understood as meaning ‘mount, copulate’ (cf. *HED*, *HW*²). However, evidence for this meaning in OH/OS comes from only two occurrences.¹⁷ From this scanty evidence, it is hard to determine the exact semantics of this predicate, let alone its default aspectual construal.

Both OH/OS occurrences of the verb come from Zalpa’s text, as shown in (104). In this text, the meaning of the verb is far from being clear (cf. Holland & Zorman 2007: 49), so that the translation below remains highly speculative. In both examples, the verb takes neither a direct object or a location (cf. *HW*² “absolut gebraucht [...] sonst transi(itiv)”), and one could tentatively assign it a default aspectual construal of undirected activity, as in (104).

(104) *UMMA* LÚ^{MES} URU^{LIM} *kuwapit aumen nu ANSE-is*
 thus man(PL) city wherever look.PST.1PL CONN donkey.NOM

arkatta

mount.PRS.3SG.MID

“And the men of the city (said): wherever we have looked, a donkey mounts.” (KBo 22.2 obv. 10, OH/OS)

With the exclusion of a problematic MH/MS occurrence (see fn. 17), evidence for a transitive use of the active verb is limited to post-OH texts. Consider example (105). In the first occurrence, *arga* is likely to profile a telic change-of-state event ‘mount’. The second occurrence is more problematic. Here, since participants involved are inanimate, viz. the town and the earth, the verb possibly profiles a stative spatial configuration ‘cover’, even though the occurrence of the imperative points to an inchoative reading of the verb ‘begin to cover’.

(105) *UDU.A.LUM GIM-an UDU.SÍG arga* (...) [*nu LÍL-ri*

¹⁷ The occurrence of *a-ar-kat-ta* in a MH/MS text (HKM 47 obv. 15) is based on Alp’s (1991: 204) reading of this passage. A different interpretation has been proposed by van den Hout (2001: 430 fn. 36), who reads *a-wa-an kat-ta* [*a-*]u-me-en instead of *a-ar-kat-ta*. This reading is accepted by Marizza (2008: 109) and Hoffner (2009: 180), who translate “we thoroughly investigated by augury the matter of the town Takkasta”. I follow here van den Hout’s interpretation.

ram as ewe mount.PRS.3SG.MID CONN steppe.DAT
 GE₆]-in KI-an **argaru**

dark.ACC earth.ACC mount.IMP.3SG.MID

“Even as the ram mounts the ewe (and she becomes pregnant, so too let this town and settlement become a ram) and cover on the steppe the dark earth.” (KUB 41.8 iv 30 ff., MH/NS)

Etymology:

For Kloekhorst (2008 *s.v.*), the verb derives from the zero grade of the root **h₃erǵ^h*-, with regular loss of word initial **h₃* before **-r-* (cf. *ar-* < **h₃r-*), *contra LIV*² and *HED*, according to which the form goes back to **h₁erǵ^h*-. The former is connected with Gr. *órkhis* ‘testicle’ and Av. *ərəzi-* ‘testicle’, the latter perhaps with Gr. *érkhomai* ‘come’. There is thus no cognate verbal form which corresponds to the Hittite verb. The inflectional class of this verb remains unclear. Surprisingly, OH attestations of the verb show *-tta* endings, whereas post-OH evidence point towards *-a* inflection (Melchert *forthc.b*: 22).

Argument structure and relationship with voice:

In OS, the verb appears inflected in the middle only. Therefore, middle inflection is regarded as original for this verb, which arguably belong to the class of the transitive *media tantum* (Neu 1968b: 56, Kloekhorst 2008 *s.v.*).

The event denoted by *ark^{-a(ri)}* involves two animate participants, an Agent and a Patient. When used metaphorically, either participant can also be inanimate, as in (105). Syntactically, the agent is always encoded as a nominative subject, whereas the patient, when it occurs, is encoded as an accusative direct object. Although generally described as a transitive verb (Neu 1968b: 54), in OS the verb does not take a direct object, and is intransitive. There is no evidence for the use of clitic subject pronouns with *ark^{-a(ri)}*, but based on the general behavior of transitive verbs used without direct object, it is reasonable to assume unergative syntax for this verb (Luraghi 2010a: 137).

Melchert (*forthc.b*: 22) tentatively suggests that OH occurrences of the verb showing the *-tta* ending might be interpreted as passive, but there are no compelling reasons to accept this reading. Notably, one finds the active form *a-ar-ki* only in later texts (which alternates with middle *ar-ga* in two NS copies of the same OH texts, KBo 48.89 and KBo 10.45 respectively). In NS, there is no semantic difference whatsoever between active and middle forms. Grestenberger (2016: 132) argues that middle inflection for this verb was originally connected to its Translational Motion semantics

‘climb onto’. Later on, the verb specialized in the meaning ‘mount (sexually)’ requiring a direct object in the accusative case, hence its synchronic classification as a deponent verb.

huett(i)-^{a(ri)}, huettiye/a-^{zi/i} ‘draw, pull’

Semantics and aspectual construal:

The bulk of the attestations of *huett(i)-^{a(ri)}* comes from post-OS texts, with only a handful of occurrences in certain OH/OS compositions. In these, the verb shows the meaning ‘pull, draw, substitute’ (cf. *HW²* for a thorough treatment of the occurrences). Unfortunately, the verb does not occur with temporal or spatial expressions that can be used to soundly establish its default aspectual construal. In (106) the verb occurs with a Source expressed by the ablative URU-*riyaz*, which suggest the profiling of a trajectory from Source to Goal, hence a telic interpretation of the verb as a directed reversible achievement.

(106) [xxx] URU-*riyaz* ERIN^{MEŠ}=ŠU ***huittiyati***
city.ABL troop(PL)=3SG.POSS draw.PST.3SG.MID
“[...] moved his army from the city.” (KBo 3.22 rev. 54, OH/OS)¹⁸

Beside (106), the verb occurs three times in the *Laws* (KBo 6.2, ed. by Hoffner 1997), with the meaning ‘substitute’ < ‘pull something for something’. The construal of the event is an achievement in this case as well, as suggested by example (107).

(107) *kinun=a* 1 UDU LÚ-*nas* *kassas=sas* ***huēttiyanta***
now=CONN 1 sheep man.GEN in.place.GEN=3SG.POSS.GEN draw.PRS.3PL.MID
“‘And now they substitute one sheep for the man.’” (KUB 29.30+ iii 6, OH/OS)

Etymology:

As discussed by Kloekhorst (2008 *s.v.*) the etymology of this verb is still disputed, as all reconstructions proposed so far are either formally or semantically unappealing. Regarding the stem,

¹⁸ Note that the context is partly fragmentary and Neu in his edition of Anitta’s text (Neu 1974) interprets *menahhanda* from the preceding context as the Goal of the event and translates ‘führte ihre Truppen aus der Stadt (mir) entgegen’, supporting the telic interpretation of the verb.

Kloekhorst points out that the stem *huett(i)-* is most likely connected with the middle inflection, based on the distribution of the stem in post-OS, whereas the stem *huittiya-* is used in the active, much in the same way as the stem alternation discussed for *hatt-^{ta(ri)}* vs. *hazziye/a-^{zi}*. This would point to an original middle inflection of the simple verb. However, the distribution is already blurred up in OH/OS, as the stem *huittiye/a-* was transferred to the middle inflection already by the time of our earlier attestations. Note that when inflecting as active, the verb shows both *-mi* and, to a limited extent, *-hi* endings (Kloekhorst 2008 *s.v.*). In the 3rd person, the verb shows a stem in *-i-*, similarly to *pars(i)-^{a(ri)}* ‘break’, on which see also Jasanoff (2012: 123-124).

Argument structure and relationship with voice:

It is not easy to determine the original voice of the verb *huett(i)-^{a(ri)}*. In OH/OS, one only finds middle forms based on the stems *huett(i)-* and *huettiye/a-* (see under etymology). However, the active voice is robustly attested in OH/MS and MH/MS texts, so that the possibility that voice alternation dates back to OH cannot be safely ruled out.

In OH and MH, voice alternation does not affect the syntax and the semantics of the predicate, with middle and active forms being used in free variation (Neu 1968b: 107). Both active and middle forms of the verb denote a two-participant event that involves an Agent and a Patient, and likewise occur in a transitive construction with the two participants encoded as subject and direct object respectively, as comparison between (107) and (108) shows. Being consistently transitive, the middle verb can be rightly classified as a deponent verb (cf. Grestenberger 2014: 269). When the verb has the meaning ‘substitute’ there is also a Beneficiary participant, which can be optionally encoded through an adpositional phrase involving *kassas* and an NP in the genitive, as in (107).

- (108) *n=asta* ^{LÚ}SANGA DINGIR^{LAM} *āpitaz sarā 7-ŠU huittiyazzi*
 CONN=PTC priest god pit.ABL up 7.times draw.PRS.3SG
 “The priest draws the deity up from the pit seven times.” (KUB 29.4 ii 19-20, MH/NS)

NS texts partly offer a different picture. Beside the well attested usage of the middle verb in the transitive construction (e.g. KBo 11.11 i 9, see *HED* for occurrences), one also finds sporadic occurrences in which middle forms are used intransitively. Beside the passage in (109), other

occurrences come from a single text, KBo 13.109, in which one finds the imperative form SUD-*ru* (Neu 1968a: 57).¹⁹

(109) [GIM-(*an=ma*)] *uit* *IŠTU È.LUGAL* *DI-essar* *ku*[(*itki*
when=PTC come.PST.3SG by palace case(N).NOM INDF.NOM.N
EGIR-*pa* *huitti*)]*yattat*
back draw.PST.3SG.MID

“But when it came to pass that the trial was somewhat protracted by the palace.” (KUB 1.1+ iii 14-15, NH/NS; integration from KUB 19.67+ NH/LNS, cf. Otten 1981: 38)

As argued by Neu (1968a: 57), such occurrences attest to passive use of middle forms of *huettiye/a^{-zi}*. A passive interpretation of (109) is further supported by the occurrence of the agent phrase *IŠTU È.LUGAL* ‘by the temple’. Notably, these forms are all based on the stem *huettiye/a^{-zi}* and the verb shows the more productive passive ending *-tari* (Grestenberger 2014: 269). This can be taken as evidence of a later grammaticalization of voice opposition with this verb that became possible only once transitive active forms were created. This chronology complies with the general increase of productivity of the passive function in NH.

***lukk-^{ta/zi}* ‘get light, dawn’**

Semantics and aspectual construal:

The verb *lukk-^{ta}* ‘dawn’ refers to the “faint but growing sunlight in the atmosphere at dawn just before the sun rises” (*CHD s.v.*). The semantics of the verb is best attested in the NS example quoted in (110). Note that even though this example is extremely useful to illustrate the meaning of the verb, it is exceptional in that the verb is unexpectedly inflected in the active voice and used with a nominative subject (see below for discussion).

¹⁹ Another possible example is attested in KUB 34.14 rev. 10, [*heyaw*]*ēs garittess=a* EGIR-*pa* *hūit*[*tiyanta*] “rains and floods will recede.PRS.3PL.MID”. In this case, the intransitive verb can be interpreted as encoding a spontaneous event ‘stop, recede’, so that voice alternation can be taken as indicating anticausative alternation, with a shift from passive ‘be drawn, be pulled’ to anticausative ‘stop, recede’ (for a similar semantic shift see *kars*(*iyē/a*)^{-zi} ‘cut, stop’). However, in this passage the middle ending of the verb has been entirely restored, so that this example cannot be taken as probative of the intransitive use of middle forms of *huettiye/a^{-zi}*.

(110) *mahhan=ma* GE₆-*anza lukzi*

when=PTC night.NOM dawn.PRS.3SG

“But when the night grows brighter (and the morning star rises, while it hasn’t yet become bright, let him promptly leave the city.)” (KBo 9.15 ii 16-20, NS, transl. after *CHD*)

The verb is most often attested in the middle voice, and most occurrences of *lukk-^{ta}* recorded on original OH and MH texts resemble the ones quoted in (111) and (112) in their syntax and semantics.

(111) *mān lukkata=ma* nu ^{LÚ}A.ZU *ūkk=a* *paiwani*
 when dawn.PRS.3SG.MID=PTC CONN physician 1SG.NOM=CONJ go.PRS.1PL

“When it dawns, the physician and I go.” (KBo 17.1+iv 7, OH/OS)

(112) *mahhan=ma lukkata* *n=asta* URU-*az* ^{LÚ}.(MEŠ)NÍ.ZU *katta*

when=PTC dawn.PRS.3SG.MID CONN=PTC town.ABL scout(PL) down
uwandu]

come.IMP.3PL

“But as soon as it dawns, the scouts shall come down from the town.” (KUB 13.1 i 29, MH/MS)

In (111) and (112), the verb *lukk-^{ta}* occurs within temporal clauses introduced by *mān* and *mahhan* ‘when’ respectively, which set the temporal frame for the event encoded by the main clause.

Although the meaning of the verb is undisputed, it is not easy to establish its default aspectual construal, partly because it seldom occurs with clear linguistic cues.

The most likely interpretation is that the verb profiles the event as an incremental accomplishment, as suggested by most translations. In this case, the verb denotes a bounded temporal arch, from the first light to the actual rising of the sun. This can be seen by comparing the examples in (113) and (114), in which the context implies a starting and a terminal point of the event.

(113) *nu=mu* INA ^{URU}*Kattimmuwa lukta*

CONN=1SG.DAT to K. dawn.PRS.3SG.MID

“(I marched by night,) and it lit up (lit. lights up, historical present) on me at K.” (KBo 5.8 i 25-26, NH/NS)

(114) GIM-*an lukkata* ^dUTU-*us=kan* *ūptat*

when dawn.PRS.3SG sun.NOM=PTC rise.PST.3SG

“When it dawned and the sun rose” (KUB 21.10 13, NH/LNS)

Note that the participle *lukkant-* must be based on the active verb *lukkiye/a-^{zi}* ‘set fire’ for semantic reasons (Frotscher 2013: fn. 358), and thus does not provide evidence for the default aspectual construal of *lukk-^{ta}*.

Etymology:

According to Kloekhorst (2008 s.v.) and *LIV*², the verb *lukk-^{ta}* derives from the PIE root **léuk-*. Cognates are Ved. *rócate* (*e*-present), *ruróca* (perfect), TochA *lyokät*, Lat. *lucēo* (*éye*-Present). As can be seen, different stems were built on the PIE root in the daughter languages (cf. Kloekhorst 2008 and *LIV*² for details), with the Hittite present stem arguably issued from the PIE aorist stem (cf. Villanueva Svensson 2008). Note that middle inflection in both Ved. *rócate* and TochA *lyokät* points towards the origin of the verb as a *medium tantum* in PIE already. In Hittite, the transitive active verb *lukk(iye/a)-^{zi}* ‘set fire (tr.)’ is derived from the same root.

Argument structure and relationship with voice:

As already remarked by Neu (1968b: 98) the verb *lukk-^{ta}* was possibly an original *medium tantum*. This is supported on the one hand from the fact that the verb takes middle inflection only in OS and MS texts, and on the other hand by comparison with its Vedic and Tocharian counterparts, which show middle inflection only.

Active inflection for this verb is only sporadically attested in NS, with the same meaning of the middle (Neu 1968b: 79, 98-99, see further Kloekhorst 2008 s.v.), as comparison between (110) and (111) shows, and clearly constitutes a later development.

The verb *lukk-^{ta}* belongs together with impersonal weather verbs that lack a referential subject (Neu 1968b: 98-99, see under *neku-^{zi}* and *tith-^a*). As such, the verb is used intransitively without clitic subjects (Hoffner & Melchert 2008: 281). In NS texts, one sporadically finds the verb used in a personal construction with a ‘night’ Patient participant encoded as subject, as in (110). Neu (1968a: 110) reports one example with a clitic subject, which is either an instance of the construction with the noun ‘night’ or a scribal mistake.

***paiske/a-^{ta(ri)/zi}* ‘go’**

Semantics and aspectual construal:

The middle verb *paiske/a*-^{ta(ri)} is a derived *-ske/a-* formation of *pai*-^{zi} ‘go’ (see *CHD* s.v. for semantics and attestations of the latter). The base verb is an *activum tantum* and encodes a directed motion event, as can be seen in example (115), where it also occurs with the noun *parna* ‘the house’ in the directive case. The verb *pai*-^{zi} contrasts with *uwa*-^{zi} ‘come’ in its deixis, as the former indicates movement away from the speaker whereas the latter indicates movement towards the speaker (cf. Brosch 2014: 8, 36-37).

- (115) *ta* DUMU^{MEŠ}-*an parna* ***paimi***
 CONN son.GEN.PL house.ALL go.PRS.1SG
 “And I go to the house of the sons.” (KBo 17.1+iv 11, OH/OS)

Based on examples such as (115), in which the verb occurs with an overt expression of the goal of the movement (on the use of the directive case with the verb see Starke 1977: 32-34), the verb can be interpreted as profiling an incremental accomplishment (Luraghi 2010a: 140-142, see examples in *CHD* s.v. and Tjerkstra 1999: chap. 3). In this case, the incremental change pertains to the progressive ‘shortening’ of the Path (cf. Croft 2012: 75 on Path incremental themes). Telicity of this predicate is notoriously suggested by its resultative participle *pant-* ‘gone’ as opposed to atelic motion verb such as *ye/a*-^{ta(ri)} ‘march’ >> *iyant-* ‘going’.

The understanding of the construal of *-ske/a-* forms heavily depends on the functions one attributes to the suffix. In the only fully preserved OS occurrence, it is likely that the verb is construed as an undirected activity, as shown in (116):

- (116) *karū=ma* É DUMU^{MEŠ}-*an* ***paiskahat***
 already=PTC house son.GEN.PL go-IMPF-PST.1SG.MID
 “But earlier he used to go to the house of the sons.” (KBo 17.1+iv 13, OH/OS)

In (116), the suffixed verb possibly indicates a habitual behavior situated in the past, so that the event can be profiled as an undirected activity via structural schematization. Most MS occurrences pattern with (116), as does (117), in which the context favors a habitual reading of the event (the passage comes from an Instruction text describing the behavior of various palace servants).

- (117) *nu=kan* GAL-*yaz* *katta apas* ***paisketta***
 CONN=PTC gate.ABL down DEM.NOM go-IPFV-PRS.3SG.MID
 “He usually goes down out of the main gate.” (IBoT 1.36 i 63, MH/MS)

Argument structure and relationship with voice:

The verb *paiske/a*-^{tt^a(ri)} indicates a one-participant directed motion event involving an Agent, and a Direction. The base verb *pai*-^{zi} is intransitive. As first pointed out by Goedegebuure (1999), in OS the verb *pai*-^{zi} does not always require a clitic subject, as in (115), and the verb fully acquired unaccusative syntax in post-OH times only (Luraghi 2010a: 140-142). This syntactic behavior is mirrored by *-ske/a-* forms. In example (116), which dates to OH/OS, the verb fails to show a clitic subject, whereas a later MH/MS passage quoted in (118) features the occurrence of the clitic subject =*at*.

- (118) *n=at=kan* *lusdaniyaz katta pais[kand]a*
CONN=3PL.NOM=PTC gate.ABL down go-IPFV-PRS.3PL.MID
“They go down out of the postern gate.” (IBoT 1.36 i 61, MH/MS)

The base verb *pai*-^{zi} consistently shows active inflection throughout the history of Hittite. By contrast, derived *-ske/a-* forms mostly inflect in the middle voice, but active forms are attested in NH (e.g. *paiskewen* KUB 18.24 4, Neu 1968b: 87 fn. 19) and likely reflect a later innovation (Melchert 2017b: 480). Notably, in this respect the verb belongs together with active intransitive verbs that obligatorily inflect in the middle voice in their derived *-ske/a-* forms (cf. Melchert 2017b). In this case there is no detectable semantic contribution of the middle voice.

***salik*-^{a(ri)/zi/i} ‘approach’**

Semantics and aspectual construal:

The basic meaning of the verb *salik*-^{a(ri)} is ‘approach, enter’ (see *CHD* s.v. for occurrences), as can be seen in examples (119) and (120).

- (119) *ta* ^{DUG}TU₇-*sa saliga*
CONN pot.ALL approach.PRS.3SG.MID
“And he reaches into the pot.” (KBo 17.43 i 15, OH/OS)
- (120) [*ta*] DUMU.MUNUS=*si=ya salig[a]*
CONN daughter=3SG.POSS.DAT=CONJ approach.PRS.3SG.MID
“(If a man has a woman in marriage), and approaches her daughter (it is unpermitted).”
(KUB 29.36+ iv 10, OH/OS)

In example (119), the verb denotes a directed motion event, whose endpoint is profiled by the adverbial ^{DUG}TU₇-*sa* ‘the pot’ in the directive case (cf. Starke 1977: 35). The occurrence of a directive NP encoding the Direction makes the whole event bounded, hence telic. Similarly, in (120) the verb is used metaphorically to refer to a sexual intercourse. Based on these occurrences the verb can be assigned a default aspectual construal of a reversible achievement.

Etymology:

According to Kloekhorst (2008 *s.v.*), the verb goes back to the PIE root **sléig-o*, thus cognate to OIr. *sligid* ‘strike down’, Eng. *slick*, OHG *slīhhan* ‘sneak’ and Gr. *lígdēn* ‘stroking’ (see further *LIV*²).

Argument structure and relationship with voice:

The verb *salik*-^{a(ri)} encodes a two-participant motion event involving an animate Agent and a Direction. Syntactically, the verb is often classified as intransitive, as it takes a nominative subject but no accusative DO, as in (120). Garrett (1966: 98) groups it together with unergative intransitives, as it never takes clitic subjects. Note that the encoding of the second participant partly depends on animacy, in that the directive case is only used with inanimate entities, as in (119), and dative-locative with animate ones, as in (120), as well as with inanimates (see examples in *CHD*; Starke 1977: 76).

There is one single occurrence, quoted under (121) in which the verb displays a clitic subject, as observed by Garret (1996: 111-112):

- (121) *n=as* DINGIR^{MEŠ} NINDA^{hārsi} ^{DUG}*ispantuzzi maninkuwan*
 CONN=3SG.NOM god(PL) *h.bread.DAT* libation.DAT near
saknuwanza ***sāliqa***
 unclean.NOM approach.PRS.3SG.MID
 “If he approaches near the gods’ bread and libation vessel unclean.” (KUB 13.4 iii 79, MH/NS)

Garret suggests treating the example in (121) as what he labels a ‘false reflexive construction’. This is a construction parallel to the alternation in Eng. *The zebra runs* vs. *the zebra runs herself lame*, with conversion from unergative to unaccusative syntax. This *ad-hoc* interpretation remains somewhat unconvincing. The change from unergative to unaccusative syntax should be better understood within the larger drift toward unaccusativity at place from OS onwards, whereby motion verbs acquire unaccusative syntax later than other intransitive verbs (Luraghi 2010a).

In OH/OS the verb *salik*-^{a(ri)} consistently displays middle inflection, suggesting that it might have belonged to the original *media tantum*. Active forms of the verb, showing both *hi*- and *mi*- inflection, are sporadically attested from MH onwards (Kloekhorst 2008 *s.v.*) and eventually take over in NH times, when middle forms drop out of use in assured NH/NS compositions (Melchert *forthc.b*: 15). Notably, active forms display the same syntax and semantics as middle forms (Neu 1968b: 81). Note that Neu’s (1968b: 81) interpretation of the verb as reflexive is unwarranted, as the verb lacks a non-reflexive counterpart and simply encodes a one-participant motion event.

As discussed for example (120), the verb can be used to denote a sexual intercourse. Notoriously, verbs denoting sexual intercourse are often reciprocal in meaning, but in this case this use, exemplified in (120), is a metaphorical extension of the basic motion meaning in (119) (*contra* Rose 2006: 398, who assumes the meaning ‘have sexual relations with’ as primary). Hence, this verb cannot be taken as evidence for an original reciprocal use of the middle voice.

tith-^a/*tetha*-ⁱ ‘thunder’

Semantics and aspectual construal:

The verb *tith*-^a indicates the event of thundering, as in example (122), and semantically belongs to the class of weather verbs.

- (122) [*mān* ^dIM-*as* *ti*|*tha* DUMU.É.GAL *piddāi*
when Stormgod.NOM thunder.PRS.3SG.MID palace.attendant come.PRS.3SG
“When the Stormgod thunders, the palace attendant comes in.” (KBo 17.11+ i 1, OH/OS)

In principle, the event denoted by *tith*-^a can be construed in two ways. Either the verb profiles a single instantiation of the weather condition, i.e. a single thundering event, or it refers to an ongoing weather condition spanning over time. In the former case the event is construed as a cyclic achievement, whereas in the latter the event is construed as an undirected activity. The shift between the two construals is licensed by structural schematization.

Textual evidence for *tith*-^a is admittedly rather scanty to establish the default aspectual construal of the verb. Contextual cues in examples (122) speak in favor of an achievement construal, since in ritual texts the verb is likely to refer to a single ‘thundering’ event, which is completed before other events can take place.

An undirected activity construal is possibly at play in *-ske/a-* forms of the verb, as in example (123):

(123) *uwantiwantaz tithiskitta*

lightning.ABL thunder-IPFV-PRS.3SG.MID

“(Telipinu came raging), and he is thundering with lightning bolts.” (KUB 17.10 ii 34 OH/NS)

Etymology:

The etymology of is difficult to explain on the basis of regular sound changes from a PIE root, mainly on account of the *-th-* cluster. Attempts to connect the Hittite verb with Lat. *tonāre* ‘thunder’ and Skt. *stan-* are formally not compelling and should be better discarded (Kloekhorst 2008 *s.v.*).

Argument structure and relationship with voice:

The verb *tith-^a* occurs only in the middle voice in OH/OS, and can be grouped with *media tantum*. From NH times onward, one also finds *hi-*inflecting active forms that are based on a stem *tetha-*, in which the final *-a-* is the outcome of reanalysis of the 3sg middle ending (Kloekhorst 2008 *s.v.*). This fact clearly demonstrates that active inflection for this verb is an innovation.

The verb *tith-^a* belongs together with impersonal weather verbs that lack a referential subject (Neu 1968b: 98-99, see under *neku-^{zi}* and *lukk-^{ta}*). Similarly to *lukk-^{ta}*, the verb *tith-^a* occurs in two constructions (see Neu 1968b: 98 ff.). In the first place, it can be used impersonally and does not require a clitic subject (Hoffner & Melchert 2008: 281), as in (124)

(124) *nu tēitha*

CONN thunder.PRS.3SG.MID

“It thunders.” (KUB 32.135 i 3, OH/MS)

However, in all OH/OS occurrences, the verb is used with an explicit subject denoting a deity, as the occurrence of the nominative subject ^dIM-*as* ‘the Stormgod’ in (122) shows. For a similar use see e.g. Lat. *Iupiter fulgurat* (see further Bauer 2000 and references therein). Moreover, as example (123)

shows, the verb can also be accompanied by an instrumental NP encoding a substance involved in the weather event.²⁰

***tuhs*^{-a(ri)/zi} ‘cut’**

Semantics and aspectual construal:

The verb *tuhs*^{-a(ri)} basically means ‘cut’ and is semantically close to *pars(i)*^{-a} ‘break’ and *kars(iye/a)*^{-zi} ‘cut’. Consider example (125)

- (125) [*takku* TUGSÍG (GÍŠ *hazanit*) *ku*]*iski* ***tuh[s]ari***
 if cloth h.tool.INST INDF.NOM cut.PRS.3SG.MID
 “If anyone cuts cloth with a *hazan*-tool.” (KUB 29.29 ii 4, OH/OS)

As discussed under *kars(iye/a)*^{-zi} events of cuttings can be variously construed, mostly depending on the physical properties of the entities involved. In (125), the occurrence of a Patient undergoing a change of state makes the event bounded, possibly an incremental accomplishment.

Etymology:

The verb *tuhs*^{-a(ri)} still lacks a convincing IE etymology. Kloekhorst (2008 *s.v.*), against Neu (1968a, b), argues that one should keep the verbs *tuhs*^{-a(ri)} ‘cut’ and *tuhhus*^{-zi} synchronically distinct, though an etymological connection between the two remains highly possible (cf. Kloekhorst 2008 *s.v.*).

Argument structure and relationship with voice:

The verb *tuhs*^{-a(ri)} encodes a two-participant event in which an animate Agent affects an inanimate Patient, disrupting its physical integrity. Syntactically, the verb is used transitively, as in example (125), with the Agent encoded as subject and the Patient as direct object. In addition, a Source participant can be encoded in the dative case, as in (126):

- (126) *n=an=si=kan* ***tuhsanta***
 CONN=3SG.ACC=3SG.DAT=PTC cut.PRS.3PL.MID

²⁰ As Neu (1968a: 173 fn. 5) remarks, it is unclear whether example (123) constitutes an instance of a personal construction of *tith*^{-a} with omission of the subject *Telipinus* featured in the preceding clause.

“And they cut her from him.” (KBo 6.3 ii 10, OH/NS)

In OH/OS the verb *tuhs*-^{a(ri)} occurs in the middle voice only and can be classified as deponent *medium tantum* (Grestenberger 2014: 272). There is no synchronic motivation for the middle inflection of this verb in OH. Specifically, there is no evidence that the verb indicated any sort of self-benefactive involvement of the subject of the event (cf. Neu 1968b: 65), similarly to what discussed for *pars(i)*-^a. Starting with MH/MS texts onwards, the verb was partly transferred to active inflection (Kloekhorst 2008 *s.v.*, Melchert forthc.b: *passim*), and active forms show the same syntax and semantics of middle forms. For instance, instead of the middle form *tuhsanta* in (126) in another NS copy of the same text one finds active *tuhsanzi* (KBo 6.5 iii 5, OH/NS).

Evidence for intransitive use of middle forms of *tuhs*-^{a(ri)} is virtually limited to a handful of occurrences (Neu 1968a: 176). Consider example (127), in which the middle form *tuhhustat* is used intransitively with passive meaning ‘be separated’ (cf. Neu 1968a: 176). Note that the verb shows the *-ta(ri)* ending instead of the *-a(ri)* ending of the deponent forms. This is suggestive of the fact that middle forms were partly reinterpreted as passive counterparts of newly created transitive active forms (see *huett(i)*-^{a(ri)} for a similar development). The passive counterpart of finite transitive forms of *tuhs*-^{a(ri)} is most often provided by the periphrastic passive construction based on the participle *tuh(hs)sant-* ‘cut’.

(127) *nu=wa=kan kās KU₆ [m]āhhan aruna[z] tuhhustat*
 CONN=QUOT=PTC DEM.NOM fish as sea.ABL cut.PST.3SG.MID
 “As this fish was separated from the sea.” (KBo 39.8 i 41, OH/MS)

Finally, Neu (1968a: 176) observes that middle forms *tuhhusta* can be used intransitively to indicate a state ‘be ended’. However, as convincingly argued for by Kloekhorst (2008 *s. tuhs*-^{a(ri)}) these are better interpreted as 3rd person preterite forms belonging to the paradigm of the verb *tuhhuszi* ‘end’, and are therefore not relevant to the present discussion.

5.1.2. Verbs with functionally identical active and middle voice

In this section, I discuss verbs that from their earliest attestation show both active and middle forms, and for which one fails to detect a meaningful pattern of voice alternation, with either forms identical in syntax and semantics. Possible reasons for this idiosyncratic behavior are discussed in individual cases.

āk-/akk-ⁱ, akkiske/a-^{ta(ri)/zi} ‘die’

Semantics and aspectual construal:

The verb *āk-ⁱ* denotes the event of dying. The verb is attested in the active and in the middle voice mostly in forms based on the derived *-ske/a-* stem, whereas evidence for voice alternation of the base stem is rather scanty (see below). For this reason, I first discuss the semantics of base active forms, and then proceed to *-ske/a-* derivatives.

As discussed at length by Botne (2003), events of dying are conceptualized differently across languages. Specifically, events of dying can be conceived as made up of three temporal components, the onset, i.e. the time preceding the death, the nucleus, i.e. the transition from life to death, and the coda, i.e. the state of death following the transition. Notably, the languages of the world differ in which of these components are profiled by individual verbal lexemes. Compare for instance English *to die*, which can profile both the onset and the nucleus of the event, with Chidali (Bantu, Niger-Congo) *-fwa*, which can refer to all three components (Botne 2003: 240-244, 266-267; see further Napoli 2006, 2009 for a similar analysis of verbs of dying in Ancient Greek). Concerning Hittite *āk-/akk-ⁱ*, let us begin by considering example (128):

- (128) *kāstit=a=man* *ākten*
 hunger.INST=CONN=IRR die.PST.2PL
 “(Even if you had escaped from Attarsiya,) you would have died from hunger.” (KUB 14.1 obv. 12, MH/MS)

In (128), the verb denotes a punctual change of state, and profiles the nucleus of the event only. The verb possibly refers to the onset phase as well, but we lack evidence to unambiguously support this reading. It is however clear that the verb cannot refer to the resultant state of death, for which the resultative participle *akkanza* ‘dead’ is used instead. In this respect, the Hittite verb shows the same aspectual construal as (*inceptive*) *achievement* as English *die*, which likewise cannot be used to refer to the “postliminary phase of death” for which the adjective *dead* is used (Botne 2003: 243).

The base verb *āk-ⁱ* consistently shows active inflection throughout the history of Hittite. There is one single MS attestation in which the verb apparently shows middle inflection, as shown in (129).

- (129) DUMU^{MES} *gast[i* *peran* *lē* *akka]ndari*
 son(PL) hunger.DAT because NEG die.PRS.3PL.MID
 “The children should not die of hunger.” (HKM 80 l. ed. 3-4, MH/MS)

In this case, the verb has been partly restored from the editors (Alp 1991: 270-273, Hoffner 2009: 238). The restoration is not without problem however, since the verb $\bar{a}k^{-i}$ is attested with middle inflection only in its derived forms in *-ske/a-* (see below), and this would be the only case in which the base stem $\bar{a}k^{-i}$ takes middle endings (see *HW²*, *HED*, Neu 1968a: 1-2). Given that the entire left edge of this tablet is missing, one cannot even be sure of the length of the gap. Based on these observations, it is better to discard this form as belonging to $\bar{a}k^{-i}$, *pace* Alp's restoration.

The bulk of the occurrences of $\bar{a}k^{-i}$ with middle inflection comes from NH/NS texts, in which one finds forms built on the suffixed *-ske/a-* stem. In this phase of the language, the verb mostly occurs in the middle voice, alongside a more limited distribution of active forms. In this case, the role of the suffix is most likely to indicate plurality of participants and sub-events (Dressler 1968: 162-163), so that the predicate is construed as an undirected activity via structural schematization. This construal of the predicate is exemplified in (130) and (131).

- (130) *kuitman=ma IŠTU UD^{KAM}-U[M] [A]BI=YA INA KUR^{URU}Hatti*
 until=CONN from day father=1SG.POSS to land H.
a[kiskettat]
 die-IMPF-PST.3SG.MID

“As long as in the land of Hatti people died from the days of my father (we never performed the ritual of the Mala River.)” (KUB 14.8 obv. 11-12, NH/NS)

- (131) *nu=kan INA ŠÀ^{KUR}Hatti apēzz=a UD^{KAM}-az a[kk]iskettari*
 CONN=PTC to inside H. DEM.ABL=also day.ABL die-IMPF-PRS.3SG.MID
 “From that day as well, people died in the inner part of the land of Hatti.” (KUB 14.8 obv. 30, NH/NS)

In the first example, unfolding over time of the event denoted by *a[kiskettat]* is confirmed both by the subordinating conjunction *kuitman*, which indicates length in time, and by the adpositional phrase *IŠTU UD.KAM-U[M]* ‘from the day’, which profiles the starting point of the event and entails development through time. Similarly, in the second example, the ablative *apēzz=a UD.KAM-az* ‘from that day’ profiles the starting point of an ongoing state of affairs.

Etymology:

For this verb, Kloekhorst (2008) sets up a root $*h_{1/3}ek-$, with a possible cognate Skt. *áka-* ‘pain’ (similarly, *LIV²* reconstructs the root as $*h_{1}ek-$, but the Hittite stem as outcome of a reduplicated

perfect **h₁e-h₁ok-*). As discussed in the *HED*, various alternative etymologies have been proposed, all unconvincing for semantic or formal reasons.

Argument structure and relationship with voice:

The verb *āk⁻ⁱ* belongs to the *activa tantum*, once the problematic form [*akka*]*ndari* in HKM 80 is left out. The active verb *āk⁻ⁱ* indicates a one-participant event involving a totally affected Patient. Syntactically, the verb *āk⁻ⁱ* is intransitive and consistently displays unaccusative syntax, as evidenced by its regular occurrence with clitic subjects (Garrett 1996: 94), as shown in example (132). When the cause of death is overtly expressed, it is encoded as an oblique in the instrumental case (Hoffner & Melchert 2008: 268-269), as exemplified by the occurrence of *kāstit* ‘by hunger’ in (128).

- (132) *n=as* *aki*
 CONN=3SG.NOM die.PRS.3SG
 “(If anyone strikes a male or a female slave,) and he dies.” (KBo 6.1 i 1, OH/OS)

According to most authors, active forms of the verb can occasionally function as a lexical passive of the *activum tantum* verb *kuen^{-zi}* ‘kill’ (cf. Neu 1968b: 110, Hoffner & Melchert 2008: 305, Luraghi 2010a: 144).²¹ To be sure, there are no occurrences with an animate external agent, and most inanimate causes could also be interpreted as spontaneous causes, as in example (128). Consider also the inanimate instrument ‘weapon’ in example (133). In principle, the instrumental phrase would point to the presence of an external volitional agent, favoring a passive rather than spontaneous interpretation, but the verb occurs in a passage in which a spontaneous reading cannot be excluded. Compare it with the second occurrence of *ekir* in the same passage, in which the verb cannot but be interpreted as spontaneous.

- (133) *nu* *kuiēs* [(*IŠTU* ^{GIŠ}TUKUL *ekir*)] *kuiēs* UD-*azz=a*
 CONN REL.NOM.PL from weapon die.PST.3PL REL.NOM.PL day.ABL=CONJ
 [(*ekir*)]
 die.PRS.3PL

²¹ The isolated form *kunati* in KUB 34.45 rev. 11 is taken by some authors as a middle form of *kuen^{-zi}* ‘kill’ with passive meaning (Neu 1968a: 101-1022, Melchert forthc.b: 12). Notably, this would be the only occurrence of *kuen^{-zi}* in the middle voice. Moreover, the dating of the text is doubtful. According to Melchert it is a “assured NH composition”, but the manuscript is dated to MH times in the *HPM* and it is not included in Goedegebuure’s (2014) list of original texts.

“And the ones who died by weapon, and the ones who died on their (death-)day.” (KUB 1.8 iv 45-46, NH/NS)

One finds however occurrences in which a specific discourse context strongly entails the occurrence of an external agent, so that the verb can be understood as indicating the passive event ‘be killed’, as in (134).

- (134) *lukkati=ma* *INA É* ^d*LAMA* *MÁŠ.GAL aki*
in.the.mornig=PTC in house protective.god buck die.PRS.3SG
“The following morning, in the house of the protective god a buck is killed.” (KBo 51.130+ iii 6, NS)

If one excludes the problematic MS occurrence shown in (129), evidence from middle inflection comes from *-ske/a-* forms only. Voice selection of *-ske/a-* derived forms is difficult to explain. Synchronically, *-ske/a-* forms are attested both in the active and in the middle voice. As comparison between examples (131) and (135), active and middle forms are entirely equivalent in syntax and semantics, and the middle voice arguably adds no noticeable semantic contribution.

- (135) *mān=kan* *ŠÀ* *KUR^{TI}* *nasma* *URU^{LIM}* *akkiskizzi*
when=PTC inside land or city die-IMPF-PRS.3SG
“‘And when inside the land or the city people die.’ (KUB 9.31 iv 44, MH/NS)

Syntactically, middle forms of *akkiske/a-* occur both with and without clitic subjects. When the verb is used impersonally without a referential subject, clitic subjects do not occur, consistently with the behavior of other impersonal intransitive predicates (Hoffner & Melchert 2008: 281). A case in point is example in (131). However, the verb can also be used with a referential subject. In case a referential subject is not overtly expressed via a full noun phrase, as in (136), the verb requires a clitic subject pronoun, as in (137).

- (136) *kinuna=mu* *É-er* *KUR^{TUM}* *ÉRIN^{MEŠ}* *ANŠE.KUR.RA^{HIA}*
now=1SG.DAT house.NOM land troop(PL) chariotry(PL)
a[k]kiskettari *kuit*
die-IMPF-PRS.3SG.MID because

“(I should indeed reestablish the gods), since now (the members of) my household, land, infantry and chariotry keep dying.” (KUB 14.13+ iv 3-5, NH/NS)

(137) *n=at* ***akki[skantat]***

CONN=3PL.NOM die-IMPF-PST.3PL.MID

“(The few makers of offering bread and libation pourers of the gods who still remained,) they died off.” (KUB 14.8 obv. 6-7)

Chronologically, both active and middle *-ske/a-* forms of the verb mostly surface in NS texts (see the Appendix for occurrences of middle forms in original texts and Kammenhuber 1973 for active forms and middle forms in copies). Notably, occurrences of active forms from older texts all come from later copies (e.g. *a-ki-is-ki-e-it* KBo 3.53+ obv. 2 OH/NS, *a-ki-is-ki-iz-zi* KUB 9.31 iv 44 MH/NS). In this case, one wonders whether middle inflection was original and active inflection constitutes a marginal innovative feature, similarly to what happened to other intransitive middle *-ske/a-* verbs (cf. Melchert 2017b: 480).

In the case of derived *-ske/a-* forms of $\bar{a}k\text{-}^i$, the suffix and the middle voice are conceived as contributing with two different meaning components. On the one hand, the suffix adds iterativity/plurality of participants (cf. already Dressler 1968: 162), on the other hand the middle voice indicates impersonality (cf. Neu 1968b: 102, Luraghi 2012: 20). This view is however by no means compelling. As a matter of fact, impersonality of forms such as (131) can be easily derived from the *-ske/a-* suffix: since the suffix refers to a plurality of undetermined participants, the verb can easily be reinterpreted as lacking a referential subject. That the middle voice is not straightforwardly connected to impersonality is also shown by occurrences with referential subjects, as in (136). Therefore, one is tempted to attribute the impersonal syntax and semantics to the suffix alone, in which case middle voice should be explained in the more general framework of intransitive *-ske/a-media tantum* built on intransitive active verbs (cf. Melchert 2017b).

***aruwae*^{-zi} ‘bow down, prostrate oneself’**

Semantics and aspectual construal:

The verb *aruwae*^{-zi} is often translated as ‘bow’, thus being roughly synonymous with *hai(n)k*^{-tta(ri)} ‘bow’ (see *HW*² for a detailed semantic interpretation). The verb shows a default aspectual construal of cyclic achievement (cf. Frotscher 2013: 207): it profiles a non-translational motion event as

occurring on a single point in time, with reversal of the Agent to the initial state. This reading fits well the only middle occurrence of this verb, reported in (138):

- (138) *n=asta ammug=a idālu ārwahhat*
 CONN=PTC 1SG.NOM=CONN badly bow.PST.1SG.MID
 “I have badly presented the case (lit. I badly prostrated myself).” (HKM 73 rev. 29, MH/MS, translation after Marizza 2009:121)

More extensive evidence for the semantics and the default aspectual construal of the verb comes from active occurrences, as in (139) and (140):

- (139) [*sarā*] *tienzi ser=pat aruwānzi*
 up step.PRS.3PL over=FOC bow.PRS.3PL
 “(The king and queen) step up and bow down.” (KBo 17.74 iii 19, OH/MS)
- (140) 3-ŠU **UŠKEN**
 3.times bow(PRS.3SG)
 “He prostrates himself three times.” (KUB 9.24 6, NS)

In (139), the temporal structure of the text suggests that the verb *aruwānzi* refers to a dynamic telic event which occurs once during the performance of a ritual. A bounded construal is further suggested by (140), where the verb, written with the Akkadian form *UŠKEN*, is accompanied by the temporal adverb 3-ŠU ‘three times’. Moreover, the resultative participle *aruwant-* ‘prostrated, bowed’ points toward a default telic construal of the predicate.

Etymology:

Puhvel (*HED s.v.*) connects the verb *aruwae-^{zi}* with Lat. *ruō* and Gr. *órousa*, setting up a PIE form **ṛw-āye-*. Kloekhorst (2008 *s.v.*) does not accept this reconstruction, and rather interprets the verb as a denominal formation from a noun **aruwa-*, possibly connected with Gr. *arwá* ‘prayer’ (already Oettinger 1979: 354, 365), from PIE **h₂orwo-ie/o-*.

Argument structure and relationship with voice:

The verb *aruwae-^{zi}* is consistently inflected in the active voice since OS. Active voice is likely original in light of the *hatrae*-class inflection of this verb (cf. Kloekhorst 2008: 133). It indicates a one-participant event involving a human Agent. The verb is intransitive, and apparently unaccusative, as

it never takes clitic subject pronouns (Garrett 1996: 98). Remarkably, this is at best at odds with the fact that the synonymous verb *hai(n)k-tta(ri)* shows unaccusative syntax (cf. Hoffner & Melchert 2008: 282, see under *hai(n)k-tta(ri)*). The entity to which the event of bowing is performed can be occasionally encoded in the dative (cf. Starke 1977: 69).

The only middle occurrence of this verb is given in (138), and is semantically and syntactically entirely equivalent to active forms of the verb. Note that the interpretation of this token remains somehow dubious, since the form is unattested elsewhere (cf. Alp 1991: 342). However, the reading *a-ar-wa-ah-ha-at* on the tablet seems certain: even though the first sign *a* is partly damaged, it is clear that there is no space for reconstructing sings other than *a-*. Since it is an isolated occurrence, it could be safer to take it as scribal error. Perhaps such sporadic middle inflection of the otherwise active verb *aruwae-zi* might be due to the influence of middle *hai(n)k-tta(ri)* ‘bow’.

***āss-zi* ‘remain’**

Semantics and aspectual construal:

The verb *āss-zi* means ‘remain’ (see *HW*² for a thorough semantic treatment), and occurs both in the active and in the middle voice. The verb displays a complex aspectual construal, as it refers to a transitory state ensuing from a change-of-state event, which is however consistently left unprofiled (*contra* Frotscher 2013: 208, who classifies it as achievement verb). In this respect, the verb is partly similar to *kī-ttari* ‘lie’. Consider middle *āstat* in (141), and active *āszī* in (142). In either case, the verb refers to the state of an entity remaining in a given place after other entities have left/have been removed. In this case, the subject participant clearly does not undergo any change of state.

(141) *takkisrawa=kan kue NA₄^{HL.A}=ya EGIR-pa āstat*
t.(N).NOM.PL=PTC REL.NOM.PL.N stone(pl)=CONJ back remain.PST.3SG.MID
 “The *t.*-pieces and the precious stones which remained, (are now lying in the container for *adpuli*-garments).” (KUB 22.70 obv. 18, NH/NS)

(142) *pidi=ma=ssi=san kuis āszī*
place.LOC=CONN=3SG.DAT=PTC REL.NOM remain.PRS.3SG
 “Whoever remains in his place (of a deportee who leaves your province).” (KUB 13.2 iii 39, MH/MS)

Interestingly, the participle of this verb *āssant-* ‘remaining, left over’, is compatible both with a telic and with an atelic reading of the base predicate.

Argument structure:

The verb *āss-^{zi}* is consistently attested in the active voice since OH, with only two middle occurrences in NS texts (Neu 1968a: 19, see Appendix).

The verb indicates a one-participant event involving a non-Agent participant. Syntactically, both active and middle forms of the verb are intransitive, with the single participant encoded as a nominative subject. Notably, the verb is unaccusative and requires clitic subjects, as shown in (143).

- (143) *nu=war=at=kan* *āssi*
 CONN=QUOT=3SG.NOM.N=PTC remain.PRS.3SG
 “And it remains.” (KUB 13.35 iv 46, MH/NS)

There is no noticeable difference between active and middle forms, either in syntax or semantics, as comparison between (142) and (141) suggests. Note that the interpretation of active forms of the verb as passive in meaning ‘be left’ is clearly unwarranted, as the verb does not display voice opposition. It is rather more accurate to describe the verb in either voice as indicating a spontaneous stative event.

Summing up, either one dismisses the few middle forms attested as scribal errors, or one could argue that middle morphology was occasionally analogically extended to *āss-^{zi}* based on the semantic similarity with more frequent stative positional verbs such as *ar-^{ta(ri)}* ‘stand’ and *ki-^{ta(ri)}* ‘lie’.

****hassuezziye/a-^{ta(ri)/zi}* ‘be(come) king’**

Semantics and aspectual construal:

The verb **hassuezziye/a-^{ta(ri)}*, always spelled with the Sumerogram LUGAL (Neu 1968a: 109) means ‘become king’. The event denoted by this verb clearly indicates a change of state, as exemplified in (144), where the sentence refers to Tudhaliya taking the throne after the death of his predecessor. In this case, the verb indicates a punctual transition without internal temporal unfolding, so that the event can be considered an irreversible directed achievement.

- (144) [U]MMA ^mTudhaliya LUGAL.GAL LUGAL-*eziahhat*=wa

thus *T.* great.king become.king.PST.1SG.MID=QUOT
 “Thus speaks Tudhaliya, Great King: I have become king” (KUB 23.112 i 1, NH/NS)

The vast majority of the occurrences of this verb are used in contexts similar to (144), in which the verb cannot but refer to a dynamic telic event. Contrary to Neu’s claim (1968a: 109), there is no compelling evidence for a stative construal of the verb, even though this would not be unexpected given the tendency of denominal *-iye/a-* verb to show alternative change-of-state/stative construals.

Etymology:

The verb **hassuezziye/a-^{ta(ri)}* is a denominal *-iye/a-* formation from the stem **hassuezzi-* ‘royal status’, in turn derived from **hassu-* ‘king’ mostly written with the Sumerogram LUGAL. See Kloekhorst (2008: 327-328) for the etymology of the latter. Alternatively, the verb has been interpreted as a compound form of **hassuezzi-* plus middle *ye/a-^{ta(ri)}* ‘go’ with the meaning ‘go to royal status > to become king’ (cf. *HW²*). This interpretation is however problematic in light of the fact that *ye/a-^{ta(ri)}* ‘march’ never indicates a directed telic motion event, and can be therefore discarded.

Argument structure and relationship with voice:

The event indicated by the verb involves a single human non-Agent participant. The verb is syntactically intransitive, but since 3rd person forms of the verb always occur with an overt NP subject there is no evidence for the use of clitic subjects with this verb.

The verb occurs both in the active and in the middle voice, without any discernible functional distinction.²² Compare in this respect example (144) with the passage reported under (145).

(145) *nu* *ABI* ^dUTU-ŠI ^mHattusilis LUGAL-*izziat*
 CONN father my.majesty *H.NOM* become.king.PST.3SG
 “(But when Muwattalli, the uncle of My Majesty, became god), the father of My Majesty, Hattussili, became king.” (KUB 23.1+ i 41-42, NH/NS)

²² Notably, Neu (1969a: 109) treats the form LUGAL-*izziat* (e.g. KUB 23.1+ i 29, NH/NS) as a 3rd person preterite middle. However, as rightly pointed out by Puhvel (*HED* III: 241) and Kloekhorst (2008 *s. hassu-*), this form should be better interpreted as an active preterite, as opposed to the preterite middle LUGAL-*izziattat* (KUB 33.115 iii 6, NS).

Since active and middle forms are both attested in NH texts only, there is no diachronic textual evidence to assess the original inflection of the verb. Notably, as Puhvel observes (*HED* II: 388), the same pattern of voice fluctuation occurs with the semantically similar verb *ishizziya*-^{zi} ‘be lordly, prevail’. It should be observed however that evidence for active inflection of **hassuezziye/a*-^{ta(ri)} is restricted to the preterite form LUGAL-*izziat*, which occurs three times only in a single NH/NS text (KUB 23.1+): it is therefore possible that we are dealing with an idiosyncratic scribal practice (note that the same text attests to the preterite middle form *ú-e-ri-at-ta-at* KUB 23.1+ iii 7).

Interestingly, this is one of the few cases of an *-iye/a-* fientive denominal verb for which a ‘periphrastic’ formation involving *kis*-^{a(ri)} ‘become’ plus a nominal complement is available, as exemplified in (58). The construction LUGAL-*us kisari* ‘become king’ is mostly attested in OH texts (once OH/OS KBo 3.22 rev. 22, once OH/NS KBo 3.1+ ii 46), with only a single occurrence in NH (KUB 23.103 rev. 27), whereas forms of **hassuezziye/a*-^{ta(ri)} are virtually attested in NS texts only. It is thus tempting to assume that **hassuezziye/a*-^{ta(ri)} took over the function of LUGAL-*us kis-*, but the quantitative data about the distribution of LUGAL-*us kis*-^{a(ri)} are too scarce to draw any compelling conclusion.

Interaction with the particle =za:

The verb **hassuezziye/a*-^{ta(ri)} occurs once with =*za* in KUB 23.103 rev. 7 (NH/NS). Note that in this case the form LUGAL-*e-[iz-zi-ya-at]* is partly restored. According to Mora & Giorgieri (2004: 160), the reading is confirmed by the reading of the sign *-e-* before the gap. However, since only the beginning of the sign is readable, one could read as well *-us*.²³ If this is the case, then we are probably dealing with the LUGAL-*us kis-* construction, which would perfectly explain the occurrence of =*za*.

***haliye/a*-^{zi} ‘kneel down’**

Semantics and aspectual construal:

The verb *haliye/a*-^{zi} indicates the act of kneeling down, and occurs both in the active and in the middle voice. The event encoded by this verb is likely construed as a reversible achievement, i.e. as a change-of-state event lacking temporal unfolding. Even though we lack evidence from temporal adverbs, telicity of this predicate is confirmed by its occurrence with locative NPs indicating the final Location

²³ In obv. 7 only two horizontal edges are readable, which are identical to the spelling of LUGAL-*us* in the same text in obv. 9.

of the movement, as in (146), and by the resultative participle *haliyant-* ‘knelt down’ (Frotscher 2013: 207).

- (146) *n=at=mu* *GÌR^{MEŠ}-as* *kattan* *haliyandat*
 CONN=3PL.NOM=1SG.DAT foot.DAT.PL down kneel.PST.3PL.MID
 “And they knelt down at my feet.” (KUB 14.16 iii 46-47, NH/NS)

Moreover, a stative reading of this verb is ruled out by its occurrence in the serial construction with *we^{zi}*, which is virtually incompatible with stative predicates, as shown in (147), and by the occurrence of the verb in contexts in which it indicates an individual step within the performance of a sequence of actions, as shown in (148).

- (147) *n=as=mu* *uit* *GÌR^{MEŠ}-as* *kattan* *haliyattat*
 CONN=3SG.NOM=1SG.DAT come.PST.3SG foot.DAT.PL down kneel.PST.3PL.MID
 “And she suddenly knelt down to my feet.” (KUB 16.15 iv 28-29, NH/LNS)

- (148) *n=as* *ANA DINGIR^{LIM}* *UŠKIEN* *ta* *hāliya* *ta*
 CONN=3SG.NOM to god bow(PRS.3SG) CONN kneel.PRS.3SG.MID CONN
namma UŠKIEN
 again bow(PRS.3SG)
 “He bows down to the gods, kneels down, and bows down again.” (KUB 10.11 ii 15ff., LNS)

As comparison between (146) and (149) shows, active and middle forms of the verb share the same aspectual construal.

- (149) *nu=mu* *MUNUS^{MEŠ}* *kuit* *GÌR^{MEŠ}-as* *GAM-an* *hālier*
 CONN=1SG.DAT woman(PL) because foot.DAT.PL down kneel.PST.3PL
 “And because the women knelt down at my feet.” (KBo 3.4 iii 16, OH/NS)

The verb occurs only once in a derived *-ske/a-* form that inflects in the middle voice, as shown in (150).

- (150) *kuitman=ma apūs* *INA^{URU}Zithara^dUTU-ŠI=ma* *kā[- xxx]* *INA*
 until=CONN DEM.NOM.PL in Z. my.majesty=CONN for

UD.3.KAM *hāliskattari*

3.days kneel-IMPf-PRs.3SG.MID

“But while they are in Zithara, His Majesty has already been kneeling down in obeisance for three days.” (KUB 5.6 ii 51, NH/NS)

In (150), the verb *hāliskattari* can only be interpreted as indicating iteration of the event denoted by the base verb through a span of time, as evidenced both by the occurrence of the adverbial expression *INA* UD.3.KAM ‘for three days’ indicating length in time, and by the preceding *kuitman* clause, which sets the boundary within which the event encoded by the main clause takes place (cf. Inglese 2016: 86). As a result, the verb is construed as an undirected activity, via structural schematization of the base achievement construal.

Etymology:

This verb possibly originated as **halai-*, and was later transferred to the *tiyanzi*-class to avoid overlap with the homophonous verb *halai-* ‘set in motion’ (Kloekhorst 2008 *s.v.*). Etymologically, the verb cannot reflect anything but **h₂l-oi-/*h₂l-i-*, for which there are no known cognates (see Puhvel *HED* H:28 for possible connections, which are all either semantically or formally unconvincing).

Argument structure and relationship with voice:

The verb *haliye/a^{-zi}* shows both active and middle forms, which are identical in syntax and semantics, as already observed by Neu (1968a: 35, 1968b: 79). The verb indicates a motion event involving a human Agent that volitionally undergoes a change of Location. Syntactically, the verb is intransitive and consistently takes clitic subjects (Garrett 1996: 97), as shown by example (146). When overtly expressed, the Location is mostly encoded by a dative NP meaning ‘feet’, as in (146).

When the sentence is introduced by *ta*, the verb shows an inconsistent behavior with respect to clitic subjects, with some occurrences lacking the clitic pronoun, as in (148), and other showing it, as (151).

(151) *t=as hāliya*

CONN=3SG.NOM kneel.PRS.3SG.MID

“And he kneels down.” (KUB 20.46 ii 11-12, NS)

The reason why the verb shows such an inconsistent behavior only when occurring with *ta*, whereas it systematically shows a clitic subject in sentences introduced by *nu*, can be explained in

two ways. On the one hand, one could assume that being *ta* notoriously less prone to take object clitics as compared to *nu* in OH/OS texts (Luraghi & Inglese 2017), NS scribes erroneously overextended the lack of clitics with *ta* to subject clitics. On the other hand, since occurrences of *ta* likely point to an OH original composition of the text, the alternation of clitic subject placement with this verb might be taken as evidence of the fact that in OH the verb had not yet fully acquired unaccusative syntax, in line with other motion verbs (cf. Luraghi 2010a).

Establishing the original voice of this verb is not easy, as active and middle forms are functionally entirely equivalent. Notably, both forms alternate even within the same text (*hālier* KBo 4.4 iv 19 vs. *haliyandat* iii 46, NH/NS). Since most of the occurrences of this verb come from NS texts, it is hard to establish the precise chronology of voice selection of this verb. In this respect, it should be noted that even OH/NS copies show active and middle forms in apparently free variation. Nevertheless, middle occurrences tend to be more frequent in number, and this might be cautiously taken as evidence of middle voice being original for this verb, also because a transfer to active voice of an original *medium tantum* is more likely than the other way around.

hanna⁻ⁱ ‘sue, judge, contest’

Semantics and aspectual construal:

The verb *hanna*⁻ⁱ means ‘judge, contest’, with different meanings also partly connected to the different constructions in which the verb occurs (see below). The only MS occurrence of this verb (KBo 16.25 ii 23) is too fragmentary to provide evidence for its default aspectual construal. Based on NS evidence, the verb can be tentatively assigned an achievement construal, as the verb indicates a telic event lacking internal temporal unfolding, as in (152).

(152) *hannari*=*ya*=*si*=*kan*

lē kuiski

contest.PRS.3SG.MID=CONJ=3SG.DAT=PTC NEG INDF.NOM

“(In the future, nobody shall take it from Ulmi-tesub’s offspring,) and nobody shall challenge it.” (KBo 4.10 ii 23, NH/NS)

Argument structure and relationship with voice:

The verb *hanna*⁻ⁱ occurs both in the active and in the middle voice, and is used in a number of different constructions (cf. Neu 1968a: 39-40, see further *HW*² for phraseology). The event frame

involves an Agent, i.e. the participant instigating the judiciary case, and an animate/inanimate Theme, i.e. the entity contested or the person under trial.

In the first place, the verb can be used in a transitive construction. In this case, the Agent of the verb is encoded as the subject, whereas the direct object is the internal cognate object *hannessa(r)* ‘judgment’ (cf. Hoffner & Melchert 2008: 248). In this case, the Theme participant indicating the person under trial is encoded as a genitive modifier of the noun *hannessar*. This construction is exemplified in (153).

- (153) *idālawass=a huwappas antuhsa[s h]annessa zik=pat*
 bad.DAT.PL=CONJ evil.DAT.PL man.DAT.PL judgment(N).ACC 2SG.NOM=FOC
^dUTU-*us hannattari*
 Sungod.NOM judge.PRS.2SG.MID
 “On bad and evil men you Sungod alone pass judgement.” (KUB 31.135 obv. 13, MS)

When the Theme is expressed by a clitic pronoun, it can either be encoded as a possessive pronoun to the noun *hannessar*, as in (154)a, or more commonly with a dative clitic pronoun, as in (154)b, owing to the general decay of possessive clitics in post-OH and the rise of external possessor dative constructions (cf. Hoffner & Melchert 2008: 138, Luraghi 2018). Moreover, as example (154)b shows, the internal object can also be replaced by a clitic object.

- (154) a. *hannessa=set hannat ŪL*
 judgment(N).ACC=3SG.POSS.ACC.N judge.PST.3SG.MID NEG
 “He did not judge his case.” (KUB 12.63 i 33, OH/MS)
 b. *n=at=si hannī*
 CONN=3SG.ACC.N=3SG.DAT judge.PRS.3SG
 “(Who has a legal case), judge his case.” (KUB 13.2 iii 32, MH/NS)

In addition, the verb can be used either with the internal object only, leaving the Theme participant unprofiled, as in (155), or without the internal object and a dative clitic encoding the Theme, as in (152), the latter being a fairly frequent legal formula (cf. *HED*).

- (155) *nu auriyas EN-as DINA SIG₅-in hannau*
 CONN border.GEN lord.NOM judgment well judge.IMP.3SG
 “The border-lord shall judge the case well.” (KUB 13.2 iii 22-23, MH/NS)

be derived from the middle, which consistently display the non-ablating stem *hanna-*. Still, this would mean that middle voice developed later on, which is best at odd with the tendency to replace middle inflection with active one for *media tantum* transitive verbs (see Chap. 3).

A final note is in order on the putative passive interpretation of some middle forms of this verb. According to Neu (1968a: 39), the example under (154)a, as well as two other examples with the same structure, should be interpreted as passive “Its case was not judged”. However, formally the sentence can be equally understood as a plain transitive one with omission of the subject, the form *hannessa=set* being the accusative neuter object, as remarked by Grestenberger (2014: 266-267). Moreover, this putative passive reading is only found in the formula *hannessar hannat*, in which the verb consistently shows the passive *-ttari* ending rather than *-ari*, possibly representing a calque from Akkadian (see discussion in Grestenberger 2014: 267).

***hatt*^{-a(ri)}, *hazziye/a-*^{zi} ‘hit, pierce, inscribe’**

Semantics and aspectual construal:

The verb *hatt*^{-a(ri)}, and its correspondent active form *hazziye/a-*^{zi}, both mean ‘hit, pierce, inscribe’ (see *HW*² for a detailed treatment of the occurrences). To be more precise, forms of *hatt*^{-a(ri)} and *hazziye/a-*^{zi} both occur with the meaning ‘hit, pierce’, whereas the specialized meanings ‘hit (a musical instrument)’ and ‘inscribe (a tablet)’ are only associate with forms of the stem *hazziye/a-*. Middle forms of the verb occur in OH/OS in fragmentary contexts, which seriously limit their interpretation (already Neu 1968a: 52). Consider examples (157) and (158)

(157) [xxx]-*san hattari*

hit.PRS.3SG.MID

“[...] he hits (?)” (KBo 25.29 ii 4, OH/OS)

(158) [xxx] UGULA LÚ.MEŠ MUHALDIM Û LÚ.MEŠ MUHALDIM *hattanta*

chief cook(PL) and cook(PL) hit.PRS.3PL.MID

“[...] the chief of the cooks and the cooks pierce (?)” (KBo 25.29 ii 6, OH/OS)

Active forms of the verb suggest that the event denoted by *hazziye/a-*^{zi} has the default aspectual construal of a cyclic achievement, as possibly in example (159). This construal is particularly clear in the active occurrences in which the verb means ‘hit a musical instrument’, as in (160).

- (159) *n=an nepisas* ^dIŠKUR-*as* *hazziēt[tu]*
 CONN=3SG.ACC sky.GEN Stormgod.NOM hit.IMP.3SG
 “And the Stormgod shall hit him.” (KBo 3.22 rev. 51, OH/OS)
- (160) [GIŠ] ^dINANNA^{HI.A} *hazzianzi*
 instrument.*I*.(PL) hit.PRS.3PL
 “They play the *Inanna*-instruments.” (KBo 20.14 i 19, OH/OS)

Etymology:

The verb goes back to a root **h₂ét-* (Kloekhorst 2008, *LIV*²), which shows no outer-Anatolian verbal cognate. In OS, the active forms of the verb are based on the enlarged stem *hazziye/a-* (< **hatt-ye/a-*), which is a **-ye/o-* derivative based on the stem of the middle forms. The paradigm underwent restructuration in post-OS, when the middle stem *hatt-^{a(ri)}* was enlarged to *hatta-^{a(ri)}* (1st sg. *hattahhari*) and subsequently served as base for a new active *hi*-stem (3rd sg. *hattai*) (cf. Kloekhorst 2008, and slightly differently *LIV*², where the new middle stem *hatta-* is taken as derived from the new active form *hattai*, based on Oettinger 1979: 124-5).

Argument structure and relationship with voice:

The argument structure of *hatt-^{a(ri)}* cannot be soundly established on the basis of the fragmentary OH/OS occurrences. Post-OH occurrences such as (161) show that *hatt-^{a(ri)}* denotes a two-participants event involving an Agent and a Patient, encoded in a transitive construction as subject and direct object respectively.

- (161) *n=an handanda*
 CONN=3SG.ACC hit.PRS.3PL.MID
 “And they pierce it (i.e. a sheep).” (KUB 29.9+ iv 12, NS)

Scholars agree in assigning the same syntax and semantics to active *hazziye/a-^{zi}* and middle *hatt-^{a(ri)}* (cf. Neu 1968b: 55, Kloekhorst 2008 *s.v.*), with a possible specialization of the former with the meanings ‘hit (a musical instrument)’ and ‘inscribe (a tablet)’ out of the original core meaning ‘hit, pierce’. Indeed, comparison between (159) and (161) shows that active and middle forms likewise occur in a transitive construction without any noticeable functional distinction. Based on post-OS evidence, Neu (1968a: 52) stresses that the middle verb *hatt-^{a(ri)}* never has a passive meaning.

It is however questionable whether one should treat *hatt-^{a(ri)}* and *hazziye/a-^{zi}* as synchronically instantiating voice alternation. In fact, active forms are consistently based on a derived **-ye/o-* stem

issued from middle forms, so that clearly the middle voice cannot be derived from active forms of the verb (see the etymology). Note that active forms such as *hattai* and *hattanzi* clearly represent a later innovation (cf. Melchert 2017b: 479), as they are based on a stem *hatta-* (cf. Kloekhorst 2008 s.v.), possibly derived from the reanalysis of the 3rd singular middle form *hatta* as a base stem (cf. *titha* vs. *tithai* ‘thunders’ for a similar pattern). It is therefore possible that, as Grestenberger (2014: 268) points out, the stem *hatt-^{a(ri)}*, which is synchronically deponent, started out as a transitive *medium tantum* and that based on in syntactic and semantic transitivity, a more transparent derived active verb was created.

huwai-ⁱ ‘run’

Semantics and aspectual construal:

The verb *huwai-ⁱ* indicates a manner-of-motion event ‘run, flee’ (see *HW²*), and behaves similarly to *ye/a-^{ta(ri)}* ‘go, march’ in many respects. The verb occurs mostly in the active voice, with only isolated occurrences in the middle voice. Given this unbalanced distribution, I first discuss the semantics of the verb based on active forms.

Concerning its aspectual construal, the verb can be easily shown to be construed as an undirected activity (Luraghi 2012: 14-15). Evidence for this interpretation comes from the absence of locative expressions indicating the Goal/Direction (Starke 1977: 41, Brosch 2014: 33).²⁴ In particular, the verb never takes directive or dative/locative complements in OH, but only accusative ones, which otherwise do not occur with directed motion verbs (Luraghi 2010a: 141). This is particularly clear in contexts in which *huwai-ⁱ* is contrasted with the directed-motion verb *pai-^{zi}* ‘go’, as in (162):

(162) Û LÚ^{MEŠ} URU^{URU} *Zihnuwa* ANA KUR URU^{URU} *Taruqqa* *panzi* nu 8 URU^{DIDLI}
 CONJ man(PL) Z. to land T. go.PRS.3PL CONN 8 city(PL)

hūwayanzi

run.PRS.3PL

“The people of Zihnuwa go into the land of Taruqqa, and they march through 8 cities.” (KUB 59.30 iii 14, NS)

²⁴ To be more precise, some locative expressions can be used to profile the spatial orientation of the motion, never the endpoint, or sometimes the source of the movement (see *HW²* for occurrences and the discussion under *ye/a-^{ta(ri)}*).

In (162), the verb *panzi* ‘they go’ in the first sentence profiles the attainment of the Goal of movement, so that the army is described as reaching the land of Taruqqa. By contrast, in the second sentence the verb *huwai*⁻ⁱ indicates an undirected motion event, of which the 8 cities profile the complex Path. Similar considerations hold for contexts in which *huwai*⁻ⁱ occurs with *we*^{-zi} ‘come’, as in (163).

(163) [*n=as* ***h]ūwai*** *n=as* *INA KUR*^{URU} *Hatti* *uizzi*
 CONN=3SG.NOM run.PRS.3SG CONN=3SG.NOM to land *H.* come.PRS.3SG
 “He flees, and comes into the land of Hatti.” (KBo 5.4 rev. 40, NH/NS)

In (163), the verb [*h]ūwai* in the first sentence simply refers to the manner-of-motion event of ‘running’ away from something, i.e. being a runaway (on the meaning of the substantivized participle *huyant-* ‘runaway, fugitive’ see *HW*², Dardano 2014a: 59 and Rieken 2017b), whereas in the second sentence the verb *uizzi* ‘he comes’ is used with the expression ‘the land of Hatti’ to profile the attained Direction of the movement.

Further pieces of evidence for the atelicity of *huwai*⁻ⁱ come from its incompatibility with the *-ske/a-* suffix and from the meaning of the participle *huyant-* ‘running’, which patterns with the one of stative verbs.²⁵

The same aspectual construal is at play with middle forms of the verb, as shown in (164):

(164) *warras* *udd[anī]* *sumes* *mahhan parā huyadduma* *LÚ*^{MEŠ}
 help.GEN word.DAT 2PL.NOM as forth run.PRS.2PL.MID man(PL)
^{URU}*Pahhuwa=ya parā QAT[AMMA huyantaru]*²⁶
P.=also forth likewise run.IMP.3PL.MID
 “Just as you march forth at one call for help, so the people of Pahhuwa shall likewise march”. (KUB 23.72 rev. 19-20, MH/MS)

In (164) the verb also refers to a non-directed motion event, even if in this case the preverb *parā* occurs to profile the source of the movement ‘march forth’.

²⁵ As in the case of *ye/a*^{-tta(ri)}, occurrences of ‘iterative’ *-ske/a-* forms of *huwai*⁻ⁱ are extremely limited and all convey ingressive meaning ‘begin to march, set off’ (see *HED* for occurrences).

²⁶ The integration follows *HW*² and Reichmuth (2011: 109-144). The verb in the gap is instead restored as *i-ya-at-ten* by Kosyan (2006: 77), but parallelism between the two sentences, highlighted by the occurrence of the correlative pair *mahhan...QATAMMA* ‘how...likewise’ and by the repetition of the preverb *parā*, favors the former interpretation.

Etymology:

Kloekhorst (2008 s.v.) argues that the earliest OS occurrences of this verb point towards a *dāi/tiyanzi*-class inflection, which would license a reconstruction of this verb as **h₂uh₁-ói-ei*, cognate with Skt. *vāti* ‘blow’. This reconstruction is not entirely agreed upon: in the *LIV*², the verb is reconstructed as a perfect form **h₂e-h₂uói-* from a root **h₂wei-* ‘run’ unattested elsewhere. Puhvel (*HED* s.v.), connects the verb to **ueih₂-*, reflected in Skt. *vay-* ‘seek’, but as Kloekhorst (2008 s.v.) discusses, this reconstruction is formally unconvincing.

Note further that within the history of Hittite the verb shows some morphological variation, as pointed out by Kloekhorst (2008 s.v.): OS forms point to a *dāi/tiyanzi*-class inflection, but forms belonging to the *hatrae-* class, based on a newly created *huya*-stem, are attested from MS onwards. Moreover, whereas most of the attestations show *hi*-inflection, some later occurrences take *mi*-endings.

Argument structure and relationship with voice:

The verb *huwai-ⁱ* indicates a one-participant motion event, involving an Agent. A Path is possibly expressed through oblique NPs in the accusative. Syntactically, the verb *huwai-ⁱ* is intransitive and displays unaccusative syntax (Garrett 1996: 97), as the occurrence of a clitic subject in (165) shows.

(165) *n=as huwaizz[i]*
CONN=3SG.NOM run.PRS.3SG
“He runs (away).” (KBo 10.12 + iii 41, NH/NS)

However, as Luraghi (2010a: 141-142) observes, the active verb fails to take subject clitics in many occurrences in OH (data from Goedegebuure 1999). This shows that the verb fully acquired unaccusative syntax at a later stage only.

Concerning its relationship with voice, the verb *huwai-ⁱ* is consistently inflected in the active *hi*-inflection since OS texts (Luraghi 2012: 15 mentions it as an *activum tantum*). Middle forms of this verb are extremely rare and most of them come from MS/NS texts (Neu 1968a: 61 counts seven middle forms, of which only two occur in original MH/MS texts; see Appendix).²⁷ As already

²⁷ The form *hu-ya-an-ta* (Bo 4767 OH/OS) can either be a 3SG.MID (thus Neu 1968a: 61, *HW*² s.v.) or a participle NOM.ACC.PL.N (thus StBoT 26: 74). Its interpretation is hampered by the severely broken context.

remarked by Neu (1968b: 81), active and middle forms of this verbs are identical in syntax and semantics, as comparison between (162) and (164) shows. Given the distribution of middle forms, one can safely conclude that middle marking was not original for this verb. Occasional middle forms might be due to analogy with *ye/a*-^{ta(ri)}. If so, the reason why *ye/a*-^{ta(ri)} influences *huwai*-ⁱ and not the other way around might be tentatively explained as a result of the higher token frequency of the former. It is also interesting to observe that middle forms are based only on the stem *huye/a*-, which is clearly a later formation (see Kloekhorst 2008 s.v. for discussion), thus backing up the hypothesis that middle inflection of this verb is secondary.

ishuwai-ⁱ ‘throw, scatter, pour’

Semantics and aspectual construal:

The verb *ishuwai*-ⁱ ‘scatter, pour, thrown’ refers to a complex spatial state of affairs. Since *pour*-verbs, including Hittite *ishuwai*-ⁱ, are usually used in reference to liquid or otherwise quantized objects with a mass reading, they are likely to construe the event as unfolding over time, i.e. as an accomplishment (Frotscher 2013: 213). The context often favors an accomplishment reading of *ishuwai*-ⁱ, as is the case of the middle form *ishuwāitta* in (166) and the active form *ishūwanzi* in (167). Both forms profile telic events that are construed as unfolding over time, given the quantized nature of the objects =*an* that refers to cattle and =*as* that refers to grains.

(166) *n=an=san* ŠA^{mE}[N-*t*]arawa maniyahhiya **ishuwāitta**
 CONN=3SG.ACC=PTC of E. district.DAT pour.PRS.2SG.MID

“(Regarding the fact that you took the cattle of Kasipura), you will distribute (lit. scatter) them in the district of EN-tarawa.” (HKM 5 obv. 3-5, MH/MS, transl. after Alp 1991: 126)

(167) *n=as=kan* DINGIR^{MEŠ}-as KISLAH^{MEŠ}-as anda **ishūwanzi**
 CONN=3PL.ACC=PTC god.GEN.PL granary.DAT.PL in pour.PRS.3PL

“(They will take away all your grains) and pour them into the granaries of the gods.” (KUB 13.4 iv 23-24, NS)

Note however that when meaning ‘throw’ the verb can also profile an instantaneous change-of-state event, i.e. an achievement. This construal is particularly evident in example (168). As

comparison between (167) and (168) suggests, alternative construal with this verb is largely dependent on the semantic features of the Patient participant.

- (168) *n=at=kan* *ÍD-i* *anda ishūwāi*
 CONN=3SG.ACC.N=PTC river.DAT in pour.PRS.3SG
 “He throws it (i.e. the cloak) into the river.” (KUB 27.29 i 14, MH/NS)

Etymology:

Establishing the etymology of this verb has proven a challenging task, partly owing to the difficulty of assessing the original paradigm of the verb based on the attested forms (see Kloekhorst 2008 *s.v.* for discussion). According to Kloekhorst (2008), who refers to Jasanoff (1978), the most likely interpretation of this verb connects it to Gr. *húo*, TochAB *su-/swās-* ‘rain’ from PIE **sHeu-* ‘pour’ with metathesis to **seuh-* possibly in PIE times already (see further *LIV*² with different details). An inner-Hittite cognate might be the verb *suhha-ⁱ* ‘pour’, though the details of the relationship are unclear. See further *HED* and *HEG* for different scenarios.

Argument structure and relationship with the middle voice:

The active verb *ishuwai-ⁱ* encodes a spatial event involving at least three entities, an Agent, a Patient, and a Location. Notably, the relationship between these three participants can be variously construed, so that *pour*-verbs usually attest to more than one possible syntactic construction, often paired with different aspectual construal (see Levin 1993: 115-116 on English and Melchert 1981 on the syntax of *pour*-verbs in Hittite). The same considerations apply to Hittite *ishuwai-ⁱ*. The verb is mostly used transitively, with the Agent encoded as subject, and the Patient as direct object, as in (167). When the Location is overtly expressed, it is encoded as an adverbial, as the dative *ÍD-i* ‘the river’ in (168) shows, and never as the direct object. Notably, even though we lack finite forms of the verb with passive meaning, the passive participle can only refer to the Theme participant, as in *halkis ishuwan* ‘poured barley’, and never to the Location. This syntactic behavior is consistent with the behavior observed for *pour*-verbs in English that cannot enter locative alternations of the type *He poured water into the bowl* vs. **He poured the bowl with water* (Levin 1993: 115).

The verb consistently inflects in the active voice throughout the history of the language, with only a handful of middle occurrences. Two of them occur in too much fragmentary contexts to determine

their function.²⁸ However, based on the only readable MS occurrence given here, it seems that the middle is identical to the active in its transitive syntax and semantics. It must be stressed that middle interpretation of this form, argued for by Alp (1991: 304, 367) is not entirely compelling. As an alternative, one could simply interpret the verb as the homophonous active preterite 2nd person form (cf. Kloekhorst 2008 *s.v.*, Marizza 2009: 99 fn. 1, Hoffner 2009: 103 fn. 29), but note that in general middle forms identical to active transitives are attested for other verbs.

The passive of this verb is more commonly expressed by the periphrastic construction based on the participle *ishuwan-* ‘poured, thrown’.

ispānt-/ispant-ⁱ ‘libate’

Semantics and aspectual construal:

The verb *ispānt-ⁱ*, also spelled *sipant-*, means ‘libate’ (see *HW²* and *CHD* for attestations a thorough treatment of the occurrences; see also Melchert 1981, 2016). Since the verb consistently occurs in the active voice, with only a single occurrence in the middle voice, I first illustrate its semantics based on the former.

Regarding its aspectual construal, it is unclear whether the event denoted by the verb is construed as an achievement or as an accomplishment, partly due to lack of evidence from temporal adverbs. What is clear is that the verb must refer to a bounded telic event. Evidence for telicity comes from the occurrence of iterative time adverbials, such as *namma* ‘again’ in (169), and 3-*ŠU* ‘three times’ in (170).

(169) *nu* GEŠTIN *namma ANA DINGIR^{MEŠ} hūmandas peran katta*
 CONN wine again to god(PL) all.DAT.PL in.front down

sipanti

libate.PRS.3SG

“He again libates wine down in front for all the gods.” (KUB 45.50 ii 15-16, NS)

²⁸ Neu (1968a: 75) gives two partly restored forms in KBo 8.96 (OH/MS), i.e. [*is-hu*]-*wa-it-ta-a[t]* obv. 1 and [*i*]-*hu-wa-it-t[a-at]* obv. 2. Of these, only former is clearly a middle form, but in principle there is no reason to reconstruct a form of the verb *ishuwai-* there (cf. F. Fuscagni (ed.), *hethiter.net/*: CTH 457.2 (Expl. A, 05.08.2014)). Concerning the second form, while it clearly belongs to the stem *ishuwai-*, it could also be easily restored simply as [*i*]-*hu-wa-it-t[a]*, i.e. as a 2nd preterite form (even though lack of plene spelling is somehow surprising). If this is correct, then there is no sound evidence for middle forms of *ishuwai-* after all.

- (170) *hassī* 3-ŠU *sipanti*
 earth.DAT 3.times libate.PRS.3SG
 “He libates three times to the earth.” (KUB 20.46 iv 16, NS)

Etymology:

The verb *ispānt-ⁱ* is likely a cognate of Lat. *spondeō* and Gr. *spéndō*, based on a PIE root present **spóndei* (cf. *LIV*²; for an alternative explanation see Forssmann 1994, Rasmussen 2010, and the discussion in Melchert 2016). Since OS, the stem shows both *is-pa-* and *si-pa-* spellings, without any noticeable semantic difference, a variation which has proven hard to explain on phonetic and morphological grounds (cf. Kloekhorst 2008 *s.v.*, see further Melchert 2016 and Yakubovich 2016 for two different approaches with further references).

Argument structure and relationship with voice:

The active verb *ispānt-ⁱ* denotes a complex event involving different participants: an Agent performing the libation, a Patient denoting the entity which is libated, a Recipient (usually a god) for which the libation is performed, and an Instrument with which the event is carried out.

Participants to this event may be variously encoded, and the verb displays several constructions, as thoroughly discussed by Melchert (1981). First, the verb can be used as a three-place predicate, with the Agent and the Patient encoded as subject and direct object respectively, and the Recipient in the dative case, as in (169). Alternatively, the Patient can be left out, as in example (170). Of the other possible constructions (see Melchert 1981 and *CHD* for details), it is worth observing that both the Patient and the Recipient can be encoded as direct objects when the verb is used transitively as a two-place predicate:

- (171) a. GEŠTIN-*an* *ispantahhi*
 wine.ACC libate.PRS.1SG
 “I libate wine.” (KBo 17.1 iii 14, OH/OS)
- b. *n=an* *sippanter*
 CONN=3SG.ACC libate.PST.3PL
 “And they offered to him.” (KUB 5.6 ii 69, NH/NS)

Evidence for passivization to determine the argumenthood of the two roles is extremely scanty, as the participle of this verb is more often attested in fragmentary contexts. It seems however that the Patient and not the Recipient is most often encoded as subject of the passive participle.

Note further that when the active verb occurs with the particle =*za*, it acquires an indirect reflexive reading. In this case, the particle does not alter the valency of the predicate but expresses that the Agent performs the libation in his own interest. Compare (169) and (172):

- (172) *mān=za ANA* ^d*Hebat* *kuis* ^{GIŠ}*gesheta* *sipanti*
 if=REFL to H. INDF.NOM throne.ACC.PL libate.PRS.3SG
 “If someone libates for himself to Hebat to her throne.” (KBo 21.33 iv 35, MH/MS)

The verb *ispānt-ⁱ* consistently occurs in the active voice throughout the history of the language. A single middle occurrence of this verb comes from a MH/MS text. The passage, quoted in (173), is of difficult interpretation, mostly because of the doubtful reading of the word *tāwana*.

- (173) *n=asta kāsa anduhuses tāwana sipandandāt*
 CONN=PTC here man.NOM.PL ? libate.PRS.3SPL.MID
 “The men have been properly offered/consecrated.” (KBo 12.62 rev. 13, MH/MS)

On the one hand, if one interprets *ta-a-wa-na* as an adverb ‘right, properly’, the verb shows intransitive syntax, with *anduhuses* ‘men’ as the nominative subject. In this case, the middle form *sipandandāt* is interpreted by most scholars as having a passive function, e.g. Neu (1968a: 156) ‘wurde geopfert’ (see *HEG* s.v. and Marizza 2009: 128 for similar translations; see Hoffner 2009: 97 for a different interpretation), and the combination with *tāwana* possibly constitutes some sort of idiomatic expression (Marizza 2009: 128):

A different interpretation has been proposed by Neu (1985: 144-145) himself, followed by Marizza (2009: 129). Neu suggests reading *ta-a-wa-na* ‘right, properly’ as *ta-a-wa-al* ‘a kind of beer’. Following this interpretation, *tāwal* would be the direct object of the verb, so that the sentence in (173) should be better translated as ‘and the men offered *tawal*-beer’. If this reading is correct, then the middle form shows transitive syntax, with active and middle voice being fully equivalent in syntax and semantics, as comparison between (169) and (173) shows.

istar(k)-^{zi}, *istar(ak)kiye/a-^{zi}* ‘be(come) ill’

Semantics and aspectual construal:

The verb *istar(k)-^{zi}*, which also surfaces with a stem *istar(ak)kiye/a-^{zi}*, is an experiencer predicate of illness ‘be(come) ill’ (cf. Neu 1968b: 101). In most cases, it is difficult to tell whether the verb profiles a stative situation ‘be ill’ or a change-of-state event ‘get ill’, with either construals being often compatible with most contexts. The participle of the verb is unattested.

A change-of-state meaning is possibly at play in (174) that features an active form of the base stem *istark-*.

(174) *istarakzi=war=an*

become.ill.PRS.3SG=QUOT=3SG.ACC

“(If a god is angry at a man), he becomes ill.” (KUB 5.6 i 45, NS)

In (174), the illness is conceived as cast upon a man by an angry deity, so that what is being profiled is the change-of-state in the experiencer participant rather than the resulting state only.

Forms based on the stem *istar(ak)kiye/a-^{zi}* also show a change-of-state construal. The context favors a dynamic interpretation of the middle form [*i*]*starakkiyattat* in example (175), in which the experiencer is described as undergoing a change of state as a consequence of being struck by a lightning bolt.

(175) *nu=war=an*

[*idālus*

GIG-*as*

i]*starakkiyattat*

CONN=QUOT=3SG.ACC evil.NOM illness.NOM become.ill.PST.3SG.MID

“(The lightning bolt struck Uhha-ziti), so that he became gravely ill.” (KUB 14.15 ii 13, NH/LNS)

A stative construal of the event encoded by *istar(k)-^{zi}* is possibly at play in the passage quoted in (176), as suggested by Puhvel (*HED*) and Luraghi (2010b) translations. However, even in this occurrence the verb can also be easily interpreted as dynamic (cf. Dardano 2006: 225).

(176) [*m*]*ān*

antuhsan

SAG.DU=*ŠU*

istara[*kzi*]

n=an

nassu

if man.ACC head=3SG.POSS become.ill.PRS.3SG CONN=3SG.ACC or

apenissan ista[*r*]*akzi*

thus become.ILL.PRS.3SG

“If a man has head pains, or if he has some similar illness.” (KUB 8.36 ii 12-13, NS)

Overall, forms of the verb *istar(k)^{-zi}* can be either profile a stative or a dynamic event. This behavior fits well the tendency of other change-of-state verbs in *-iye/a-* to show alternating aspectual construal.

Etymology:

The verb *istar(k)^{-zi}* comes from the PIE root **sterk-*, connected with Lat. *stercus* (but the etymology is not universally accepted, see Kloekhorst 2008 *s.v.* for further discussion). The only verbal cognate is possibly Lith. *teršiù* ‘befoul’.

Argument structure and relationship with voice:

The argument structure of the verb *istar(k)^{-zi}* is of remarkable interest. The verb refers to an experiencer event involving a human Experiencer and a Stimulus encoding the illness. Syntactically, the verb occurs in a variety of constructions (see Dardano 2018 for an overview). In the first place, the verb may occur with a non-canonical subject (cf. Luraghi 2010b, Dardano 2017: 105-106, 2018). When this is the case, the verb inflects in the 3rd person singular, whereas the Experience is encoded in the accusative case, as in (174). Notably, this construction is attested for forms of both stems of the verb, as comparison between (177) and (178) shows.

- (177) *mān=mu* *istarkzi* *kuwapi*
 when=1SG.ACC become.ill.PRS.3SG wherever
 “Whenever illness befalls me (sick as I was I looked on it as the goddess’ providence).”
 (KUB 1.1 i 44, NH/NS, transl. van den Hout 1997: 200)
- (178) *nasm[a i]starkiyazzi* *kuinki*
 or become.ill.PRS.3SG INDF.ACC
 “(If infantry or chariotry march through your land, and someone falls asleep) or
 someone falls ill.” (KBo 5.8 rev. 38, NH/NS)

In NH/NS texts, the verb occasionally occurs in a transitive personal construction. In these cases, the Experiencer is still encoded as an accusative, but the verb also takes a nominative subject ‘illness’, as shown in (179). As comparison between (175) and (179) shows, such personal constructions occur with both stems of the verb, in the active as well as in the middle voice.

- (179) *n=an* *idalus* *GIG-as* *istarakta*
 CONN=3SG.ACC evil.NOM illness.NOM become.ill.PST.3SG

“A bad illness afflicted him.” (KUB 14.15 ii 16, NH/LNS)

An intransitive construction with a nominative subject encoding the Experiencer is only sporadically attested (cf. Dardano 2018), as reported in (180):

- (180) [k]inuna kāsā ^fKassuliyawias tuēl GÉME^{TUM} *istarkiat*
 now here K.NOM 2SG.GEN slave become.ill.PST.3SG
 “Now Kassuliyawia, your slave, has become ill.” (KBo 4.6 obv. 24, NS)

In (180), the name *Kassuliyawias* in the nominative is clearly the subject (and the experiencer) of the intransitive verb *istarkiat*. Two explanations are in principle available for the unusual syntax of this isolated occurrence. In the first place, one can assume that canonical subject marking, i.e. the use of a nominative subject, was sporadically extended to the verb *istar(ak)kiye/a^{-zi}*, which is consistent with the widespread tendency for non-canonical verbs to be regularized to canonical marking in the course of time (see e.g. Luraghi 2010b: 257, Viti 2015a: 162-173). Indeed, as Dardano (2018: 57) points out, it is plausible that the construction with a non-canonical subject is older with this verb, and that both the transitive and the intransitive canonical constructions constitute later developments. Alternatively, since the noun phrase ^f*Kassuliyawias tuēl GÉME^{TUM}* occurs in the two previous sentences in the same text, one can also explain the isolated use of the nominative in (180) as a scribal mistake of repetition.

Concerning voice alternation, one finds that form based on the stem *istark-* are consistently active. By contrast, the stem *istar(ak)kiye/a^{-zi}* inflects both in the active and in the middle voice in apparently free variation. Active and middle forms of *istar(ak)kiye/a^{-zi}* share the same syntax and semantics, as shown by comparison between (175) and (178). Notably active and middle forms alternate even within the same texts. Compare *istarkiyattat* in (175) and *istarakta* in (179), both from KUB 14.15 and showing identical meaning and argument structure constructions.

A closer look at the distribution of the two stems show that the *activum tantum* stem *istar(k)-* is attested since MH/MS, whereas forms of *istar(ak)kiye/a^{-zi}* all come from NS texts. Therefore, one can tentatively explain the middle inflection of *istar(ak)kiye/a^{-zi}* as a secondary development, perhaps under the influence of the semantically similar verb *irmaliye/a^{-ta(ri)}*, or under the influence of middle forms of *istarni(n)k^{-zi}*. See further the discussion under *istarni(n)k^{-zi}*.

idalawēss^{-zi} ‘become bad, evil’

Semantics and aspectual construal:

The verb *idalawēss-^{zi}* ‘become evil’ is a derived fientive *ēss*-verb based on the adjective *idalu-* ‘bad, evil’ and consistently profiles a change of state. As an example, consider the occurrence of the base form *idalawēsta* in (181):

- (181) *nu=ssi=kan* *ZI-za* *anda idalawēsta*
CONN=3SG.DAT=PTC soul.NOM in become.evil.PST.3SG
“His spirits fell.” (KUB 36.25 iv 2, NS)

The verb occurs only once in the middle voice in a derived *-ske/a-* form, as shown in (182). In this case, the *-ske/a-* suffix possibly add an iterative reading to the verb, as the text reports the repeated negative response of an oracular inquiry that was performed four times by the Old Woman (see Hoffner 2006: 265-266).

- (182) *ANA* SAG.DU *DUMU* MUNUS.SANGA=*wa* *ūrkiēs*
to person son priestess=QUOT trace.NOM
idālawesketta
become.evil-IPFV-PRS.3SG.MID
“(The Old Woman spoke as follows): the oracular trace (repeatedly) turned (lit. turns) out bad for the person of the son of the priestess.” (KuT 49 4, MH/MS)

Argument structure and relationship with voice:

The verb *idalawēss-^{zi}* indicates a spontaneous change-of-state event that involves a Patient participant encoded as subject of the intransitive verb. As the occurrence of the clitic subject =*e* in (183) shows, the verb can be grouped with unaccusative change-of-state predicates (Garrett 1996: 94). The verb is also sporadically employed without clitic subject pronouns, but only when used with no referential subject in the meaning it turns bad’ in oracular texts (Hoffner & Melchert 2008: 281, fn. 15).

- (183) *man=e=za* *idalawessanzi*
if=3PL.NOM=REFL become.evil.PRS.3PL
“If they have a falling out (lit. become evil at each other).” (KBo 6.2 iii 8-11, OH/NS)

Middle inflection of this verb is attested only once in a derived *-ske/a-* form. As comparison between (182) and (183) shows, one fails to detect a meaningful pattern of voice alternation for this

verb, as the middle *-ske/a-* form is identical in syntax and semantics to base active forms. The verb can therefore be grouped together with intransitive active verbs building middle *-ske/a-* forms. Notably, the middle form *idālawesketta* comes from a MH/MS composition, but in later times the verb was possibly transferred to active inflection, as evidenced by the occurrence of the form *HUL-es-ki-iz-zi* in KBo 1.30 (NS).

***kallaress-^{zi}* ‘become inauspicious’**

Semantics and aspectual construal:

The verb *kallaress-^{zi}* is a derived fientive *-ess-* verb based on the adjective *kallar-* ‘inauspicious’ and means ‘become inauspicious’. Being a fientive *-ess-* verb, it always profiles a change of state. Its use is virtually restricted to oracular texts, in which it designates the event of an oracular sign turning out to be unfavorable, as show (184), in which the verb can be understood as profiling an achievement.

- (184) *apēdani* UN-*si* ***kallaresszi***
 DEM.DAT man.DAT become.inauspicious.PRS.3SG
 “(If the hair of a sheep turns out as KAM-sign), for that man, it turns out inauspicious.”
 (KUB 4.4 iv 29, no date available in *HPM*)

The verb is attested with middle inflection only once in a derived *-ske/a-* form. In this case, the suffix *-ske/a-* indicates iteration of the event denoted by the base verb – this is clear from the general context, in which a man called Mashuiluwa repeats an oracular investigation multiple times – so that the whole event is profiled as an undirected activity via structural schematization.

- (185) *zilas=ma* ***kallareshkattari***
 oracle.NOM=PTC become.inauspicious-IPFV-PRS.3SG.MID
 “The prognostication is repeatedly unfavorable.” (KUB 5.6 iii 18, NH/NS)

Argument structure and relationship with voice:

The verb *kallaress-^{zi}* denotes a spontaneous change-of-state event involving a Patient participant only, which is encoded as subject of the intransitive verb. The lack of a clitic subject in (184) is consistent with the impersonal interpretation of the verb as lacking a referential subject, similarly to the impersonal use of *idālaweszi* ‘it turns bad’ in oracular texts (Hoffner & Melchert 2008: 281, fn. 15).

The only middle form of the verb is attested for a *-ske/a-* derivative.²⁹ Otherwise, as comparison between (184) and (185) shows, active and middle forms of the verb share the same syntax and semantics. As such, this verb can be grouped together with intransitive active verbs building middle *-ske/a-* derivatives. A form spelled *gal-la-re-es-ki-i[r]* (KUB 5.22 35, NH/LNS) shows that the *-ske/a-* forms were later occasionally transferred to active inflection (cf. *āk-ⁱ* ‘die’), if one accepts the editor’s restoration of the passage at hand (cf. Sakuma 2009: 47).

***kardimiye/a-^{tt(ri)}zi* ‘be(come) angry’**

Semantics and aspectual construal:

The verb *kardimiye/a-^{tt(ri)}* encodes an experiencer situation ‘be(come) angry’. Specifically, according to Vansevèren (2014: 999-1010), within the semantic field of ‘rage’ the verb possibly refers to human justified and rational anger caused by a concrete reason, as opposed to divine anger, denoted by *sāuwar* and *karpis*, and violent anger encoded by *lelaniye/a-^{tt(ri)}*.³⁰ Concerning its aspectual construal, the verb is consistently treated as indicating a state ‘be angry’ (cf. *HED*, Kloekhorst 2008 s.v.). However, as the only MS occurrence available shows, the verb can in principle be understood as referring to a change-of-state event as well. Consider example (186):

- (186) *nu=si=kan* ^{LÚ}Ī.DU₈ ***ka[rdimi]yaitta***
 CONN=3SG.DAT=PTC gatekeeper become.angry.PRS.3SG.MID
 “(If he barges in), the gatekeeper will become furious with him.” (IBoT 1.36 i 48-49, MH/MS)

In (186), the context suggests that experiencer undergoes a change of emotional state, and disfavors a stative reading of the verb. That the verb can also be construed as telic is further supported by occurrences of the derived *-ske/a-* forms, as in example (187).

²⁹ It is unclear whether middle forms NU.SIG_{5-ri} ‘be(come) unfavorable’ coming from a NH/NS oracular text (KUB 5.1 iii 8, iv 80) stand for *kal-la-re-es-kat-ta-ri*.

³⁰ When it comes to the relationship between *kardimiye/a-^{tt(ri)}* and *lelaniye/a-^{tt(ri)}*, Vansevèren’s (2014: 999-1010) argument that they are semantically different proves rather unconvincing, as the two verbs are often used in similar contexts without any discernible difference in meaning. This is clearly shown by replacement of forms of *lelaniye/a-^{tt(ri)}* in OS texts with *kardimiye/a-^{tt(ri)}* in later NS copies (e.g. *le-e-[la]-ni-at-ta* KBo 6.2 ii 14 [OS] replaced by *kar-tim-mi-ya-an-ta-ri* in KBo 6.3 ii 32 [NS], Hoffner 1997: 44-45).

(187) *n=as=kan* *kartimmiskattari*
 CONN=3SG.NOM=PTC become.angry-IPFV-PRS.3SG.MID
 “And he keeps getting angry.” (KUB 4.47 i 6, NS, transl. HED)

In (187), the suffix *-ske/a-* triggers a habitual interpretation of the base incremental accomplishment telic event, resulting in an undirected activity via structural schematization. If one assumes that the basic meaning of *kardimiye/a-^{ta(ri)}* is stative, then occurrences with *-ske/a-* are hard to explain, the suffix being notoriously incompatible with stative verbs. The participle *kartimmiyant-* provides conflicting evidence, since it is attested only once (KUB 43.23 obv. 3), and it can be interpreted as either resultative ‘angered’ or stative ‘being angry’.

Overall, the possible alternative aspectual construal of *kardimiye/a-^{ta(ri)}* as indicating either a state or a change-of-state is not surprising, and it patterns with the behavior of other *-iye/a-* verbs.

Etymology:

As Kloekhorst (2008 *s.v.*) points out, the verb *kardimiye/a-^{ta(ri)}* is generally maintained to be related to *ker/kardi-* ‘heart’, also based on the semantic parallelism found in e.g. OCS *srъditi se* ‘be angry’ and *srъdъce* ‘heart’ (see further Vanséveren 2014). The morphological relation is still in debate. According to Pedersen (1938: 40), the verb derives from a participial formation *kartimma-*, which is however unlikely since this is a Luwian participle formation otherwise not attested in Hittite (Kloekhorst 2008 *s.v.*). Alternatively, the verb can be seen as either a denominal formation from a base *kardima-* (Oettinger 1979: 255), or as a more complex denominal formation involving two different stages of verbal derivation **kerd-i-mn-ye/o-* (Rieken 1999: 110-111). Since all these proposals are problematic in certain respects, Kloekhorst (2008 *s.v.*), along the lines of Laroche’s proposal (1975: 342), suggests treating the verb as originating from a compound formation *kard-* ‘heart’ + *imiye/a-* ‘mix’, originally ‘be mixed regarding his hearth’ > ‘be angry’ (an alternative compound interpretation *kardi-* + *miya-* ‘grow’ has been given by Laroche 1975: 342, see Vanséveren 2014: 997-998 for discussion).

Argument structure and relationship with voice:

The verb *kardimiye/a-^{ta(ri)}* is an experience predicate involving an Experiencer and a Stimulus. The verb is intransitive and displays unaccusative syntax, as the clitic subject pronoun *=as* in (187) shows (Garret 1996: 95). When the stimulus participant is overtly expressed, it is encoded in the dative, as in the case of the dative pronoun *=si* ‘with him’ in (186).

Finite forms of *kardimiye/a*-^{tt(a)(ri)} with a change-of-state construal are equivalent to a construction involving the noun *kartimmiyaz* ‘anger’ and the verb *kis*-^{a(ri)}. In this case, the Stimulus is construed as Subject, whereas the Experiencer surfaces in the dative, as in (188).

- (188) *nu=wa=mu kartimmiyaz [kisa]t*
 CONN=QUOT=1SG.DAT anger.NOM become.PST.3SG.MID
 “And I became angry (lit. anger happened to me.)” (KUB 34.24 + iv 5-6, NH/LNS?)

As Kloekhorst (2008 *s.v.*) discusses, the verb *kardimiye/a*-^{tt(a)(ri)} occurs both in the active and in the middle voice, without any noticeable difference in meaning between the two, as comparison between (186) and (189) shows (already Neu 1968b: 81).

- (189) [xxx] UTU-ŠI *kartimmiyaizzi*
 his.majesty become.angry.PRS.3SG
 “[...] his Majesty becomes/is angry.” (KBo 18.66 obv. 15, MH/MS)

Notably, active and middle forms coexist alongside since MS times, when the verb starts to be used in place of OH *lelaniye/a*-^{tt(a)(ri)} ‘be(come) angry’, so that the chronology is not of great help in deciding the original inflection of this verb. However, since middle inflection is quantitatively prominent, it is tempting to assume that the verb was originally a *medium tantum*, in line with other *media tantum* experiencer predicates in *-iye/a*.

The verb shows several derivative formations, including causative *kartimmi(ya)nu*-^{zi} and *kartimmiyahh*-ⁱ ‘make angry’ as well as fientive *kartimmiēss*-^{zi} ‘become angry’.

***karūss(iye/a)*-^{zi} ‘be(come) silent’**

Semantics and aspectual construal:

The verb *karūss(iye/a)*-^{zi} means ‘be(come) silent’. According to Neu (1968b: 94), who in turn refers to Bechtel (1936: 100), the verb *karūss(iye/a)*-^{zi} profiles a state (also Frotscher 2013: 202), as in (190). Here atelicity of the event is confirmed by the context, as the verb refers to the obligation by Kupanta-Kurunta to inform the king if any evil deed is planned against him and not hide the matter from him.

- (190) *namma=za=kan EGIR-anda memiyani s[er l]ē karussiyari*

again=REFL=PTC afterwards matter.DAT upon NEG be.silent.PRS.3SG.MID

“And afterwards don’t let him keep quiet about the matter.” (KUB 61.4+ iii 50, NH/NS)

Since the verb depicts a situation over which the subject can exert control, as also evidenced by the occurrence of the verb in the negative imperative construction with *lē* in (190), one can describe *karūss(iye/a)^{-zi}* as a non-prototypical state that belongs to the class of *inactive action* (Croft 2012: 98-101).

Notably, the same meaning can also be conveyed by stative construction *karussiyan hark-* in the imperative (cf. Inglese & Luraghi forthc.) as in (191). This is the only occurrence of the participle, whose semantics is compatible with both a telic and an atelic base meaning of the verb, as it indicates a state, either ensuing from a change of state or not.

(191) *nu=wa* *karussiyan* *harak*
CONN=QUOT be.silent.PTCP.N/A.N have.IMP.2SG
“Keep (being) silent!” (KUB 14.4 iv 11, NH/NS)

By contrast, in some cases the event denoted by *karūss(iye/a)^{-zi}* can also be construed as indicating a telic change of state ‘fall silent’, as in (192), where the transition of the subject from barking to silence is profiled.

(192) *n=as* *karussiazi*
CONN=3SG.NOM be.silent.PRS.3SG
“(A dog barks, arrives there), and it falls silent.” (KUB 13.8 obv. 7, MH/NS)

Summing up, there is evidence that *karūss(iye/a)^{-zi}* displays a stative/change-of-state alternative construal, similarly to other middle inflecting *-iye/a-* verbs.

Etymology:

This verb is mostly attested as *karūssiye/a-*, with only one occurrence of the stem *karus-* in the imperative, thus reminiscent of the distribution of present vs. non-present stems discussed for *karpiye/a^{-zi}* (cf. Melchert 1997). As remarked by Kloekhorst (2008 *s.v.*), Eichner’s (1975b) connection of this verb with Goth. *kriustan* ‘gnash’ is problematic. Formally, the verb is likely to go back to a **gréus-t/*grus-ént* ablauting stem alongside a **grus-ie/o-* derived present (Kloekhorst 2008).

Argument structure and relationship with voice:

The verb *karūss(iye/a)-^{zi}* indicates a one-participant experiencer event. The verb consistently occurs in an intransitive construction, and shows unaccusative syntax (Garrett 1996: 95), as the occurrence of the clitic subject =*as* in (192) shows.

As already pointed out by Neu (1968b: 79), the verb *karūss(iye/a)-^{zi}* occurs both in the active and in the middle voice without any noticeable semantic or syntactic distinction. The distribution of middle forms is however suspicious. Not only are active forms in general more frequent (cf. *HED* K: 116-117), but the few middle forms are mostly confined to a single text (the *Treaty with Kupanta-Kurunta*, CTH 68), plus a single occurrence in a fragmentary context in KBo 26.73 3 (NS). Overall, there is no compelling evidence for determining the original inflection of the verb. Middle inflection could well be original, given the frequency of middle *-iye/a-* verbs, but the asymmetry in the distribution could also point to a later extension of the verb to middle inflection.

Interaction with the particle =za:

The verb *karūss(iye/a)-^{zi}* displays a peculiar relationship with the particle =*za* (and =*kan*), see Neu (1968a: 85 fn. 3; Boley 1993: 104-105). When the verb occurs without particles, it refers to the physical event of being silent, both in the active and in the middle, as comparison between (192) and (193) shows:

- (193) [(n=)]*as* *karūssiatattat=pat*
CONN=3SG.NOM be.silent.PST.3SG.MID=FOC
“And he was/fell silent.” (KUB 26.79+ 7, NH/LNS)³¹

Conversely, when the verb occurs with the particle =*za* it means ‘keep silent about something’, as in (190). In this construction with =*za*, active and middle forms freely alternate even within the same text, as variation in the *Treaty with Kupanta-Kurunta* shows (compare *karussiyari* in KBo 19.66+ 60 replaced by [*karuss*]*iyasi* in manuscript A, KBo 4.3 ii 37, cf. Melchert forthc.b: 16-17). In the construction with =*za*, the particle might highlight a higher degree of control by the subject, and can be compared to e.g. It. *stare zitto* ‘be silent’ vs. *starsene zitto* ‘keep silent’.

³¹ The restoration of the left-sentence boundary is secured by comparison with KBo 26.109, see E. Rieken et al. (ed.), *hethiter.net*: CTH 348.I.20.

mai-/mi-ⁱ ‘grow’

Semantics and aspectual construal:

The verb *mai-ⁱ* means either ‘grow, prosper’ or ‘be born’ (see CHD *s.v.* for attestations), and shows different aspectual construals. It occurs both in the active and in the middle voice, without any discernible distinction between the two. In the first place, the event denoted by *mai-ⁱ* can be by default construed as a directed activity, where incremental change over time is profiled without reference to the ending point. Semantically, the verb can be classified as a *degree verb* (Bertinetto & Civardi 2015). This is the case of example (194) and (195).

(194) *paiddu mīyaru*

go.IMP.3SG grow.IMP.3SG.MID

“Let (the city of Zalpa) prosper in the future.” (KBO 3.38 obv. 6, OH/NS)

(195) *nu=mu halkis māu*

CONN=1SG.DAT grain.NOM grow.IMP.3SG

“Let my grain grow.” (KUB 17.28 iii 2.3, MH/NS)

Moreover, with inanimate beings as subject the verb can also mean ‘be plentiful, be abundant’, as in (196). In this case, since there is no incremental growing process entailed, the event is clearly profiled as stative.

(196) [xxx] ^{NINDA}*harsas=smas* ^{URU}*Kākumahima mā[u]*

h.bread.NOM=3PL.DAT K. grow.IMP.3SG

“Let the bread be plentiful for them in K.” (KBo 25.112 ii 8-9, OH/OS)

In some occurrences, the verb *mai-ⁱ* can also profile the attained state of the growing process and therefore should be classified as incremental accomplishment. This is the case when the verb means ‘ripen, be mature, bear fruits’ (cf. CHD *mai-*, 2a), as in (197), in which the verb takes the *-ske/a-* suffix and active inflection:

(197) *mān* ^{GIŠ}*KIRI₆.GEŠTIN* *kuis* *UL* *miēskizzi*

when vineyard INDF.NOM NEG grow-IPFVV.PRS.3SG

“If a vineyard never bears fruit.” (KUB 12.44 ii 27-28 [NH/NS])

Argument structure:

The verb *mai*⁻ⁱ indicates a one-participant event involving a Patient, which can be either animate or inanimate and is mostly construed as undergoing a spontaneous change of state. Syntactically, the verb is unaccusative (Garrett 1996: 94), as the occurrence of the clitic subject =*as* in (198) shows.

The verb *mai*⁻ⁱ inflects both in the active and in the middle voice since OH/OS, with no sensible difference between the two, as comparison between (194) and (196) shows (Neu 1968b: 79). Irrespective of its inflection, the verb denotes a spontaneous event, whose causative counterpart is provided by *miyanu*^{-zi} ‘make (branches) fruit bearing’ (Luraghi 2012: 13). Based on the available evidence, it is not possible to decide whether the verb originally inflected as active or as middle. Notably, the verb also shows a derivative formation *miēss*^{-zi} with the same meaning of the base verb ‘grow, be born’, attested from MH/MS onwards. One finds a single occurrence of *miēss*-inflected the middle voice *mi-es-ha-ti* ‘I grew’ (KUB 30.10 obv. 11). Since *-ēss*-fientive verbs are consistently active, middle inflection on this form can be explained as analogical influence of the middle forms of simple *mai*⁻ⁱ.

Neu (1968a: 177) argues that when the verb means ‘be born’ it has a passive meaning, possibly biased by the formally passive German translation ‘geboren werden’. In this case, the verb should be understood as a lexical passive of *hās*⁻ⁱ ‘bear (children)’ at best. However, as Neu (1968a: 117 fn. 8) himself remarks, the passive use arguably arose out of the spontaneous meaning ‘ripen’, as discussed above. As a result, the alternation between *mai*⁻ⁱ ‘be born’ and *hās*⁻ⁱ ‘bear (children)’ should be better interpreted as a case of anticausative alternation encoded through suppletion.

***mau/mu*⁻ⁱ, *mauss*^{-zi} ‘fall’**

Semantics and aspectual construal:

The verb *mau*⁻ⁱ means ‘fall’, both when it occurs in the active and in the middle voice, as comparison between (200) and (201) illustrate.

(200) ÍD-*pi*[*a mu*] *hhi* *luli*[*ya*] *muhhi*
river.ALL fall.PRS.1SG pond.ALL fall.PRS.1SG

“I will fall into a river, I will fall into a pond.” (KUB 43.60 i 33-34, OH/NS)

(201) [*n*]=*as*=*kan* *anda warisiyas* [*pa*] *hhuenass*=*a seli* [*m*] *austaru*
CONN=3SG.NOM=PTC in w.GEN fire.GEN=CONJ pile.DAT fall.IMP.3SG.MID

“Let him fall into a pile of *w.* and fire.” (KBo 13.260 iii 39-41, NS)

The verb mostly profiles a telic event, and can be assigned a default aspectual construal of an irreversible achievement. A telic interpretation of the predicate is supported by contextual cues such as the occurrence of adverbial NPs that profile the Goal of the movement, as in (200) and (201). Moreover, telicity of the predicate is suggested by its resultative participle *maussant-* ‘fallen’.

Beside indicating a motion event, the verb can also be employed metaphorically either with the meaning ‘perish, suffer defeat’, as in (202), or with an abstract Goal as in (203).

(202) ERÍN^{MEŠ}=*kan* *mauszi*
troop(PL)=PTC fall.PRS.3SG

“The army will suffer defeat.” (KUB 8.22 ii 8, NS)

(203) *nu=ssi=kan* *idalāwanni* EGIR-*an* UL *namma* *maus[(h)]ahat*
CONN=3SG.DAT=PTC malice.DAT back NEG again fall.PST.1SG.MID

“I did not fall back into maliciousness against him.” (KUB 1.1 iii 22-24, NH/NS)

Etymology:

The verb *mau-ⁱ* is generally connected to PIE **m(i)euH₁-*, reflected in Lat. *moveō* ‘move’, Skt. *mīv-*, *mū-* ‘move, push’. The verb shows a paradigm similar to *au/u-ⁱ* in that it occurs with three different stems, viz. *mau-*, *mu-*, *mauss-*. The stem *mauss-* originated in the 3rd person singular and eventually extended to other parts of the paradigm, such as the 3pl.pst *mausser* and the participle *maussant-* where it is attested in NH times (Kloekhorst 2008 *s.v.* for discussion). Note that middle forms of the verb are mostly based on the stem *mauss-*.

Argument structure and relationship with voice:

The verb *mau-ⁱ* refers to a spontaneous change-of-location event that involves a single participant that does not exert control over the event, hence likely a Patient. Its causative counterpart is provided by the suppletive stem *pessiye/a-^{zi}* ‘make fall, throw’ (Luraghi 2012: 10). The verb *mau-ⁱ* is syntactically intransitive and display unaccusative syntax, as the occurrence of the clitic subject pronoun =*as* in (201) shows (Garrett 1996). Active and middle forms of the verb likewise occur in the same intransitive construction, and one fails to notice a functional opposition between the two.

The original voice of this verb is difficult to assess. Two scenarios are in principle possible. Either the verb was originally a *medium tantum* and was later transferred to active inflection, or the verb inflected in the active voice and was partly transferred to middle inflection. Note that whichever the

case, active forms based on the stem *mau-* that take *hi-*endings are likely to be quite old. The etymology is not really of help, as the Lat. and Skt. cognates have the more general meaning ‘move’, show active inflection and also occur in a transitive construction. If one looks at the diachrony of the attestations, it turns out that the verb *mau-ⁱ* is not attested altogether in OS (count based on data in the *CHD s.v.* and Kloekhorst 2008). The first occurrences of both active and middle forms date to MS times, so that either voice is likely to be original. Note further that whereas most NS middle forms are based on the stem *mauss-*, one also finds a OH/MS form *mu-wa-a-an-ta-ru* (KBo 32.14 ii 60) based on the stem *mau-*. This shows that middle forms might be as old as *hi-*inflecting forms based on the stem *mau-*. Overall, there is no compelling evidence to establish the original inflection of the verb.

***mēma-ⁱ* ‘speak, tell’**

Semantics and aspectual construal:

Active forms of the verb *mēma-ⁱ* refer to acts of speech of different sorts ‘speak, tell, report’ (cf. *CHD* for a full treatment of the occurrences). As common with verbs of speech, the verb *mēma-ⁱ* can either refer to an ongoing atelic activity, when used without reference to a specific propositional content, or to a telic event, when referring to the individual uttering of a sentence. Compare example (204), in which the event is construed as an ongoing activity, with (205) in which the verb takes the direct object *kī uddār* ‘these words’ and is rather construed as an incremental accomplishment.

(204) *nu memai*

CONN speak.PRS.3SG

“(If a woman gives birth, and the child opens its mouth from within the mother’s womb) and talks.” (KBo 6.25+ iii 7, NH/NS)

(205) *nu kī uddār memiyanzi*

CONN DEM.ACC.PL.N word(N).ACC.PL speak.PRS.3PL

“They recite these words.” (KUB 29.1 iii 30, OH/NS)

Etymology:

This verb *mēma-ⁱ* has so far resisted a satisfactory etymological treatment. Though there is some agreement that the verb must go back to a reduplicated formation, the shape and the semantics of the original root are disputed (cf. Kloekhorst 2008 *s.v.*, Rasmussen 2010: 225-226, Dempsey 2015: 289-291 for discussion with further references).

Argument structure and relationship with voice:

The verb *mēma-ⁱ* refers to a speaking event involving an Agent, the speaker, a Theme, the content of the speech, and possibly an Addressee. Active forms of the verb are involved in different constructions. First, *mēma-ⁱ* can be used either with or without a direct object, as shown in (204) and (205). In this case, the speaking Agent is encoded as subject, with the Theme encoded as direct object. Moreover, the Addressee can also optionally be encoded in the dative (cf. Starke 1977: 74, *CHD* s.v.). Unsurprisingly, when used intransitively the verb does not require a clitic subject, as in (204), thus patterning with unergative verbs (Garrett 1996: 99).

The verb *mēma-ⁱ* is almost invariantly attested as active throughout the history of Hittite. There is one single NH/NS occurrence in which the verb takes middle inflection, quoted in (206).

- (206) *nu ANA DUMU^{MEŠ} ^mMiddannamūwa ser memiyahhat*
CONN to son(PL) M. up speak.PST.1SG.MID
“And I spoke up for the sons of M.” (KBo 4.12 obv. 27, NH/NS)

This occurrence is particularly difficult to interpret. Neu’s (1968a: 116) suggests that the function of the middle voice in this case is to indicate stativity of the event ‘be a speaker’. However, this interpretation is unwarranted, since the active verb can also denote an atelic event when it does not occur with a referential direct object, as shown in (204). Neu’s observation (1968b: 69) that middle voice is connected to reflexivity is also not compelling. Overall, one fails to detect the functional contribution of the middle voice in (206), since the *memiyahhat* arguably shares the same syntax and semantics of active forms.

***mer-^{zi}* ‘disappear, vanish’**

Semantics and aspectual construal:

The verb *mer-^{zi}* denotes a one-participant change-of-state event ‘disappear’ (see *CHD* for occurrences). The event is most likely construed as telic, as also supported by the resultative participle *marrant-* (cf. Frotscher 2013: 209), but there is no compelling evidence in favor of either an accomplishment and an achievement reading. In most occurrences, a punctual reading seems to fit the context better, as in example (207):

(207) [1 DUMU.MUNUS?] *ŠUM=ŠU* *mertat*
 1 daughter name=3SG.POSS disappear.PST.3SG.MID
 “One girl: her name got lost.” (KUB 31.56 6, NH/NS)

Active forms of the verb show the same aspectual construal as middle forms. Compare examples (207), featuring the middle form *mertat*, and (208), featuring the active form *merir*.

(208) *U* DUMU.NITA^{MEŠ} *merir*
 and son(PL) disappear.PST.3PL
 “(Once our Queen of Kanesh bore thirty daughters at one time) but (her) sons disappeared.”
 (KBo 22.2 obv. 13, OH/OS)

Etymology:

The verb *mer-^{zi}* goes back to the root **mer-/mor-*, which in other IE languages indicates the event of dying, e.g. Lat *moriōr* (cf. Justus 2000: 283-285). According to Kloekhorst (2008 *s.v.*), Hittite preserves the original semantics of the root ‘vanish, disappear’, from which the meaning ‘die’ can be derived as a result of conventionalization of a euphemistic expression.

Argument structure and relationship with voice:

The verb *mer-^{zi}* indicates a one-participant event involving a Patient that undergoes a change of state. The verb always occurs in an intransitive construction with the Patient as subject, and requires clitic subjects (Garrett 1996: 94). Active and middle forms display the same syntax. Compare example (209), in which the verb shows active inflection, with (210), in which the verb occurs in the middle voice, both featuring the clitic subject pronoun *=at*.

(209) *n=at=ta=kkan* *merdu*
 CONN=3SG.NOM.N=PTC disappear.IMP.2SG
 “May it disappear from you.” (KBo 17.105 iv 24, MH/MS)

(210) *martari=war=at=kan*
 disappear.PRS.3SG.MID=QUOT=3SG.NOM.N=PTC
 “One thing disappears (one thing remains).” (KUB 13.35 iv 45, NS)

The verb *mer-^{zi}* is attested in the active voice since OH/OS, and indicates a spontaneous change-of-state event. The induced counterpart is provided by the transitive active verb *marnu-^{zi}* (Luraghi

2012: 12). As comparison between (207) and (208) shows, middle forms of the verb are entirely equivalent to active forms in syntax and semantics (Neu 1968b: 79; Justus 2000: 283 detects a difference between active ‘go missing’ and middle ‘disappear’ forms, but this distinction seems partly unwarranted, as examples in this section show). However, middle forms are attested in NS texts only, and are quantitatively rather infrequent. Based on this distribution, is tempting to assume that the verb was originally active and only later was sporadically extended to middle inflection (cf. Villanueva Svensson 2008: 206), possibly on analogy of other spontaneous change-of-state event associated with middle voice such as *kist*-^{a(ri)}. If this is the case, then middle inflection of Hittite *mer*-^{zi} should not be etymologically equated with mediopassive inflection in Lat. *morior* ‘die’ and OIr. *marbthair* ‘die, is killed’.

***mummiye/a*-^{zi} ‘keep falling, crumble (?)’**

Semantics and aspectual construal:

The verb *mummiye/a*-^{zi}, which occurs both in the active and the middle voice, is usually translated as ‘keep falling, crumble’ (*CHD* s.v. for occurrences), as in example (211).

- (211) *hanissuwar=ma=kan kuit awan katta mummiyetta*
 plaster(N).NOM=PTC=PTC REL.NOM.N INTS down crumble.PRS.3SG.MID
 “The plaster that keeps crumbling down though, (they shall regularly remove it from the wall).” (KBo 50.280+ ii 18-19, MH/MS)

The aspectual construal of this verb is particularly interesting. In the available occurrences, the verb most likely indicates an atelic undirected activity ‘keep falling’. In (211), the context strongly favors an activity reading of the event, since what is profiled is the repeated falling down of some amount of plaster from a wall, without reference to an endpoint. In a later copy of the same text (KUB 31.86 iii 2 [MH/NS]) the verb *mummiyetta* is replaced by the form *mauskittari*. The fact that the simple form of *mummiye/a*-^{zi} alternates with a *-ske/a-* derived form of *mau*-ⁱ ‘fall’ can be taken as evidence of the fact that *mummiye/a*-^{zi} is mostly construed as an atelic event, as opposed to *mau*-ⁱ which by default indicates a telic event (see discussion under *mau*-ⁱ). The atelic nature of *mummiye/a*-^{zi} possibly follows from its reduplicated formation (cf. Neu 1968b: 89-91, Dempsey 2015: 116-120).

Etymology:

The verb *mummiye/a^{-zi}* is a derivative from *mau⁻ⁱ* ‘fall’, though the detail of the formation of the stem *mummiye/a^{-zi}* are somewhat obscure (Kloekhorst 2008 *s.v.*; see Dempsey 2015: 269-271 for a different interpretation). See under *mau⁻ⁱ* for the etymology of the base verb.

Argument structure and relationship with voice:

The verb *mummiye/a^{-zi}* largely share the syntax and semantics of the base verb *mau⁻ⁱ*. The verb indicates a motion event involving a single participant that undergoes a change of location. Notably, the event profiled by the verb is always uncontrolled, so that the participant can be better regarded as a Patient. The verb is syntactically intransitive, and displays unaccusative syntax, as the occurrence of the clitic subject =*at* in (212) shows.

- (212) *n=at=kan* *katta [m]umianzi*
 CONN=3PL.NOM.N=PTC down fall.PRS.3PL
 “(If stars collide in the sky,) and fall down.” (KUB 8.22 ii 8, MH[?]/NS)

Even though the verb occurs both in the active and in the middle voice, one fails to detect a meaningful pattern of voice alternation. The only MH/MS occurrence of the verb comes in the middle voice, as does the replacing form *mauskittari* in the later NS copy (KUB 31.86 iii 2 [MH/NS]). Active forms of the verb are attested in NH/NS (and once in OH/MS as well), and have the same syntax and semantics of the middle form (Neu 1968b: 79), as comparison between (211) and (212) illustrate. The diachronic distribution of these occurrences seems to point to an original status of the middle voice, but the evidence is too scanty to be compelling.

Interestingly, the verb *mau⁻ⁱ* displays a comparable behavior to *mummiye/a^{-zi}* with respect to voice alternation, with active and middle forms entirely equivalent in syntax and semantics.

***nahsariye/a^{-zi}* ‘be(come) afraid’**

Semantics and aspectual construal:

The verb *nahsariye/a^{-zi}* denotes a change-of-state event ‘become afraid’. The verb mostly profiles a punctual event, i.e. an achievement, as shown in (213), where the context strongly favors a change-of-state reading. Active and middle forms of the verb display the same semantics and aspectual construal, as comparison between (213) and (214) shows. Note that in both examples, the present tense is used as historical present with past reference.

(213) *n=at* ***nahsariyanzi***

CONN=3PL.NOM become.afraid.PRS.3PL

“(When the Egyptians heard that the Hittites had attacked Amqa), they become afraid.”

(KBo 5.6 iii 6, NH/NS)

(214) *n=at* ***nahsarriyandari***

CONN=3PL.NOM become.afraid.PRS.3PL

“(The enemy land saw him, when he defeated the tribal troops,) and they became afraid.”

(KBo 5.6 ii 6, NH/NS)

There is no compelling evidence for a stative use of finite forms of *nahsariye/a-^{zi}* in the meaning ‘be fearful, show respect’, which is restricted to occurrences of the supine (cf. *CHD s.v.*), even though such an alternating aspectual construal would be compatible with the behaviors of other *-iye/a-* verbs.

Etymology:

The verb is a derivative from *nāh-ⁱ* ‘fear, become afraid’ from a stem **nahsar-* which cannot but reflect **neh₂sr-*, possibly connected with e.g. OIr. *nár* ‘modest’ (see Kloekhorst 2008 *s.v.* for discussion).

Argument structure and relationship with voice:

The verb *nahsariye/a-^{zi}* occurs both in the active and in the middle voice. It semantically belongs to the class of change-of-state Experiencer predicates, and its event frame involves an Experiencer and a Stimulus. The verb is consistently intransitive, with the Experiencer encoded as subject, both when occurring in the active or in the middle voice, and it systematically requires clitic subjects, as in (213) and (214). Occasionally, the stimulus of this verb can be encoded in the dative (Luraghi 2010b: 9), as in (215):

(215) [*ku*]edani ***nahsariyahhat***

INDF.DAT become.afraid.PST.1SG.MID

“Who became I afraid of?” (KUB 33.120 ii 56, NS)

As comparison between (213) and (214) shows, active and middle forms of this verb display the same syntax and semantics, and both forms alternate even in the same text (cf. Neu 1968b: 81). The chronology of the attestations suggests however that the middle voice is older, since it occurs since

OH/MS (or even OS; the dating of KUB 36.100 is uncertain), whereas occurrences of active forms are fewer in number and all confined to NH/NS texts (see *CHD* for occurrences).

This verb partly overlaps with the *activum tantum nāh-i* ‘be fearful, become afraid’, but the two are not entirely equivalent. In the first place, as already observed in the *CHD*, unlike *nahsariye/a-zi* that is predominantly dynamic, *nāh-i* can also profile a state (cf. also Boley 1993: 155). Moreover, the two differ in their syntax. Whereas the latter can take either a dative or an accusative Stimulus, with the former only a construction with the dative Stimulus is available. In addition, *nāh-i* can also be used in an impersonal construction with the verb in the 3rd person singular and the Experiencer encoded in the dative/accusative (see discussion in Luraghi 2010b: 261-262, Dardano 2017, 2018).

Interaction with the particle =za:

The verb *nahsariye/a-zi* occurs once with the particle =za (KUB 19.11+ iv 10). The particle does not add any discernible semantic contribution to the verb, as comparison between (213) and (216) shows.

- (216) ^{LÚ}KÚR ^{URU}Gasga=ma=za **nahsar[iyattat]**
 enemy K.=PTC=REFL become.afraid.PST.3SG.MID
 “The Kaskean enemy become afraid.” (KUB 19.11+ iv 10, NH/NS)

Notably, the use of =za with this verb might be modelled on the occurrence of =za with the verb *nāh-i*. According to Boley (1993: 155), the combination of *nāh-i* with the particle =za always indicates that the event is dynamic and not static. Chronologically, the construction =za *nāh-i* ‘become afraid’ possibly took over in LHN after the decline of *nahsariye/a-zi*, which becomes increasingly rare in texts dating after Mursili II.

***nakkēss-zi* ‘become important, become troublesome to’**

Semantics and aspectual construal:

The verb *nakkēss-zi*, a fientive derivative from the adjective *nakkī-* ‘important, difficult’, means ‘become important’ and ‘become troublesome’ (see *CHD* s.v. for occurrences). Judging from the available evidence, the event denoted by this verb is construed as punctual, i.e. as an achievement, since no internal temporal unfolding is profiled. Telicity of this predicate is further confirmed by its resultative participle *nakkessant-* ‘which has become difficult’. Consider example (217), in which the change-of-state component of the middle verb *nakkestat* is particularly clear from the overall context.

(217) *n=as ammuk nakkestat*

CONN=3SG.NOM 1SG.DAT become.troublesome.PST.3SG.MID

“(My father had promised the festival of invocation to Hebat for Kummanni, but he had not yet performed it for her,) so she began to trouble me.” (KUB 14.4 iii 25, NH/NS)

As comparison between (218) and (217) shows, active and middle forms of the verb display the same aspectual construal.

(218) [*nu ap*]āt ēshar apēdani UN-si

CONN DEM.NOM.N bloodshed(N).NOM DEM.DAT person.DAT

na[kkesz]i

become.troublesome.PRS.3SG

“(If a person takes an oath vis-à-vis another person, and then afterwards kills him), and that act of bloodshed begins to trouble that person.” (KBo 14.68+ i 16-17, NH/NS)

The verb occurs twice with the *-ske/a-* suffix. In (219), the suffix does not alter the aspectual construal of the predicate, as it possibly reflects only the plurality of entities involved. In this respect, example (219) is entirely equivalent to (217).

(219) *nu[=ssi] ŠA ABI=ŠU DINGIR^{MEŠ.HI.A}*

CONN=3SG.DAT of father=3SG.POSS god(PL)

nakkiskantat

become.troublesome.PST.3PL.MID

“And the ancestral gods have begun to trouble him.” (KBo 18.15 6-8, NH/NS)

By contrast, in the other occurrence, quoted in (220), the suffix *-ske/a-* possibly adds a habitual meaning to the base verb. The sentence occurs in a prescriptive part of a treaty, where what is highlighted is the fact that every time a certain event occurs, specific ritual practices should be adopted.

(220) *ANA LUGAL^{MEŠ} GIM-an nakkeskattari*

to king(PL) whenever become.troublesome-IPFV-PRS.3SG.MID

“And whenever it becomes difficult for the kings.” (KBo 4.14 ii 27, NH/NS)

Argument structure and relationship with voice:

The verb *nakkēss^{-zi}* belongs together with Experiencer predicates, and its event frame involves an Experiencer and a Stimulus. The syntax of this verb is of particular interest among Experiencer predicates. As discussed by Luraghi (2010b *passim*), different constructions are available for this verb. First, the verb can be used intransitively in a personal construction, with the Stimulus encoded as a subject and the Experiencer encoded in the dative. This construction is exemplified in (218). When no subject NP occurs, the verb displays unaccusative syntax and consistently requires a clitic subject (Garrett 1996: 94), as shown in (217). Alternatively, the verb can be used in an impersonal construction, with the verb occurring in the default 3rd person singular. In this construction, the Stimulus is omitted altogether and the Experiencer, which can be described as a non-canonical oblique subject, is encoded in the dative case. This construction differs from the former in that no clitic subject occurs, as comparison between (217) and (220) reveals. The two argument structure constructions can be schematized as follows:

- A. $[N_{1(\text{NOM.CL})} N_{2(\text{DAT})} \textit{nakkēss}^{-zi}] = [\text{SEM}_{1,\text{STIM}} \text{ becomes troublesome for } \text{SEM}_{2,\text{EXP}}]$
B. $[N_{1(\text{DAT})} \textit{nakkēss}^{-zi}_{(3\text{RD.PERSON})}] = [\text{SEM}_{1,\text{EXP}} \text{ comes to be in trouble}]$

The verb *nakkēss^{-zi}* occurs both in the active and in the middle voice. Active and middle forms of the verb display the same syntax and semantics (Neu 1968a: 126). Both forms refer to change-of-state event and can either be used in a personal and an impersonal construction. Note that the occurrence of the *-ske/a-* suffix is unrelated to voice selection, as alongside middle forms shown in (219) and (220), one also finds active *nakkēskit* (KUB 40.1 rev. 8). There are reasons to believe that active voice is original on this verb. Not only based on data from the *CHD* active forms are quantitatively prominent (23 active forms of the base stem vs. 1 middle form), but more generally, fientive *-ess-*verbs are most often *activa tantum*. The chronology of the attestation is not of much help. The vast majority of either active and middle forms come from NH/NS texts, but a few occurrences of active forms in OH/NS texts might speak in favor of an original active inflection of this verb. Based on these observations, we can assume that middle inflection occurs as a marginal innovative pattern in NH, possibly through analogy with other change-of-state experiencer predicates taking middle morphology (cf. Melchert 2017b: 480).

neku^{-zi} ‘become evening’

Semantics and aspectual construal:

The verb *neku*^{-zi} means ‘become evening, night’. The verb is semantically close to *lukk*^{-tta}, with which it shares the aspectual construal. Similarly to what discussed for *lukk*^{-tta}, which describes the onset of the day, the verb *neku*^{-zi} indicates the onset of night, i.e. the sunset. The meaning of the verb clearly emerges in example (221), in which the verb occurs in the active form *nekuzzi*.

(221) [*kuitman*]n *nekuzzi*

until become.evening.PRS.3SG

“While the evening is coming on (but the Sun is still up).” (KBo 15.22 8, NS)

In (221), the verb combined with the subordinating conjunction *kuitman*, which indicates duration in time (Inglese 2016: 86), profiles the event as an ongoing directed activity, without reference to its endpoint. However, the event can also be construed as bounded, i.e. as an incremental accomplishment, as in (222):

(222) *mahhan=ma nekuttat*

when=PTC become.evening.PST.3SG.MID

“When the evening came (I turned around and went against PN..., and I marched all night)”. (KBo 5.8 iii 19-21, NH/NS)

In (222), given the overall textual structure, it is more likely that the event of ‘becoming night’ is construed as completed before other events can take place.

Etymology:

The verb is generally regarded as deriving from the PIE word for ‘night’ **nok^wts*. The Hittite form, combined with evidence from the Gr. stem *nekh-*, is however suggestive of a PIE form **neg^{wh}-* (Kloekhorst 2008 s.v.).

Argument structure and relationship with voice:

The verb *neku*^{-zi} belongs together with impersonal weather verbs. Syntactically, it is used impersonally without a referential subject (Neu 1968b: 98-99), and does not require a clitic subject (Hoffner & Melchert 2008: 281).

As in the case of *lukk-^{ta}*, the verb *neku-^{zi}* displays both active and middle inflection, without any detectable difference in use between the two (Neu 1968b: 79). It is difficult to determine what the original voice of this verb was. According to Kloekhorst (2008 *s.v.*), the verb was originally active, and middle forms were created in analogy to *lukk-^{ta}* from MS onwards (also Villanueva Svensson 2008: 209, Melchert 2017b: 480). However, there is no compelling evidence that the active voice was original, since all active forms are attested in MS and NS texts. Indeed, middle and active forms coexists in MS texts, and overall the occurrences are so scarce that no significant quantitative distribution can be recognized. Therefore, the verb could as well be an original *medium tantum*, later partly transferred to active inflection in analogy to other impersonal weather verbs (cf. Neu 1968b: 98-99).

pahs-ⁱ ‘protect’

Semantics and aspectual construal:

The verb *pahs-ⁱ*, which occurs both in the active and in the middle voice, means ‘protect’, as in examples (223) and (224).

(223) *nu=tta* DINGIR^{MEŠ} TI-*an* *harkandu* *nu* SAG.DU=*KA*
 CONN=2SG.ACC god(PL) alive.ACC have.IMP.3PL conn head=2SG.POSS

pahsandarū

protect.IMP.3PL.MID

“May the gods keep you alive and protect you (lit. your head).” (ABoT 65 obv. 4-5, MH/MS)

(224) *kuitman ANNUTI* ^m*Tuthaliyas* KUR^{URU}*Hatti* LUGAL-*iznani*
 until DEM.PL T.NOM land *H.* kingship.DAT

pahsari

protect.PRS.3SG.MID

“And as long as these (words stand and) Tuthaliya of the land of Hatti protect (you) in kingship.” (Bo 86/299 ii 69, NH/NS)

The default aspectual construal of this verb is possibly an undirected activity, as the verb refers to a continuative protection of a given entity rather than to an individual punctual event of protecting (cf. Neu 1968b: 64). Evidence for an atelic default reading of this predicate comes from contextual cues.

In (223), the parallelism between *pahs-* and the stative construction *TI-an harkandu*, which profiles maintenance of a state (Inglese & Luraghi forthc.), suggests that the former is likely to be construed as an undirected activity. Moreover, in example (224) atelicity of the predicate is suggested by its occurrence in a temporal *kuitman*-clause that indicates duration in time (Inglese 2016: 86).

A stative construal is also possibly at play in occurrences in which the verb means ‘be loyal’, as in (225).

- (225) *nu=ssi* ^m[A]*ziras* *QATAMMA* **[(*pahhast*)]*at***
 CONN=3SG.DAT A.NOM likewise protect.PST.3S.MID
 “‘And Aziru correspondingly was loyal to him.’” (KUB 23.1 i 20, NH/NS)

Note that the fact that the participle *pahsant-* ‘protected’ is P-oriented is perfectly compatible with an atelic reading of the base verb, since participles of transitive stative verbs such as *sākk-ⁱ* ‘know’ are notoriously P-oriented (Hoffner & Melchert 2008: 339).

Etymology:

The verb has long been recognized as cognate to Lat. *pascō* ‘graze’, OCS *pasti* ‘pasture’, from a PIE root **peh2s-o* (Kloekhorst 2008 s.v.). Despite Oettinger’s (1979a: 210) treatment of this verb as belonging to the *mi*-inflection, the oldest occurrences clearly show a preference for *hi*-endings (Kloekhorst 2008 s.v.).

Argument structure and relationship with voice:

Active and middle forms of this verb alternate without any discernible difference in meaning (Neu 1968b: 63, 108). Active and middle forms of *pahs-ⁱ* likewise occur in two different constructions. In the first place, with the meaning ‘protect’ the verb encodes a two-participant event involving an Agent and a Theme, that are encoded in a transitive construction as the subject and the direct object of the verb. This pattern is exemplified in (223). In the second place, the verb can be used with the meaning ‘be loyal to’. In this case, the verb can be understood as encoding an Experiencer predicate, involving an Experiencer and a Stimulus, that are encoded as subject and as a dative oblique respectively, as in (225). The two argument structure constructions can be represented as follows:³²

³² The attempt by Justus (2000: 286) to differentiate between a transitive active ‘protect’ and an intransitive middle ‘be loyal’ construction is not borne out by textual data, as both voices freely alternate in either construction

- A. [N_{1(NOM)} *pahs*⁻ⁱ N_{2(ACC)}] = [SEM_{1.AG} protect SEM_{1.TH}]
 B. [N_{1(NOM)} *pahs*⁻ⁱ N_{2(DAT)}] = [SEM_{1.EXP} is loyal SEM_{1.STIM}]

It is not easy to assess the original voice of *pahs*⁻ⁱ. According to Neu (1968b: 64), the verb originally belonged to the *media tantum*, as shown by its stative meaning, by the completeness of the paradigm, and by the fact that it shows a causative counterpart *pahsanu*^{-zi}. However, none of these arguments is *per se* decisive. First, there is no principled way to assume that atelic predicates were originally middle, as shown by the contrast between e.g. *huwai*⁻ⁱ and *ye/a*^{-tta(ri)}, since the link between atelicity and the middle voice is a tenuous one at best (cf. Inglese forthc., Chap. 2). Morphologically, the fact that all the forms of the paradigm are attested is fortuitous, and the difference is limited to the 3rd person singular, which is never attested as active. Concerning the existence of the derived causative *-nu-* counterpart *pahsanu*^{-zi} ‘protect’, whereas it is true that most (stative) *media tantum* build their causative counterpart via *-nu-* suffixation, e.g. *zē*^{-a(ri)} ‘cook (intr.)’ vs. *zanu* ‘cook (tr.)’, one also finds a wealth of *-nu-* derived verbs based on (atelic) *activa tantum*, as in e.g. *ārs*^{-zi} ‘flow’ vs. *arsanu*^{-zi} ‘let flow’.

Note also that the derived form *pahsanu*^{-zi} is quite puzzling, as it fails to show traces of causativity or transitivization, and is often treated as a synonymous of the base verb *pahs*⁻ⁱ (Neu 1968b: 64). As such, the derive form has been explained in terms of hypercharacterization (cf. Kronasser 1966: 452). The difference between the two should be sought in the different contexts in which they occur, *pahs*⁻ⁱ being virtually restricted to situations where the gods or superior entities keep someone protected, or to the observation of pacts and obligations, mostly in formulaic-like expressions (whence its frequency in letters and treaties), whereas *pahsanu*^{-zi} is often used to refer to actual defense events from hostile activities or has the meaning ‘watch out, be alert’ (cf. the through semantic treatment in *CHD*; see Luraghi 1992: 168-169, Justus 2000: 286 with further references).

The chronology of the attestations of *pahs*⁻ⁱ is however of help in providing a clearer picture of the diachrony of this predicate. In spite of the absence of forms of *pahs*⁻ⁱ in OH/OS texts, one finds that in MS texts middle forms display a much higher token frequency than active forms (37 vs. 3, plus occurrences from late MH texts dated to Suppiluliuma I, count based on the data from the *CHD*). This distribution is suggestive of the fact that the middle voice was more common, as also pointed out by Kloekhorst (2008 *s.v.*), and possibly primary, and that the active voice constitutes a sporadic innovation, possibly motivated by the transitivity of the verb. The more archaic nature of the middle inflection is further suggested by the fact that *pahs*⁻ⁱ consistently takes the dentalless 3rd sg. ending *-ari*. Based on these facts, combined with the lack of synchronic semantic motivations for the middle inflection of *pahs*⁻ⁱ, Grestenberger (2016: 114-116) suggests that middle voice is inherited from this

verb from PIE, for which she sets up a deponent verb **péh₂-s-or* (per Grestenberger, if the *-s-* element in the root is indeed a marker of subjunctive, i.e. irrealis mood, this could explain why the verb originally took middle inflection, Kemmer 1993: 79, but this argument is not entirely convincing).

Interaction with the particle =za:

The verb sporadically occurs with *=za*, which is used in its possessive function, and does not arguably contribute to the predicate's meaning (see CHD *s. pahs-* 2, Boley 1993: 25), as in (226).

- (226) *nu=za* *KUR=SÚ* *pahsa*
 CONN=REFL land=3SG.POSS protect.PRS.3SG.MID
 “He will protect his own land.” (KUB 36.127 obv. 8, MH/MS)

parh^{-zi} ‘chase, hunt’

Semantics and aspectual construal:

The verb *parh*^{-zi} occurs both in the active and the middle voice and displays different meanings ranging from ‘hunt, chase, hasten’ (see CHD *s.v.* for a thorough discussion of the occurrences). These meanings reflect different underlying aspectual construals of the event encoded by the verb. Since the semantics of the predicate is at best exemplified by active occurrences of the verb, I discuss these first. As pointed out by Frotscher (2013: 233), the verb displays at least two distinct aspectual construals. To begin with, consider example (227):

- (227) *n=us=san* *hahhalas* *parhir*
 CONN=3PL.ACC=PTC bush.DAT.PL chase.PST.3PL
 “They chased them into the bushes.” (KBo 3.67 ii 7, OH/NS)

Example (227) shows the use of *parh*^{-zi} to denote a spatial event in which one entity follows another one in space, with the follower eventually reaching the followed entity. Here, the event is construed as an incremental accomplishment, and, as with other motion verbs, incrementality is provided by the incrementally covered Path. In (227), boundedness of the motion event is also suggested by the occurrence of a Location indicating the endpoint of the motion event. The same construal is at play when the verb is used with the meaning ‘drive out, expel’, in which case it often co-occurs with Source expressions or with the preverb *arha* (see CHD *s.v.*).

Boundedness of the verb *parh-^{zi}* is also suggested by the fact that when an atelic counterpart is required, *-ske/a-* derived forms are used instead. Consider in this respect example (228), in which the derived form *parhiskiddu-* is used in parallel with the activity predicate *ye/a-^{ta(ri)}* ‘go, march’, highlighting the atelic construal of the verb:

- (228) [*i*]attaru *n=an* **parhiskiddu**
 go.PRS.3SG.MID CONN=3SG.ACC follow-IPFV-IMP.3SG
 “May he go, and follow him.” (KBo 19.145 iii 19, MH/MS)

In a few occurrences (cf. *CHD s. parh-* 5), the verb is used intransitively with the meaning ‘hasten, rush’ in the active voice, as in example (229):

- (229) *nu=kan* *ANA* ^{LÚ}*KÚR* *IŠTU* 1 ^{GIŠ}*GIGIR* *parranta* **parhas**
 CONN=PTC to enemy with 1 chariot forth rush.PST.3SG
 “He raced across toward the enemy with a single chariot (and the enemy fled).” (KUB 31.20 iii 9-10, NH/NS)

In (229), the verb *parh-^{zi}* possibly displays an undirected activity construal, in which the final endpoint of the movement is left unprofiled (as suggested by the fact that the enemy escapes and is not reached by the king, see Frotscher 2013: 233).

According to Frotscher, this alternative construal of *parh-^{zi}* is also supported by evidence from the semantics of the participle, which is P-resultative *parhant-* ‘chased’ when issued from the transitive verb but has contemporary semantics when issued from the intransitive verb, meaning ‘hasting’, as comparison between (230)a and b shows:

- (230) a. *kuis* *arha* **parhanza**
 REL.NOM away chase.PTCP.NOM
 “He (*sc.* the prince) who is chased, (shall return.)” (KUB 8.1 ii 7-8, OH/NS)
- b. *EGIR-pa=ya* *URU-ri* *anda* **pahandus** *uwanzi*
 back=CONJ city.DAT in haste.PTCP.NOM.PL come.PRS.3PL
 “They (*sc.* the horses) come back hastening to the city.” (KBo 3.2 rev. 34, MH/NS)

It must be stressed that the evidence for a non-resultative participle meaning ‘hasting’ is tenuous at best. In fact, it is restricted to the occurrence shown in (230)b only, in which one could also easily

interpret the participle as a P-resultative participle ‘hasted, made gallop’, since the transitive verb *parh^{-zi}* ‘make gallop’ is also attested with reference to horses (cf. *CHD s. parh-* 4).

Etymology:

The verb *parh^{-zi}* ‘chase’ is etymologically connected with Skt. *bhar-* ‘move rapidly, to hurry’ (Oettinger 1979: 213 *apud* Kloekhorst 2008). Active forms of this verb consistently show *mi*-inflection, beside a few *hi*-inflected forms in a single manuscript (KBo 3.5 MH/MS).

Argument structure and relationship with voice:

The verb *parh^{-zi}* in the meaning ‘chase, hunt’ indicates a two-participant event involving two moving entities, of which the first one is profiled as the causer of the motion event. The verb semantically belongs to the class of lexical reciprocal events of the chaining type (Kemmer 1993: 100, Inglese 2017: 968-969), i.e. asymmetric events involving at least two participants, in which A pursues B, and B necessarily moves away. When meaning ‘hasten’, the verb indicates a one-participant motion event involving a moving Agent only.

Syntactically, the verb *parh^{-zi}* can be used either transitively and intransitively. The transitive construction is connected to the meaning ‘chase, hunt’ and it features the two participants are encoded as subject and direct object respectively. Notably, both active and middle forms can occur in the transitive construction, as the occurrence of the clitic objects =*us* ‘them’ and =*ta* ‘you’ in (227) and (231) respectively shows.

(231) *n=tta* *parhantaru*
 CONN=2SG.ACC chase.IMP.3PL.MID
 “They shall haunt you.” (KUB 36.114 8, MH/MS)

Evidence for the intransitive use of the verb with the meaning ‘hasten’, shown in (229), is extremely limited, and restricted to active forms only (two of the three occurrences are derived *-ske/a-* forms). The two constructions can be schematized as follows:

- A. [N_{1(NOM)} *parh^{-zi/a(ri)}* N_{2(ACC)}] = [SEM₁ follows SEM₂]
- B. [N_{1(NOM)} *parh^{-zi}*] = [SEM_{1.AG} hastens]

The relationship of the verb *parh^{-zi}* with voice is extremely complicated. To sum up, for the largest part active and middle forms of this verb are used in a transitive construction with the same meaning

(Neu 1968b: 57, 107-108), as comparison between (227) and (231) shows. The chronology of the texts is of little help, as a single active form is attested in OS, whereas middle forms come from MS texts onwards (two OS occurrences in StBoT 25 are broken and thus not revealing about the inflection of the verb, one occurrence reported as OH in the *CHD* is from a OH/NS text, KBo 31.83). As mentioned by Neu (1968a: 136), there is a single NS occurrence in which a middle form of *parh-^{zi}* is used intransitively with passive meaning ‘be chased’ (KUB 17.16 i 4f.). If Neu’s interpretation of the form *parhieskantari* as ‘are chased’ is correct, this proves that in NH middle forms could be reinterpreted as oppositional passives to active transitive forms. Moreover, evidence for an intransitive autocausative ‘hasten’ use of the active voice is restricted to a couple of NS occurrences (cf. *CHD s.v.*, 5). As such, these forms are hardly probative of the default syntax and semantics of middle forms.

It should be noted that neither transitive syntax nor middle inflection are attested in the Skt. cognate *bhar-*, which inflects as active and is syntactically intransitive. Therefore, comparative evidence points to the intransitive autocausative use as the base meaning, ‘move hastily’, and active voice was possibly original. Transitivity and middle marking could well be an inner-Hittite innovation. Originally, it is not unlikely that Hittite *parh-^{zi}* could be used intransitively to refer to the motion event ‘move hastily’. It is unclear whether sporadic intransitive usages of *parh-^{zi}* ‘hasten’ in NH/NS constitute a direct reflex of this original situation or a later development. When two or more participants were involved, the event could have been interpreted as a reciprocal chaining situation, ‘move hastily one after the other’ > ‘follow each other’ > ‘chase’. Therefore, middle morphology, that could also be used to encode reciprocal events, especially spatial ones (cf. Inglese 2017), could have been transferred to this verb to mark such situations, similarly to middle verbs such as e.g. Lat. *sequor* and Gr. *hépomai* ‘follow’ (cf. Grestenberger 2016: 129-131). Later on, the event encoded by the middle form was reinterpreted as ‘chase, hunt’, therefore as a semantically more transitive event, and this could have led the development of active voice for this verb. Clearly, the verb was transferred to active inflection quite early, as the textual evidence shows, but middle forms were never totally ousted, so that synchronically one fails to detect a meaningful pattern of voice alternation for this predicate.

***pars(i)-^{a(ri)/zi}* ‘break’**

Semantics and aspectual construal:

The verb *pars(i)-^{a(ri)}* indicates a physical change-of-state event meaning ‘break’, as shown in (232), and semantically belongs together with highly transitive verbs of physical direct effect on the Patient (cf. Tsunoda 1985). The meaning of the verb is somewhat specialized, as it is mostly used to refer to the ritual event of breaking bread or other offerings in the course of a ritual (cf. Rieken 2014 for a thorough discussion of the syntax and semantics of this verb in the context of ritual texts).

- (232) ^{LÚ}SÌLA.ŠU.DU₈ LUGAL-*i* NINDA.KUR₄.RA *parsiya*
 cup.bearer king.DAT bread break.PRS.3SG.MID
 “The cup bearer breaks bread for the king.” (KBo 25.61 ii 10, OH/OS)

The default aspectual construal of the verb is most likely an irreversible directed achievement, as the event profiled lacks internal temporal unfolding. This construal is further confirmed by the occurrence of the verb with the adverb *namma*, which indicates completion and repetition, in (233):

- (233) [...] *namma* 4 NINDA.KUR₄.RA *parsiya*
 again 4 bread break.PRS.3SG.MID
 “And (he) breaks 4 breads again.” (KBo 25.98 4, OH/OS)

In ritual texts, one often finds the verb without a direct object, as in (234):

- (234) LUGAL-*us* *parsiya*
 king.NOM break.PRS.3SG.MID
 “The king breaks (it).” (KBo 25.61 rev. 11, OH/OS)

In cases such as (234) the verb still profiles a telic event, as these cases feature the discourse-conditioned omission of a definite direct object (Garret 1996 fn. 7, Rieken 2014) rather than an absolute construction of the verb (see further Luraghi 1990: 37).

Etymology:

The etymology of this verb is disputed. Kloekhorst (2008) reconstructs it as derived from **b^hrs-o*, a root reflected in Gr. *phársos* ‘part’ and OHG *brestan*, ON *bresta* ‘burst’. Connection with Lat. *pars*, though semantically appealing, must be rejected on formal grounds. The middle forms show variation between two stems *pars-* and *parsi-*, the latter being quantitatively far more frequent than the former (42 vs. 4 occurrences in OS), and entirely taking over in MS texts. The active paradigm shows two

stems *pars-* and *parsiye/a-*, as well as variation between *-mi* and *-hi* inflection (Rose 2006: 364). On the middle stem in *-i-*, which is also attested in *huett(i)-^{a(ri)}* ‘draw’, see now Jasanoff (2012: 123-124).

Argument structure and relationship with voice:

The verb *pars(i)-^{a(ri)}* indicates a two-participant event involving an animate (mostly human) Agent and inanimate Patient entity which undergoes a physical change of state. Moreover, the event frame can also involve a Recipient, mostly a divine entity with respect to which the ritual ‘breaking’ of the bread is performed.

The verb is syntactically transitive, with the two participants encoded as subject and direct object respectively, as in (232). Omission of the definite direct object is also possible, as in (234). The optional Recipient is encoded in the dative case, as in (235).

- (235) EGIR-*ŠU=ma* 3 NINDA.GUR₄.RA BABBAR ŠÀ.BA 1 SA₅ DINGIR
 afterwards=PTC 3 bread white inside 1 red god
 LÚ^{MES} *hūmandas* ŠA^{URU} *Hatti* *parsiya*
 man(PL) all.DAT.PL of *H.* break.PRS.3SG.MID
 “Then he breaks three white breads and a red one for all the gods of Hatti.” (KUB 6.45
 iv 33-34, NH/NS)

Since OH/OS, the verb *pars(i)-^{a(ri)}* occurs almost invariantly in the middle voice. Active forms of the verb are sporadic and quantitatively marginal. In OS, there is only one active token *par-su-wa-ni* (KBo 17.3+ iii 47), but it occurs in a highly fragmentary context, and the active ending is apparently written over an erasure (Neu 1980: 16 fn. 42). Thus, we can safely assume that middle inflection for this verb is original, as most active attestations come from MS and NS (Kloekhorst 2008 *s.v.*, *CHD s.v.*).

Since the verb most often occurs with objects denoting offerings in rituals, one could try to motivate middle inflection as signaling *indirect reflexive* use, with the event of breaking performed for one’s own benefit. However, this interpretation is not borne out by the data, as most often the ‘breaking’ act is performed by Agents without any discernible self-involvement, as in example (236).

- (236) [(GAL LÚ^{MES} GIŠ^{BANŠUR} NINDA^{harsi})]n GE₆ *parsiya* *ta*
 chief man(PL) table *h.bread.ACC* black break.PRS.3SG.MID CONN
hāssi *dā[i]*
 brazier.DAT put.PRS.3SG

“The chief of the men of the table breaks black bread and puts (it) on the brazier.” (KBo 17.11+ i 52, OH/OS)

Overall, in the rituals one finds a wealth of actions that could in principle be conceived as construed with higher self-involvement, but are consistently encoded by active verbs (most notably *sipant-i* ‘libate’). Moreover, occurrences of the verb outside the ritual context, as in (237), further confirm that an indirect reflexive reading should be discarded.

(237) *tak[ku A.ŠÀ-as arhan kuiski **parsiy]a***
if field.GEN boundary.ACC INDF.NOM break.PRS.3SG.MID
“If anyone violates the boundary of a field.” (KUB 29.25+ iii 2, OH/OS)

With respect to the latter example, it is worth observing that active forms of *zahh-i* ‘hit’ appear in very similar contexts as middle forms of *pars(i)-^{a(ri)}* in (237). Overall, since there appears to be no semantic motivation for the use of middle voice with this verb, it can be synchronically described as a deponent verb, as it consistently displays transitive syntax but middle inflection (Grestenberger 2014: 270-271).

Most interestingly, one finds sporadic occurrences in which the middle verb is intransitive and denotes a spontaneous event. As an example, consider the passage in (238):

(238) *MUN-as=ma=kan GIM-an hassi anda **parsittari***
salt.NOM=PTC=PTC as brazier.DAT in break.PRS.3SG.MID
“Just as the salt disintegrates on the brazier...” (KBo 6.34 ii 9-10, MH/NS)

Comparison between examples such as (236) and (238) shows that middle voice displays a certain degree of lability with respect to anticausative derivation (Luraghi 2010a: 145). It must be however stressed that such anticausative readings of the verb are extremely marginal: all of them come from late NS attestations, and two of them are suspiciously found in the same text (KBo 6.34, cf. *CHD s.v.*). Note further that these intransitive occurrences of the verb all show the more recent and productive ending *-ta(ri)*, that replaces the original ending *-a(ri)* (cf. Neu 1968b: 57). Clearly, this textual evidence points towards a later development of lability for this predicate.

sanna⁻ⁱ ‘hide, conceal’

Semantics and aspectual construal:

The verb *sanna*⁻ⁱ means ‘hide, conceal’ (see *CHD s.v.*), both when it occurs in the active and in the middle voice, as illustrated in examples (239) and (240).

(239) [(n=)an=k(an ANA ZAG^{HL.A}) s]annāi

CONN=3SG.ACC=PTC in border(PL) hide.PRS.3SG

“(Whoever doesn’t give up Hittite persons used for resettling), but conceals them within your borders.” (KBo 5.3 iii 68-69, NH/NS)

(240) [nu mān ÌR ^{LÚ}pitteantan] andan sannatta

CONN if slave fugitive.ACC in hide.PRS.3SG.MID

“If a slave conceals a fugitive (and harbors him, his master shall give compensation for him).” (KUB 36.127 rev. 13, NH/NS, F. Fuscagni (ed.), *hethiter.net/*: CTH 41.II.2)

In principle, the event denoted by *sanna*⁻ⁱ can be understood as profiling either the punctual transition of a change-of-state event or the resulting state only. In other words, the verb can show the aspectual construal of either a directed achievement ‘conceal’ or an undirected activity ‘keep secret’.³³ Unfortunately, there is no evidence from temporal adverbs to support either reading, which are both compatible with examples (239) and (240).

Etymology:

The Hittite verb *sanna*⁻ⁱ is cognate with adverbial items such as Lat. *sine*, OIr. *sain*, Gr. *áneu*, all meaning ‘without’. Based on this observation, the Hittite verb can be reconstructed as a causative nasal infix verb **sn-nó-h₁-ei* (Kloekhorst 2008 *s.v.*).

Argument structure and relationship with voice:

The verb *sanna*⁻ⁱ refers to an induced two-participants change-of-state event that involves an Agent and a Patient/Theme. As comparison between (239) and (240) shows, both active and middle forms

³³ The meaning ‘keep hidden’, that profiles the maintenance of the state ensuing from the change of state encoded by the predicate, can be also profiled by the stative construction involving the participle *sannant-* plus *hark-* (Inglese & Luraghi *forthc.*). However, the only occurrence of this construction involving *sanna*⁻ⁱ (KUB 60.43 ‘3), is too fragmentary to allow a reliable interpretation.

of *sanna-i* are syntactically transitive, with the two participants encoded as subject and direct object respectively.

As already observed by Neu (1968b: 108), active and middle forms of *sanna-i* display the same syntax and semantics, as the comparison between (239) and (240) shows. Active forms consistently take *hi*-inflection, and are thus likely to be archaic. The chronology is not of much help, as active and middle forms coexist since MS texts. Overall, as pointed out by Grestenberger (2014: 275), there is no compelling evidence to decide whether this verb was an original deponent *medium tantum* which later was transferred to active inflection (because of the *hi*-endings, the shift must have happened at a very early stage), or whether active inflection was original and sporadic middle forms are later formations. In this respect, it is at least suspicious that the only two middle occurrences come from the same MS text. A piece of evidence in favor of active forms being original comes from the etymology of this verb. Since *sanna-i* reflects a causative *‘make unavailable’ > ‘hide’, it is more likely that the verb originally had active inflection, since middle morphology on a causative transitive verb is at least semantically odd to explain, the middle voice being used with causatives mostly as a valency reducing device with e.g. passive or anticausative function.

It is interesting to observe that the semantically close verb *munnai-* ‘hide’ by contrast displays a meaningful voice alternation, with active forms used transitively and indicating an induced event ‘hide (tr.)’ and intransitive middle forms indicating the corresponding plain event ‘disappear’ or the reflexive counterpart ‘hide oneself’ when accompanied by the particle =*za* (cf. discussion in the *CHD*, Neu 1968a: 119; see Chap. 2).

sup^{(tt)a(ri)/zi} ‘fall asleep, sleep’

Semantics and aspectual construal:

The verb *sup*^{(tt)a(ri)} means ‘fall asleep, sleep’, as in example (241):

- (241) *nu=za suptari kuiski nasm[a i]starkiyazzi kuinki*
 CONN=REFL fall.asleep.PRS.3SG.MID INDF.NOM or f all.ill.PRS.3SG INDF.ACC
 “(If infantry or chariotry march through your land,) and someone falls asleep or someone falls ill.” (KBo 5.4 ii 38, NH/NS)

The aspectual interpretation of this predicate is partly problematic. On the one hand, the verb can indicate a spontaneous change-of-state punctual event, i.e. an achievement. This reading is shown in

(241), in which a dynamic reading clearly fits the context better, as also evidenced by coordination with the change-of-state verb *istar(k)-zi* ‘fall ill’.

By contrast, in example (242), the event is most likely construed as stative, as also evidenced by the occurrence of the ablative GE₆-*andaz* ‘through the night’ that indicates durations in time.

- (242) *n=as* GE₆-*andaz* *UL* *suptāri*
 CONN=3SG.NOM night.ABL NEG sleep.PRS.3SG.MID
 “And he does not sleep at night.” (KUB 4.47 i 3, OH/NS)

Unsurprisingly, a dynamic reading is at play when the verb occurs in the imperative, as in example (243).

- (243) *supten=wa*
 sleep.IMP.2PL=QUOT
 “Go to sleep!” (KUB 39.31 3, NH/NS)

In (243), even though the verb occurs in a fragmentary context, the imperative mood is only compatible with an inchoative ‘fall asleep, go to sleep’ construal of the verb. This is the common behavior of stative verbs coerced into an inchoative reading in the imperative, so that it does not add much to our understanding of the default construal of *sup*-^{(tt)a(ri)}. Notably, the fact that *sup*-^{(tt)a(ri)} occurs in the imperative shows that participant to the event can be thought of as at least partially exerting control.

Unfortunately, the other attestations of this verb (see Kloekhorst 2008 *s.v.*, *HEG* II/2 vol.14 *s.v.*) all occur in fragmentary or otherwise ambiguous contexts, so that they cannot be used to support either reading. Moreover, the participle *suptant-* is attested only once (KBo 43.27 4-5) and it can be interpreted as either stative or resultative (Frotscher 2013: 205 fn. 322).

Etymology:

The etymology of this verb is straightforward: the verb is connected to PIE **suep-* ‘sleep’, with many IE cognates, including Skt. *svap-* ‘sleep’ and Lat. *sōpīre* ‘fall asleep’ (Kloekhorst 2008 *s.v.*).

Argument structure and relationship with voice:

The verb *sup*-^{(tt)a(ri)} encodes a one-participant change-of-state event. As discussed above, the participant, which must be an animate entity, can be either construed as exerting control over the

event or not. The verb consistently occurs in an intransitive construction and requires clitic subjects (Garrett 1996: 94), as in the occurrence of the clitic =*as* in (242) shows.

The verb *sup*-^{(tt)a(ri)} occurs both in the active and the middle voice. Both forms are equivalent in syntax and semantics (Neu 1968b: 79), as comparison between (242) and (244) shows:

(244) *nu=war=at=si=kan* *dāuwani* *suppiezzi*
 CONN=QUOT=3SG.NOM=3SG.DAT=PTC staff.DAT sleep.PRS.3SG
 “He sleeps on his staff (?).” (KUB 12.63 rev. 3-4, OH/MS)

According to Kloekhorst (2008 s.v.), middle inflection of *sup*-^{(tt)a(ri)} is more likely to be original due to the higher token frequency of middle forms, but the chronology is not of help as most occurrences come from NS texts.³⁴ Etymologically, middle inflection is not supported by other IE cognates, as e.g. Skt. *svap*- consistently shows active morphology. Therefore, an alternative scenario might be that the verb was originally active and was only later transferred to the middle inflection, as argued by Villanueva Svensson (2008: 206-208).

Interaction with the particle =za:

Comparison between (241) and (242) shows that the use of the particle with this verb is optional. It is tempting to relate the alternative construal of the event in these two examples to the occurrence of the particle, with *sup*-^{(tt)a(ri)} ‘sleep’ denoting the stative event as opposed to dynamic =*za sup*-^{(tt)a(ri)} ‘fall asleep’ (comparable to e.g. It. *dormire* ‘sleep’ vs. *addormentarsi* ‘fall asleep’, see similar remarks on *ses*-^{zi} ‘sleep’ vs. =*za ses*-^{zi} ‘lie down, fall asleep’ Boley 1993: 26-27). Unfortunately, there are no other occurrences in support of this interpretation, so that any generalization remains unconvincing. Note that in NH, =*za ses*- eventually replaced *sup*-^{(tt)a(ri)} in the sense ‘go to sleep’ (Melchert 2017b: 482).

***tame(n)k*-^{zi} ‘affix, attach, stick to, join (intr.)’**

Semantics and aspectual construal:

³⁴ It should be observed that some of the occurrences given by Kloekhorst are partly restored and can be also interpreted otherwise, as e.g. [*s*]u-up-ta-ri in KUB 20.68 i 7 which is restored as [*ta-r*]u-up-ta-ri in by Groddek 2004: 118, [*su*]-up-zi in KUB 4.47 obv. 5 restored as [*ta-ru*]-up-zi, see Mouton 2007: 144 fn. 151).

The basic meaning of the verb *tame(n)k^{-zi}* is ‘attach (intr.), join up’, as in example (245):

- (245) *mān=ma=kan* UKÛ-*as=ma* *kuiski* ŠA URU^{LIM} ANA LÚ^{MEŠ} URU^{URU} *Gasga*
 if=PTC=PTC man.NOM=PTC INDF.NOM of city to man(PL) K.
kuiski *anda dammektari*
 INDF.NOM in join.PRS.3SG.MID
 “If a man of the town or anybody joins up with the Kaskean.” (KUB 21.29 iv 8-9, NH/NS)

Concerning its aspectual construal, the verb encodes a change-of-state event, telicity being confirmed also by its resultative participle *tamenkant-* ‘joined’. Frotscher (2013: 218) groups this verb together with accomplishment predicates, but there is no compelling evidence that the verb can profile the event as unfolding over time. As a matter of fact, in most of the (readable) occurrences the verb is used metaphorically to refer to human relationship, thus suggesting a non-incremental, i.e. achievement, construal of the event, as in (245).

Etymology:

The verb has been etymologically connected with Skt. *tañk-* ‘pull together, to coagulate’ from a PIE root **temk-* (Kloekhorst 2008 *s.v.*), even though the details of the relationship are doubtful (see *HEG*: T 78 for discussion).

Argument structure and relationship with voice:

The verb *tame(n)k^{-zi}* encodes a spatial reciprocal asymmetric event involving two reciprocants. In most of the occurrences, only one of the two participants is conceived as actively contributing to the initiation and completion of the event. Syntactically, this asymmetric construal is reflected by the fact that the verb occurs in a discontinuous construction with one reciprocant encoded as an intransitive subject and the second reciprocant encoded as an oblique, as the occurrence of the adverbial phrase ANA LÚ^{MEŠ} URU^{URU} *Gasga* ‘with the Kaskean’ in (245) shows. Note that the second reciprocant can be omitted altogether, as in (246), in which the verb is used intransitively and shows unaccusative syntax (Garrett 1996: 91), as evidenced by the occurrence of the clitic subject pronoun =*as*.

- (246) *n=as* UL *anda tamektari*
 CONN=3SG.NOM NEG in join.PRS.3SG.MID
 “(How I have cut this cord) and it does not attach.” (KUB 7.41 i 26, MH/NS)

Sporadically, the verb also occurs in a simple reciprocal construction, with the two reciprocants encoded by a plural subject, as in (247), in which the two reciprocants are encoded by the plural NP [GİR^{MEŠ}]=YA ‘my feet’.

- (247) [GİR^{MEŠ}]=YA *damenkir*
 foot(PL)=1SG.POSS join.PST.3PL
 “My feet attached to one another.” (VBoT 58 i 40, OH/NS))

The relationship of the verb *tame(n)k-^{zi}* with voice is quite puzzling, as the verb deviates from the use of middle voice with other verbs encoding spatial reciprocal events (see Inglese 2017). With most spatial reciprocal verbs, as discussed e.g. for *sarr-ⁱ* ‘split (tr. act.), split (intr. mid.)’, the active voice denotes a transitive object-oriented event, whereas the middle voice indicates the corresponding reciprocal anticausative, or passive, event. This is clearly not the case of *tame(n)k-^{zi}*, which occurs in both voices without any noticeable difference in syntax and semantics (cf. already Neu 1968b: 81, Kühne & Otten 1971: 42-43). Both active and middle forms indicate a subject-oriented reciprocal event, and are used intransitively. Compare examples (245) and (248).

- (248) *nu=ta=kkan* *mān LÚ^{URU}Hatt[i kuiski]* *anda tamekzi*
 CONN=2SG.DAT=PTC if man *H.* INDF.NOM in join.PRS.3SG
 “If some Hittite attaches himself to you.” (KUB 23.1+ iii 9, NH)

Based extant textual material, it is difficult to explain why this predicate fails to pattern with other spatial reciprocals in the selection of its morphological voice. The chronology of the attestations is also of little help, since active and middle forms occur alongside since MS, even within the same text (cf. *tamektat* KBo 17.105 iv 4 and *damenkizi* KBo 17.105 iv 3). Tentatively, one could argue that active voice indicating an intransitive autocausative event was original for this verb. Later on, the verb was partly transferred to middle inflection, on analogy with semantically similar middle verbs such as *harp-^{ta(ri)}* and *happ-^{ta(ri)}* ‘join (intr.)’. By contrary, if one assumes that the verb started out as *medium tantum* and later developed active voice, it is not clear why active voice did not come to be associated with the corresponding induced object-oriented reciprocal situation, giving rise to the reciprocal anticausative alternation common to most spatial reciprocals.

watku-^{zi} ‘jump, flee’

Semantics and aspectual construal:

The verb *watku*-^{zi} means ‘jump, flee’. As observed in the *HEG* (W/Z: 450), this interpretation is supported by the use of the verbal noun *watkuwar* as a translation of Akkadian *sahāṭu* ‘jump’. The verb is used in a variety of contexts with different shades of meaning (see *HEG* W/Z: 450 for an overview). The basic meaning ‘jump’ can be observed in occurrences such as (249):

- (249) ^dU-as=kan ^{GIŠ}tiyaridas sarā gagastiyas mān *watkut*
Stormgod.NOM=PTC chariot.GEN on grasshopper.NOM like jump.PST.3SG
“The Stormgod jumped on his chariot like a grasshopper.” (KUB 33.106 iv 21-22, NS)

In (249), the event is possibly construed as a directed achievement, as it indicates a telic motion event that does not incrementally unfold over time. Telicity of this predicate is confirmed by its resultative participle *watkuwant*- ‘jumped’.

The same construal can be attributed to middle occurrences such as (250):

- (250) n=asta KAKSAL-az arha mekki *watakahhut*
CONN=PTC way.ABL away much jump.IMP.2SG.MID
“(When you see a woman of the palace,) jump far out of her way!” (KBo 19.43+ iii 50 NH/NS)³⁵

Often, mostly when used with reference to animals, the verb acquires a sexual connotation and indicate ‘mount, copulate’, as in (251), showing a semantic shift similar to what discussed for *ark-a(ri)* ‘climb > copulate’.

- (251) takku ŠAH-as LÚ-ni *watkuz[i]*
if pig.NOM man.DAT jump.PRS.3SG
“If a pig tries to mount on a man.” (KBo 6.26 iv 19, OH/NS)

Etymology:

³⁵ According to Neu (1968a: 195), the aberrant middle imperative form *watakahhut* instead of expected **wakuhhut* is modelled after the form *usgahhut* which precedes in the same text.

The etymological interpretation of this verb is doubtful: either it goes back to a prefixed formation **ue-tk^w*-, similarly to *wete^{zi}* ‘build’, or the verb can be seen as reflecting a single root **uetk^w*- (Kloekhorst 2008 s.v.).

Argument structure and relationship with voice:

The verb *watku^{zi}* indicates a one-participant manner of motion event involving a moving Agent. The spatial configuration of the event can be further specified by the occurrence of a Direction, encoded by adpositional phrases, such as ^{GIŠ}*tiyaridas sarā* ‘on the chariot’ in (249), or a Source, as in the case of the ablative noun *KAKSAL-az* ‘from the way’ in (250). With the sexual meaning ‘mount’, the verb can take an animate Location encoded in the dative, as in (251).

The verb displays intransitive unaccusative syntax (Garrett 1996: 96), as the occurrence of the clitic subject *=as* in (252) shows.

- (252) *n=as=mu=kan* *peran arha watkuzi*
 CONN=3SG.NOM=3SG.DAT=PTC in.front away jump.PRS.3SG
 “He flew away from me.” (KBo 5.13 ii 19, NH/NS)

Putative evidence for a transitive use of this verb is limited to one controversial example, shown in (253):

- (253) *mān=za=kan* G[U₄-us AMAR-un xxx] *nasma* UDU-us SILA₄-an [xxx]
 if=REFL=PTC bull.NOM calf.ACC or sheep.NOM lamb.ACC
watkuzi
 jump.PRS.3SG
 “If a bull a calf [xxx], or a sheep a lamb [xxx] mounts (?).” (KUB 30.46 left. col. 8-10, NS)

As Dardano (2006: 96) discusses, there is no compelling evidence to take *watkuzi* as occurring in a transitive construction with the nouns *UDU-us* and *SILA₄-an* as subject and direct object respectively. In fact, one can easily reconstruct another transitive verb in the gap at the end of line 9, so that *watkuzi* is better interpreted as belonging to a separate sentence whose initial part is missing.

As already pointed out by Neu (1968a: 194, 1968b: 79), active and middle forms of the verb *watku^{zi}* display the same syntax and semantics, as comparison between e.g. (249) and (251) neatly shows. The principle behind voice selection, as well as the original inflection of the verb is not entirely clear.

The chronology of the attestations can shed some light on this issue. The verb shows active inflection since OS, whereas middle inflection occurs only at a later stage. Notably, one OH/OS occurrence of the form *wa-at-ku-at-ta* can either be interpreted as a 3rd singular present middle or as an active preterite (cf. Neu 1968a: 194, 1983: 213). It is not unlikely that the verb started out as active only, and eventually was marginally transferred to middle inflection on analogy to other intransitive middle motion verbs such as *salik-^{a(ri)}*. It is possible that the basis for transfer to middle inflection was provided by preterite 3rd singular forms *watkuatta*, which could be easily reinterpreted as present middle forms.

weh-^{zi} ‘turn’

Semantics and aspectual construal:

The verb *weh-^{zi}*, which occurs both in the active and in the middle voice, displays the basic meaning ‘turn’ (see Neu 1968a: 195-199 for occurrences), as in examples (254) and (255):

(254) [LÚ.M]EŠ *hāpess=a wahanzi*

officer.NOM.PL=CONJ turn.PRS.3PL

“The cult officers also turn themselves.” (KBo 25.31 ii 14, OH/OS)

(255) GİŠIG *nu=wa=ssan GIM-an [xxx] [ueh]atta*

door CONN=QUOT=PTC as turn.PRS.3SG.MID

“And as the door [in the socket?] turns.” (KBo 12.112 rev. 12, NH/NS, transl. Beckman 1983: 69)

That the verb *weh-^{zi}* denotes the event of ‘turning’ in the sense of ‘changing one’s orientation’ is further suggested by its occurrence with adverbials indicating spatial orientation, i.e. ‘on the right’ and ‘on the left’, as in (256) and (257).

(256) *t=asta namma GÛB-li=ya [wahanzi]*

CONN=PTC again left.DAT=CONJ turn.PRS.3PL

“And they turn again on the left as well.” (KBo 25.31 ii 14, OH/OS)

(257) [xxx] *pēdi=smi=pat ZAG-ni 1-ŠU wah[anzi]*

place.DAT=3PL.POSS.DAT=FOC right.DAT once turn.PRS.3PL

“And they turn once on their own place on the right.” (KBo 25.31 iii 4, OH/OS)

Based on the examples in (254) to (257), the verb can be described as a directed reversible achievement, similarly to *nai*⁻ⁱ ‘turn’. A punctual construal is suggested by the adverbs *namma* ‘again’ and 1-ŠU ‘once’, which both entail telicity, in (256) and (257) respectively. Note further that the occurrence of the adverbial *pēdi=smi* ‘on their place’ in (257) indicates that the verb encodes non-translational motion. The resultative participle *wahant-* ‘turned’ further suggests that the event denoted by the verb should be taken as bounded.

Notably, as comparison between (254) and (255) shows, active and middle forms of the verb share the same aspectual construal. However, a number of middle occurrences of the verb are more difficult to interpret. Compare examples (258) and (259), both coming from a MH/MS text:

- (258) *ser=ma=san* 3 ^{LÚ.MEŠ}DUGUD *wehandaru*
 upon=PTC=PTC 3 commander(PL) turn.IMP.3PL.MID
 “Three commanders shall supervise (them).” (KUB 13.1 i 45-46, MH/MS)
- (259) ŠA É.DU.Ú.SA=*ya* ŠA É ^{LÚ}SAGI ^É*hílamnass=a* *ārtahius*
 of purification.building of house cupbearer gate.NOM=CONJ sewer.NOM.PL
wehandaru
 turn.IMP.3PL.MID
 “The water of the drains of the ritual purification building, of the house of the cupbearer, and of the gate house must circulate (freely).” (KUB 13.1 ii 24-25, MH/MS)

Concerning example (258), as Neu (1968a: 197) discusses, in combination with the preverb *ser* the verb acquires the meaning ‘turn toward, supervise’. Even though the meaning ‘supervise’ can be easily metaphorically derived from the meaning ‘turn’ (e.g. Eng. *turn one’s attention*), the verb does not seem to profile the change-of-state event, but rather the resulting state, construed as a dynamic mental undirected activity.

The interpretation of example (259) is partly problematic. According to the *CHD* (*S*, 168b) the sentence should be translated as ‘let them patrol the water pipes’, with the verbal form *wehandaru* interpreted as occurring in a transitive construction. This is at odd with the usual behavior of the verb, which is never used transitively when inflecting in the middle voice (see further below). It is safer to follow Neu (1968a: 197) and Miller (2013: 382 fn. 402) and treat the verb as intransitive, with the meaning ‘turn here and there, move’. If this interpretation is correct, the verb does not profile a single event of turning, but a sequence of turning events construed as a single atelic undirected activity, via structural schematization.

An atelic construal of the verb is also possibly show in (260), in which the verb means ‘surround, be present’ and profiles a state (cf. Neu 1968a: 197):

- (260) ^{LÚ.MEŠ}ELLUTUM=ya=smas kuiēs arahzanda **wehanda**[(ri)]
 notable(PL)=CONJ=2PL.DAT REL.NOM.PL around turn.PRS.3PL.MID
 “And the notables who surround you (shall not be hostile to any of you.)” (KBo 5.4 ii 10-11, NH/NS)

Summing up, whereas the default aspectual construal of the verb *weh*^{zi} ‘turn’ is a reversible directed achievement, in certain contexts the verb can also profile an atelic event. Alternative construal of this verb has different motivations. First, it can be linked to meaning extensions of the verb, as in (258) ‘turn upon > supervise’ and (260) ‘turn up > be present’, in which the resulting state of the verb is profiled via methonymy. Alternatively, an atelic construal can be due to the cognitive operation of structural schematization ‘turn here and there > circulate’, as in (259). As remarked by Melchert (forthc.b: 26-28), alternative construals of middle *weh*- apparently correlate with different sets of endings, with *weh*^{tta(ri)} consistently associated with telic events and *weh*^{atta(ri)} to atelic ones. Compare the form *wehatta* in (261), whose atelicity is further confirmed by the occurrence of the temporal adverb ITU.3.KAM-*as* ‘for three months’, with the telic form *wēhtat* in (262).

- (261) [^mK]essis ITU.3.KAM-*as* HURSAG.MEŠ-*as* anda **wehatta**
 K.NOM for.three.months.DAT.PL mountain.DAT.PL in turn.PRS.3SG.MID
 “Kessi roams in the mountains for three months.” (KUB 33.121 ii 15, pre-NH/NS)
- (262) GIM-*an=ma=nnas=kan* HUL-*uwa* AWATE^{MEŠ} *istarni=summi*
 when=PTC=1PL.DAT=PTC evil.NOM.PL.N matter(N.PL) between=1PL.POSS
wēhtat
 turn.PST.3SG.MID
 “As evil things have happened between us.” (KUB 31.66 ii 10-11, NH)

Etymology:

According to Kloekhorst (2008), who draws from Eichner (1973: 76-77), the verb must go back to a PIE root **wéh₂-o*, and not to a Narten-inflected verb **ueh₂-*, as per *LIV*². Cognates to this verb are Skt. *véti* ‘pursue, strife after’, Lith. *výti* ‘pursue’. In *LIV*², these verbs are connected to **weih₁*, with the laryngeal based on the Gr. form *hiemai* ‘pursue’, but the etymology of the latter is problematic, as Kloekhorst observes.

Argument structure and relationship with voice:

The verb *weh^{-zi}* encodes a spontaneous one-participant non-translational motion event ‘turn’, involving a moving Agent. As discussed for *nai⁻ⁱ*, the verb *weh^{-zi}* can be described as indicating a spontaneous motion event of the autocausative type, so that Neu’s classification (1968b: 81) of the verb as reflexive is partly unwarranted, also on account of the lack of a non-reflexive counterpart.

As comparison between (254) and (255), active and middle forms of the verb both consistently display intransitive syntax. With respect to the use of clitic subjects, one can detect a certain degree of variation. Older occurrences of the verb, such as (256), fail to show a clitic subject pronoun. Later occurrences point towards unaccusative syntax (cf. Garrett 1996: 97), as the occurrence of the clitic subject =*as* in (263) shows:

(263) *mān=as=kan* *wēhtar[i]*
IF=3SG.NOM=PTC turn.PRS.3SG.MID
“If she turns.” (KUB 21.38 obv. 31, NH/NS)

As discussed for *nai⁻ⁱ*, unaccusative vs. unergative alternation with these verbs can be taken as evidence of the ongoing extension of unaccusativity to non-directional motion verbs from OH onwards (Luraghi 2010a).

The verb *weh^{-zi}* inflects in both the active and the middle since OS. As Kloekhorst (2008 *s.v.*) puts it, “middle forms are attested in OS texts already, which means that the middle inflection is not necessarily derived from the active inflection”. It must be stressed however that the only OS occurrences of a middle forms of *weh^{-zi}* comes from a highly fragmentary context, so that it could also be interpreted as a participle rather than as a finite form of the verb (StBoT 26: 214 fn. 624). Based on this evidence, it is not possible to decide whether the verb originally belonged to the *media tantum* or not. As far as one can tell, there is no semantic or syntactic difference between active and middle forms (Neu 1968b: 81). It is also unclear why middle forms display a split into *-tta* and *-atta* endings according to the default aspectual construal of the predicate, which is a pattern unparalleled elsewhere in Hittite. That voice alternation does not correlate with valency alternation is confirmed by the fact that valency alternation with this verb is encoded morphologically via the causative transitive counterpart *wahnu^{-zi}* ‘turn (tr.), make turn’ since OS (Luraghi 2010a: 145).

***zahhiye/a-*^{ta(ri)/zi} ‘fight’**

Semantics and aspectual construal:

The verb *zahhiye/a-*^{zi} occurs both in the active and in the middle voice and means ‘battle, fight’, as in example (264). As such, the verb encodes a lexical reciprocal event in which two Reciprocants are involved in an act of warfare.

- (264) *kinun=a=wa ehu nu=wa zahhiyawastati*
now=PTC=QUOT INTJ CONN=QUOT fight.PRS.1PL.MID
“And now let us fight (each other)!” (KBo 3.4 ii 13, NH/NS)

Similarly to what discussed for middle forms of *zahh-*ⁱ with reciprocal meaning, e.g. (499), the verb *zahhiye/a-*^{zi} is likely to profile an undirected activity involving two participants each alternately performing the role of Agent and Patient, as in (264), without the completion of the event being profiled. The participle of this verb is unattested (cf. *HEG*).

An atelic construal of the event encoded by *zahhiye/a-*^{zi} as unfolding over time is further suggested by its occurrence in *kuitman* temporal clauses indicating duration in time, as in (265):

- (265) [*nu=wa=san kuitma*]n ŠA ^dUTU-ŠI [ÉRIN^{MEŠ} *zahhiyatta*]ri
CONN=QUOT=PTC while of my.majesty troop(PL) fight.PRS.3SG.MID
“While the troops of your majesty make war (because I am nearby, I will attack the enemy land immediately.” (KUB 14.1 + KBo 19.38 obv. 25-26, MH/MS)

When the verb occurs with the temporal adverb *hūdak* ‘suddenly’, the adverb profiles the inception phase of the process, and is often combined with the imperative mood, which notoriously imposes an inchoative construal on atelic predicates, as in example (266):

- (266) *sumess=a apūn* ^{LÚ}KÚR *hūdak* [*zahhiyadd*]uma
2PL.NOM=CONJ DEM.ACC enemy suddenly fight.IMP.2PL.MID
“You should (start to) fight that enemy immediately.” (KUB 23.72 rev. 64, MH/MS)

Etymology:

The verb is a denominal formation from the inherently reciprocal noun *zahhai-* ‘battle’, itself a derivative of *zahh-*ⁱ ‘hit’ (cf. Kloekhorst 2008 s. *zahhai-*).

Argument structure and relationship with voice:

The verb *zahhiye/a^{-zi}* appears both in active and middle forms and occurs in different constructions (Neu 1968a: 204-205).

In the first place, the middle verb can be used intransitively, in which case it displays unergative syntax as it does not require a clitic subject (Garrett 1996: 99). When the verb occurs with a plural subject, it can be described as encoding a subject-oriented reciprocal event in a simple construction, with the two reciprocants encoded as subject, as in (264). Unsurprisingly, intransitive middle forms with a singular individuated subject do not trigger a reciprocal interpretation, as in (267):

- (267) [*kuedani=wa=ka*]*n* UD-*ti* ^dUTU-*ŠI* ***zahhiya[ttari]***
REL.DAT=QUOT=CONN day.DAT my.majesty fight.PRS.3SG.MID
“On the day on which his Majesty goes to battle.” (KBo 16.27 ii 2, MH/MS)

In (267), the middle verb *zahhiyattari* is used intransitively without a definite direct object, and only profiles the event as an undirected activity performed by the subject. Clearly, the presence of a second participant encoding the enemy is entailed, but it is left unprofiled.

In the second place, the verb can be used transitively. In this case, one reciprocant is encoded as subject, and the other one as direct object, as in example (266). Syntactically, this construction can be described as a discontinuous reciprocal construction. Notably, both active and middle forms of the verb freely alternate in this construction, without any discernible difference in meaning, as comparison between (266) and (268) shows.

- (268) *n=an* *apezz=a* ***zahhiyami***
CONN=3SG.ACC there=also fight.PRS.1SG
“I will fight him also there.” (KBo 16.47 obv. 13, MH/MS)

To sum up, the verb occurs in the following constructions:

- A. [$N_{1(NOM,PL)}$ *zahhiye/a^{-tta(ri)}*] = [SEM₁ fight (among each other)] SIMPLE RECIPROCAL
B. [$N_{1(NOM,SG)}$ *zahhiye/a^{-tta(ri)}*] = [SEM₁ goes to battle]
C. [$N_{1(NOM)}$ $N_{2(ACC)}$ *zahhiye/a^{-tta(ri)/zi}*] = [SEM₁ fight SEM₂] DISCONTINUOUS RECIPROCAL

It is not clear to what extent voice alternation impacts the verb's meaning. At first sight, with this verb active vs. middle voice alternation might be taken as encoding reciprocal derivation, as a cursory comparison between examples (264) and (268) may suggest. However, this interpretation is seriously called into question by occurrences in which middle forms of the verb are used transitively, in the same way as active forms are, as comparison between (266) and (268) shows (Neu 1968b: 58-59).

This apparently conflicting evidence can be more easily interpreted as outcome of different construal operations imposed on the event denoted by the verb. Being based on an inherently reciprocal noun *zahhai-* 'battle', the verb *zahhiye/a-^{zi}* cannot but indicate a reciprocal event, with two entities alternately involved in acts of mutual warfare. In this sense, the verb is a lexical reciprocal, since there is no non-reciprocal base verb from which it is derived. Middle inflection on this verb can be explained as a lexical reciprocal marker, and reciprocity is prototypically expressed when the verb takes a plural subject and no direct object appears. In this case, exemplified in (264), the event is construed as a canonical reciprocal event, with two participants being symmetrically and simultaneously involved in an inverse relationship, in a syntactically simple construction (cf. Inglese 2017: 965, 980-981). However, speakers may have the need to construe the event in a less symmetric way, for instance highlighting the more active involvement of one of the two participants, or by distinguishing between an attacker and a defender participant. In order to do so, a reciprocal discontinuous construction can be employed, that is, a transitive construction with a subject, the attacker, and a direct object, the defender. Thus, alternation between intransitive and transitive usages of the middle voice, as in (264) and (266), can be interpreted as outcome of different construal operations imposed on the same event.³⁶ Example (267), in which the defender is left unprofiled (offers another construal possibility). Once the lexical reciprocal verb *zahhiye/a-^{ta(ri)}* started to be used in transitive constructions, it could have been easily transferred to active voice, which is typically associated with highly transitive events. In this respect, it is interesting to observe that active occurrences of the verb in a transitive construction are used alongside middle forms from MS onwards (the verb does not occur in OS), but middle forms tend to be more frequent in number. Transfer to active inflection was possibly accomplished by NS times, in which one finds the middle voice preserved only in the possibly idiomatic expression 'let's fight' as in (264), and active forms otherwise replace middle forms in all other contexts.

³⁶ See Allan (2003: 52-53) for a similar analysis of verbs of fighting in Ancient Greek. These verbs, such as *mákhomai* and *érizomai* 'fight, quarrel with', occur either in an intransitive construction with a plural subject or with a second participant in the dative case, and this alternation reflects a different construal of the event.

5.1.3. Verbs with oppositional middle voice

This section features those verbs that show functionally oppositional active and middle forms. For each verb, the function(s) of the middle voice are discussed, based on comparison with active forms of the verb.

ariyeske/a^{-zi} ‘determine by oracle’, *ariyeske/a^{-tta(ri)}* ‘be determined by oracle’

Semantics and aspectual construal:

The active verb *ariye/a^{-zi}* means ‘inquire, determine through oracle’. Since middle forms of this verb are only attested for *-ske/a-* derived forms, I first discuss the semantics of active base forms.

Similarly to other verbs of speech and requesting (see discussion under *halzai⁻ⁱ* ‘call’, *isiyahh⁻ⁱ* ‘reveal’, *mema⁻ⁱ* ‘speak’), the default construal of *ariye/a^{-zi}* is most likely an irreversible achievement, i.e. a telic and punctual event. Interestingly, the verb may occur in different argument structure constructions (see below), but this alternation does not alter the aspectual construal of the event. This is shown by comparison of examples (269) and (270): in the former, the verb is used intransitively, whereas the latter features the direct object *zankilatar* ‘penalty’, but in both cases the aspectual profile of the verb remains unaltered.

(269) *nu kissan arier*

CONN thus determine.by.oracle.PST.3PL

“And they gave the following oracle response.” (KUB 5.6 iii 19, NH/NS)

(270) *zankilatar=ma ariyanzi*

penalty.ACC=CONN determine.by.oracle.PRS.3PL

“They determine the penalty by oracle.” (KUB 22.40 ii 23, NH/NS)

Although we lack evidence from temporal adverbs, telicity of this verb is further suggested by its resultative participle *ariyant-* ‘determined by oracle’.³⁷

Concerning middle forms of the verb, they are all based on the derived *-ske/a-* stem and are usually taken as indicating iterative events. In occurrences such as in (271), the context favors an

³⁷ According to the *HW*², this verb shows two different participial stems, viz. *arant-* and *ariyant-*, the latter being a younger formation (see Frotscher 2013: 185-187 for further discussion). According to Melchert (*apud* Kloekhorst 2008), however, *arant-* forms taken as belonging to *ariye/a^{-zi}* all belong to other verbs such as *arae^{-zi}* ‘stop’.

iterative/distributive interpretation, with the subject performing the event denoted by the verbs several times:

- (271) *apāss=a* *apiya* *arieskattari*
 DEM.NOM=CONJ then determine.by.oracle-IMPF-PRS.3SG.MID
 “He will at that point also be investigated through repeated oracle consultations.” (KUB 5.6 ii 37, NH/NS)

The same aspectual construal applies to active forms of the derived *-ske/a-* stem, as in example (272), in which iteration is suggested by the context. Here, what is described is the failed attempt to complete an oracle inquiry, which must be consequently repeated:

- (272) *nu* *ABU=YA* *ariskit*
 CONN father=1SG.POSS determine.by.oracle-IMPF-PST.3SG
 “And my father kept asking through oracle (but he did not find you Gods through oracle).” (KUB 14.13 obv. 50, LNS)

Etymology:

According to Kloekhorst (2008 *s.v.*) and *LIV*², the verb *ariye/a-^{zi}* is connected to Gr. *eréō* ‘ask’, going back to PIE **h₁reh₁-*. Goetze & Pedersen (1934: 47) suggest a connection with Lat. *ōrāre* ‘pray’ and Gr. *arḗ* ‘prayer’, but this is formally unlikely, since the latter go back to **h₂er-*, which would have yielded Hit. **har-*, as Kloekhorst (2008 *s.v.*) points out.

Argument structure and relationship with voice:

Forms of the simple verb *ariye/a-^{zi}* are consistently active throughout the history of Hittite.³⁸

The event encoded by the active verb *ariye/a-^{zi}* features at least an Agent and a Theme. The verb usually occurs in a transitive construction, with the Agent always encoded as a nominative subject and the Theme as a direct object. The transitive construction of *ariye/a-^{zi}* is exemplified in (270). Moreover, the verb can be used intransitively without a referential subject, in which case it displays unergative syntax, as the lack of clitic subject pronoun in (269) shows. Additionally, a Beneficiary of

³⁸ A form *a-ri-ya-a[t-ta-ri]* is reconstructed by Beckman *et al.* (2011: 188) in their edition of KUB 5.6+ ii 12. Since the reading of this form is speculative, and this would be the only known middle form of *ariye/a-^{zi}*, it is safer to follow Ünal (2005: 62) and read *a-ri-ya-an* instead.

the oracular inquiry can surface as a dative NP (cf. *HW*² for occurrences), and coreferentiality of the beneficiary with the subject might be expressed by the particle =*za*, as in example (273).

- (273) [*nu=w*]*ar=at=za* *uweni* *taksan arha*
 CONN=QUOT=3SG.ACC.N=REFL come.PRS.1PL together away
ariyaweni
 determine.by.oracle.PRS.1PL
 “Let us go put an oracle question on it together.” (KUB 34.45+ obv. 15, MH/MS)

Moreover, the Source participant, i.e. the entity that provides the answer to the oracular enquiry, can surface as an oblique in the instrumental case, mostly written with the Akkadian preposition *IŠTU* ‘from’. The use of the instrumental can be clearly seen in (274).

- (274) *āpiyas=ma* *uttar* DINGIR^{MEŠ}-*it* *kissan* ***ariyawen***
 pit.GEN=CONN matter.ACC god(PL).INST thus determine.by.oracle.PST.1PL
 “We thus determined the matter of the pits by oracle from the gods.” (KUB 15.31 ii 8 MH/NS)

Voice alternation between active and middle forms is only attested for forms based on the *-ske/a-* stem, with the first occurrences of the latter appearing in NS text only (all reliable NH/NS occurrences come from a single oracular text, KUB 5.6, see Appendix).

Active forms based on the *-ske/a-* stem share the syntax and semantics of base forms, as they can be used either transitively, as the occurrence of the accusative direct object *Armatallin* in (275) shows, or intransitively with unergative syntax, as in (270).

- (275) *AŠŠUM* ^{LÚ}SANG[A-*UTT*]*I=ma=ssi* ^m*Armatallin* ***ariskir***
 about priesthood=PTC=3SG.DAT A.ACC determine.by.oracle-IPMF-PST.3PL
 “Concerning the function as his priest, they investigated Armatalli.” (KUB 5.6 iii 5, NH/NS)

By contrast, middle *-ske/a-* forms are intransitive and show unaccusative syntax (Garrett 1996: 91), since they require a clitic subject pronoun, as in (276).

- (276) *n=as=kan* *ANA* ^dUTU-*ŠI* *:malahassallahiti*

CONN=3SG.NOM=PTC to my.majesty m.

areskattari

determine.by.oracle-IMPF-PRS.3SG.MID

“(If the Zawalli-deity of the city of Ankuwa is established by oracle as responsible for the illness of His Majesty), will he (i.e. the god) be questioned whether the performance of offerings is required from his Majesty.” (KUB 5.6 ii 67, NH/NS)

As comparison between (275) and (271) shows, active vs. middle voice alternation with this verb cannot but be interpreted as indicating passive alternation (already Neu 1968a: 13, *HW² s.v.*), even in absence of overt agent expressions. Comparison between (271) and (276) also shows that the subject of intransitive middle forms can be either the Theme, i.e. the entity determined by oracle, or the Source. Other non-passive intransitive derivations, e.g. anticausative and reflexive, are semantically incompatible with this verb. Specifically, an anticausative interpretation is ruled out by the presence of agent-oriented meaning components (Haspelmath 1987), as the predicate lexicalizes an action carried out with a specific method, i.e. a request through oracle.

Remarkably, the simple verb *ariye/a^{-zi}* never appears as middle with passive function. Instead, in oracular contexts, the passive event ‘be determined by oracle’ is consistently indicated by middle forms of *hantae^{-zi}*, which could be well thought as providing a suppletive passive for *ariye/a^{-zi}*.

Summing up, the verb occurs in the following argument structure constructions:

- A. [N_{1(NOM)} N_{2(ACC)} N_{3(DAT)} N_{4(INST)} *ariye/a(ske/a)^{-zi}*] = [SEM_{1.AG} determine by oracle SEM_{2.TH} for SEM_{3.BEN} through SEM_{4.SOUR}]
- B. [N_{1(NOM)} *ariye/a(ske/a)^{-zi}*] = [SEM_{1.AG} performs an oracular inquiry]
- C. [N_{1(NOM)} *ariye/aske/a^{-tta(ri)}*] = [SEM_{1.TH} is determined by oracle, SEM_{1.SOUR} is questioned by oracle]

asās-/ases⁻ⁱ, aseske/a^{-zi} ‘settle (tr.)’, aseske/a^{-tta(ri)} ‘be settled’

Semantics and aspectual construal:

The verb *asās⁻ⁱ* means ‘make sit, settle (tr.)’ and constitutes the causative counterpart of intransitive *es^{-a(ri)}* ‘sit down’ (see further under *es^{-a(ri)}*). The verb occurs both in the active and in the middle voice, either in its simple or in its *-ske/a-* derived stem. Since middle forms of this verb are of difficult

interpretation, as I discuss below, I first illustrate the semantics and the aspectual construal of the active base verb.

Active forms of this verb indicate an induced change-of-state event. With the meaning ‘make sit’, the event is construed as a reversible directed achievement, much in the same vein as the plain event encoded by *es*-^{a(ri)}. When meaning ‘settle’, world knowledge favors an accomplishment reading, since the event is likely to incrementally take place over time before coming to completion. This alternative construal, which is ultimately based on world knowledge and on the semantics of the participants involved, is shown in (277) and (278). Telicity of this verb is further supported by the occurrence of NPs indicating the endpoint of the movement, as in (277).

(277) *n=a(n)=ssan* ŠA dU GIŠŠÚ.A *asasi*
 CONN=3SG.ACC=PTC of Stormgod throne sit.PRS.3SG
 “He makes him sit on the Stormgod’s throne.” (KBo 5.2 iii 37-38, MH/NS)

(278) *nu* URU *Hattussan āppa asāsi*
 CONN H.ACC back sit.PRS.3SG
 “(Who becomes king after me), and resettles the city of Hattusa.” (KBo 3.22 obv. 12, OH/OS)

Etymology:

The verb *asās*-ⁱ is a reduplicate causative formation from either **h₁eh₁s-* ‘sit down’ or **h₁es-* ‘sit’, with full reduplication of the root (Kloekhorst 2008 *s.v.*, see further Luraghi 2012 fn. 11, Dempsey 2015: 61-65). As pointed out by Covini (2017: 403-419, 2018), it is likely that the formation of this verb is not of PIE date, but rather reflects a pre-Hittite innovation, based on other reduplicate causative forms such as Hittite *titta*-ⁱ ‘settle’ from PAnat. **(s)ti-(s)ta-*, the latter ultimately derived from PIE **(s)teh₂-* ‘stand’. The morphology of this verb remains however somewhat obscure, especially concerning the alternation between the two stems *asās*-/*ases*- (Jasanoff 2003: 80 fn. 46, Rasmussen 2010: 223-224, Covini 2017: 403-419, 2018).

Note that the verb *asās*-ⁱ also shows a *-nu-* causative form, which is semantically identical to the base verb. In this case, the *-nu-* causative morpheme was later redundantly introduced to make more explicit the causative semantics of the verb (Kloekhorst *s.v.*, Dempsey 2015: 65). See further below under *es*-^{a(ri)}.

Argument structure and relationship with voice:

The verb *asās-ⁱ* mostly occurs in the active voice. Middle occurrences of this verb are rare, and most of them are based on the derived *-ske/a-* stem (according to Neu 1968a: 19, one counts only 4 middle *-ske/a-* forms, of which only one is attested in an original text; see Appendix).³⁹

The basic active verb *asās-ⁱ* denotes a two-participants event which include an Agent and a Patient, which undergoes a change of Location. The verb constitutes the causative counterpart of *es-^{ari}* ‘sit’. Syntactically, the active verb occurs in a transitive construction, with the Agent encoded as the nominative subject. Interestingly, both the Patient and the Location can be encoded as direct objects, as comparison between example (278) and (279) shows. The Location can be encoded as direct object only in the case the Patient is not expressed, otherwise it takes an oblique case, e.g. the dative, conforming to the thematic role hierarchy (van Valin 2001: 32), according to which Patient/Theme participants show a higher likelihood of being encoded as direct objects as compared to e.g. Location or Goal.

- (279) *n=us* ^{URU}KÙ.BABBAR-*si* *asashun*
 CONN=3PL.ACC H.DAT sit.PST.1SG
 “And I settled them in Hattusa.” (KUB 23.11 ii 36, NH/NS)

Voice alternation is better preserved for *-ske/a-* derived forms, with which it seems that middle voice acts as a valency reducing marker. Compare active transitive *asesk-* in (280), which takes a subject (here omitted) and the accusative direct objects LUGAL-*un* MUNUS.LUGAL-*ann=a* ‘the king and the queen’, with intransitive middle *asesk-* in (281), in which only the subject ^{GIS}KU ‘domain’ occurs.

- (280) LUGAL-*un* MUNUS.LUGAL-*ann=a* *asaskiz[zi]*
 king.ACC queen.ACC=CONJ sit-IMP-PRS.3SG
 “He makes the king and the queen sit.” (KBo 17.1 i 6, OH/OS)
- (281) [xxx]-*ma=za=kan* ^{GIS}KU=Š[UNU] EGIR-*pa* *aseskattat*
 =REFL=PTC domain=3PL.POSS back sit-IMP-PST.3SG.MID
 “And their domain was settled again(?)” (KBo 14.19 ii 25, NH/NS)

³⁹ The only attested underived form is the 2nd imperative *a-se-is-hu-ut* (KBo 12.1 iv 6, NS), which however occurs in a too much fragmentary contexts to understand its syntax and semantics.

The interpretation of the middle form *aseskattat* in (281) is however not entirely clear, partly owing to the fact that the passage occurs in a highly fragmentary context. According to Houwink ten Cate (1966), the verb here has passive function ‘was settled’, but this interpretation is called into question by Neu (1968a: 20). Neu (1968a: 19-20) interprets the verb as an ‘activity middle’, i.e. as indicating an autocausative event ‘sit down’. Notably, Neu’s proposal should be taken with due care, as it is based on virtually a single passage quoted in (282), which in turn is based on Kümmel’s (1967) restoration of the text.

- (282) [(*namma* LUGAL-*us* *kuedas* *kuedas* AN)]A *AŠRI*^{HLA}
 again king.NOM REL.DAT.PL REL.DAT.PL to place(PL)
aseskattari *nu=za* *ap[ās=a* *apēdas* ANA *AŠRI*^{HLA}
 sit-IMPF-PRS.3SG.MID CONN=REFL DEM.NOM=CONN DEM.DAT.PL to place(PL)
as]eskattari
 sit-IMPF-PRS.3SG.MID
 “On whichever places the king used to sit himself, on these places this one sits as well.”
 (KBo 15.2 rev. 27-29, NS)

According to Neu and Kümmel, middle *aseske/a*-^{ta(ri)} has roughly the same meaning of *es*-^{a(ri)}, i.e. it encodes a spontaneous change-of-location motion event. It must be stressed however that this is not the only interpretation available in this context. The entire passage deals with the ‘new King’ being led through the ritual of kingship, and illustrate how various servants attend to the preparation of the ritual. It is therefore not unlikely that the verb here is used with passive function, indicating that the king is ‘made sit’ in certain places during the ritual. In this respect, the verb would constitute the exact passive counterpart of (280), with the suffix *-ske/a-* indicating habituality. Note further that a passive interpretation is also compatible with the occurrence of *=za* in both (281) and (282). Since the particle is associated with transitive *asās*-ⁱ in its meaning ‘settle’ (Boley 1993: 74-76), it is not surprising that it is preserved when the verb is used in a passive construction.

***as(sa)nu*-^{zi} ‘take care of, be done with, deliver’, *as(sa)nu*-^{ta(ri)} ‘be taken care of’**

Semantics and aspectual construal:

The verb *as(sa)nu^{-zi}* displays a number of different meanings ranging from ‘take care of’ to ‘be done with’ (see *HW²* for discussion with examples), and occurs both in the active and in the middle voice. These different meanings reflect alternative aspectual construals of the event encoded by the verb.

Unfortunately, the verb does not occur with temporal adverbs that can help us in pinning down its precise aspectual construal, nor occurrences are quantitatively sufficient to assess the verb’s default aspectual construal. On the one hand, when the verb has the meaning ‘take care’, it seems reasonable to assume that the verb refers to a change of state in a Patient argument, possibly incremental in nature, hence a tentative classification as directed accomplishment (this is the classification proposed by Frotscher 2013: 211). As an example of this construal, consider (283):

- (283) *mahhan=ma=at=kan asnu[wa]nta[ri] (...) n=as=kan*
 WHEN=CONN=3PL.NOM=PTC take.care.PRS.3PL.MID CONN=3PL.ACC=PTC
namma wit[en]i katta [penniyanzi]
 again water.DAT down lead.PRS.3PL
 “When they (i.e. the horses) are taken care of (...), they bring them again to the water.”
 (KUB 29.44+ ii 19, MH/MS)

In (283), the occurrence of the verb within the temporal clause introduced by *mahhan* is suggestive of a telic reading of the verb. As example (283) shows, the verb *as(sa)nu^{-zi}* must indicate a telic event, since given the discourse structure, the event in the subordinate clause is conceived as being brought to completion before the event in the main clause can take place, as the two events can hardly be simultaneous. The same construal applies to active forms of the verb, as in (284):

- (284) [LUGA]L *Ú DUMU^{MEŠ}=ŠU KUR-ni assanuanzi*
 king CONJ son(PL)=3SG.POSS land.DAT take.care.PRS.3PL
 “And the king and his sons will take care of the land.” (KBo 13.13 rev. 10, MH/NS)

Note that occurrences of the verb in hippological texts, are often translated as ‘massage’, thus suggesting an atelic activity reading of the predicate (cf. *HED*, Kloekhorst 2008, but see Neu 1968a: 17 for a different interpretation). As a possible example for an atelic reading of the predicate see the passage in (285), in which however a telic reading is perfectly conceivable as well. All in all, there is no compelling evidence to support an atelic reading of the predicate.

- (285) *mahhan=ma arha lāi n=as asnuzi*

when=CONN away losen.PRS.3SG CONN=3PL.ACC take.care.PRS.3SG

“But when he unharnesses them, he massages them.” (KBo 3.5 iv 25-26, MH/NS)

In ritual contexts, the verb used with objects denoting ritual material, e.g. cups, and acquires the meaning ‘deliver’, which points toward a punctual reading of the verb (see discussion in Kloekhorst 2008 *s.v.*). As an example of this meaning, consider the passage in (286):

(286) GAL^{HI.A}=*kan assanuwanzi*

cup(PL)=PTC take.care.PRS.3PL

“(When they give an offering), they deliver the cups.” (KBo 2.4 i 19-20, NH/NS)

Moreover, the verb can be used with the meaning ‘get done, finish’, and it often occurs with an infinitive (cf. *HED* for occurrences). In this case, the construction [*as(sa)nu*^{-zi} + Infinitive] highlights the termination phase of a given event (see also discussion under *zinni*^{-zi}). This construal is exemplified in (287), where unfolding over time of the event is indicated by the durative time expression ‘in eight nights’ and by the subordinating conjunction *kuitman* indicating duration in time:

(287) *nu kuitman 8 MUŠU asnuzi*

CONN until 8 month take.care.PRS.3SG

“While he gets done in eight nights.” (KBo 3.5 i 32, MH/NS)

Etymology:

The etymology of this verb is disputed, with various existing proposals listed by Kloekhorst (2008 *s.v.*, see further *HED* and Covini 2017: 400-401). Formally, the verb is likely a causative form of the verb *es-* ‘be’, which would also semantically make sense: ‘make be’ > ‘take care of’. Therefore, Kloekhorst (2008 *s.v.*) reconstructs the stem as **h₁s-neu-*.

Argument structure and relationship with voice:

The verb *as(sa)nu*^{-zi} shows a meaningful voice alternation. The base verb is a two-place predicate to which an Agent and a Patient roles are associated. Active forms of the verb can either be used transitively, with the Agent and the Patient encoded as subject and direct object respectively, or the verb can be used intransitively without a definite direct object, as comparison between (284) and (287) shows. In the latter case, the verb shows unergative syntax, as it does not take a clitic subject

pronoun. By contrast, middle forms of the verb are intransitive and require a clitic subject, as shown in (283).

As hinted by Kammenhuber's (1961) translation (followed by *HW*² and *HED*), middle forms of the transitive verb *as(sa)nu-^{zi}* have passive function. This view is supported by comparison between (285) and (283), where a passive interpretation of middle *asnu[wa]nta[ri]* is the only one possible even in absence of an overt agent expression. A slightly different interpretation is given by Neu (1968a: 17-18), who suggests that the middle verb is an intransitive stative verb meaning 'be in the appropriate state'. However, it is more accurate to describe voice alternation of this verb as connected to passive alternation. A stative interpretation of passive forms is at best a by-product of the fact that the passive of telic verbs highlights the resulting state of the Patient participant (cf. Dixon & Aikhenvald 2000: 8).

Note that all passive occurrences in MS come from hippological treaties, which have been shown to display a number of unclear linguistic features, suggesting that the texts were not written by native scribes (cf. Hoffner & Melchert 2008: 283), and therefore might not be entirely reliable as to the status of middle forms of *as(sa)nu-^{zi}*. Elsewhere, the verb occurs only once in the middle voice a NS text (KBo 9.96 ii 3), but the context is too fragmentary to get a reliable interpretation.

au-ⁱ/u-, uske/a-^{zi} 'see', *u-^{ta(ri)}* 'be seen', *uske/a-^{ta(ri)}* 'be seen, watch out (with =za)'

Semantics and aspectual construal:

The Hittite verb *au-ⁱ* denotes an event of visual perception 'see' (cf. *HW*² for a thorough semantic treatment). It occurs both in the active and in the middle voice, both in its base and in derived *-ske/a-* forms. I first discuss the semantics of active forms and then proceed to middle forms.

Verbs denoting human perceptual events notoriously show alternation between a stative and a change-of-state construal. For instance, the Eng. verb *see* can be construed either as a transitory state (*I see Mount Tamalpais*) or as a punctual achievement indicating the beginning of the state (*I reached the top of the hill and saw Mount Tamalpais*), and thus belong to a class of alternating verbs labelled *inceptive states* (Croft 2012: 37-38). Similar considerations apply to the Hittite verb *au-ⁱ*. Consider examples (288) and (289).

(288) *takku* ^d*SIN* *autti*
 if moon see.PRS.2SG

“If you observe the moon (and one of the horns is turned to ‘great wind’).” (KUB 29.11 ii 14, NS)

(289) *mān uwarka[ntan] antuhsan uwanzi*
 if fat.ACC man.ACC see.PRS.3PL

“When they see a fat person (they kill him).” (KBo 3.60 ii 3-4, OH/NS)

In (288), the verb is used in an oracle text to refer to the ongoing act of observing the moon, and therefore implies a stative construal of the event. By contrast, in (289) the discourse context favors a change-of-state reading of the event, which refers to the point in time at which the Stimulus enters the visual field of the Experiencer. It is worth observing that the alternation of aspectual construal in (288) and (289) is also linked to different degrees of control exerted by the Experiencer, as the event in (288) is clearly controlled, whereas the event in (289) is uncontrolled.

The participle of this verb *uwant-* reflects this alternative construal, as it can either mean ‘be seeing’, patterning with atelic predicates, or ‘be seen’, patterning with telic predicates (see Frotscher 2013: 228-229, Dardano 2014a: 251-252). Compare in this respect examples (290), in which a stative semantics of the participle *uwanda* ‘seeing’ is further suggested by coordination with the likewise stative participle *iyandan* ‘going’ (see further under *ye/a-^{ta(ri)}*), and (291), in which by contrast a resultative/passive reading is supported by coordination with the passive participle *sakkanta* ‘known’ (this participle can also have the meaning ‘knowing’, but only in the collocation *sekkanit ZI-it* ‘with knowing mind, knowingly’, cf. Dardano 2014a: 245-248).

(290) *pāiwani=war=an sanheskiweni iyandan kinun uwandan*
 go.PRS.1PL=QUOT=3SG.ACC search.PRS.1PL go.PTCP.ACC knee.ACC see.PTCP.ACC
 IGI^{HLA}-in
 eye.ACC

“There we go looking for it, the marching knee, the seeing eye.” (KUB 9.34 rev. iii 33-34, MH/NS)

(291) *apenissuwanda [Ū]L sakkanta ŪL uwanda*
 such.ACC.PL.N NEG know.PTCP.ACC.PL.N NEG see.PTCP.ACC.PL.N
uddār [ess]uwan daiēr
 thing(N).ACC.PL do.SUP place.PST.3PL

“They have begun to do such things that were not know and not seen.” (KBo 12.62 rev. 14-16, MH/MS, text and translation after Hoffner 2009: 87)

The aspectual interpretation of middle forms of *auⁱ* partly depends on their syntactic interpretation, as I discuss below. A stative interpretation is possibly at play in example (292), where the verb is often translated as ‘be seen, be distinguished, count’ (for the interpretation of this passage see Singer 2002: 109 fn. 13 and Rieken et al. (ed.), [hethiter.net/CTH 383.1](http://hethiter.net/CTH383.1)).

(292) *nu=ta=kan* ^{URU}*Hattusas* [DINGIR^{ME1}]^Š-*as tu[liyas* *AŠ]RU*
 CONN=2SG.DAT=PTC *H.NOM* god.GEN.PL assembly.NOM place
^{URU}*Arinnas tuel* *āssi[anza]* U[RU-*as*] ^{URU}*Neriqqas*
 A.NOM 2SG.GEN be.loved.PTCP.NOM city.NOM N.NOM
^{URU}*Zippa[la]nd[as]* ŠA DUMU=KA URU^{DIDL.HLA} *uwandaru*
 Z.NOM of son=2SG.POSS city(PL) see.IMP.3PL.MID

“May Hattusa, the place of assembly of the gods, Arinna your beloved city, and Nerik and Zippalanda, the cities of your son, be visible to you/be seen by you.” (KUB 21.19 iv 28, NH/NS)

Similarly, a stative interpretation is possibly at play with forms built on the iterative stem *uske/a-*, either active, as in (293), or middle ones as in (294). In the former example, unfolding over time of the event is suggested by the occurrence of the ablative of time extension *GE₆-za* ‘through the night’.

(293) *nu=ssi* *GE₆-za* [*hāli* *s]er uskanzi*
 CONN=3SG.DAT night.ABL watch.ACC over see-IMP-PRS.3PL
 “By night they keep watch over him.” (KUB 17.31 i 25, NS)

Middle forms of *uske/a-* mostly come from a single text, the treaty between Suppiluliuma I and Huqqanas of the Hayasa People (*CTH 11*). In these occurrences, the verb is always combined with the particle =*za*, as in (294). This is possibly an idiomatic expression, meaning ‘watch out, take care’, in which the particle underlies the subject’s self-interest (thus Boley 1993: 116, Melchert 2017b: 478). In (294), the imperative mood arguably profiles the inceptive phase of the event, as well as the subsequent stative phase, as common with the imperative of stative verbs (cf. e.g. under *ar^{-tta(ri)}*).

(294) *nu=za* *ziqq=a* *mekki usgah[u]t*
 CONN=REFL 2SG.NOM=CONJ much see-IMP-IMP.2SG.MID
 “Sharply beware!” (KBo 19.43+ iii 58, NH/NS)

Etymology:

This verb is often connected with the Vedic hapax form *uvé* ‘I see’, pointing to the reconstruction of a PIE root **h₁eu-* (cf. *LIV*²). Kloekhorst (2008 s.v.) challenges this etymological connection, and rather connects the Hittite verb with e.g. Gr. *aiō* ‘perceive’ from a PIE root **h₂eu-* ‘see’. The morphology of this verb is rather complex (see Kloekhorst 2008 for discussion). In OS and MS texts, forms of the verb points to a stem *au/u-* inflected as a *hi*-verb, with the aberrant 3rd person singular *auszi* showing a stem *auss-* and inflecting as a *mi*-verb. This form eventually takes over in large parts of the paradigm, similarly to *mau/mu-* vs. *mauss-*. Derived *-ske/a-* forms mostly attest to the stem *u-*, whereas middle forms are built either on the stem *aus-* or a stem spelled either *u-wa-* or *ú-wa-*.

Argument structure and relationship with voice:

The verb *au-ⁱ* displays an interesting relationship with voice. Since simple *au-ⁱ* forms show a partly different syntactic behavior as compared to derived *uske/a-* forms, I will treat the two separately.

Being an experiencer predicate, the verb is associated with an Experiencer, the seer, and a Stimulus, the entity seen. The active verb is mainly involved in two different constructions. First, it can be used transitively, as in (289), with the two participants encoded as subject and direct object respectively (on the nominative encoding of the Experiencer of perception verbs in Hittite, including *au-ⁱ* and *istamass-^{zi}* ‘hear’, and in other ancient IE languages see Viti 2017: 378 ff.). Secondly, the active verb can also be used intransitively, in which case it does not require a clitic subject (Garrett 1996: 99).

The middle verb is intransitive and takes the Stimulus as subject. As example (292) shows, with middle forms the Experiencer surfaces as dative (see further Neu 1968a: 22 for examples). Use of clitic subjects with middle forms is not well attested. An example is given in (295).

- (295) [n]=as=kan kuedani UL **uwaittat**
CONN=3SG.NOM=PTC REL.DAT NEG see.PST.3SG.MID
“To whom he was not visible.” (KUB 23.103 obv. 24⁴⁰, NH/NS)

Based on NH/NS evidence, the middle voice seems to operate as a valency decreasing device, providing an intransitive counterpart of the transitive active simple stem *au-ⁱ*. The interpretation of

⁴⁰ It is doubtful whether the form *uwaittat* in (295) should be taken as a 3rd singular preterite middle form of *au-ⁱ* ‘see’ and not rather as a form of *uwai-^{ta(ri)}* ‘afflict’ (see Neu 1968a: 185). Unfortunately, the context is too fragmentary to support either interpretation (see Mora & Giorgieri 2004: 166 for discussion).

these intransitive forms is not easy, also on account of sparseness of the data. According to most authors, intransitive use of middle *uwandaru* in (292) should be interpreted as a true passive, with the second person pronoun =*ta* functioning as agent ‘by you’ (e.g. Neu 1968a: 22). This interpretation is however problematic, since the dative is never used to encode the agent of the passive with finite forms of the verb (Neu 1968b: 113-115, Hoffner & Melchert 2008: 261), but rather refers to the Experiencer. Alternatively, the verb could simply encode a spontaneous state or change of state event ‘be(come) visible’, i.e. predicate an intrinsic property of the Stimulus, similarly to what discussed for *tukk-^{āri}* (cf. Melchert forthc.b: 11). A change-of-state spontaneous reading is possibly attested in (296) (see E. Rieken et al. (ed.), hethiter.net/: CTH 378.1 for the interpretation of this passage):

- (296) *nu=s[mas=k]an uwahharu*
 CONN=2PL.DAT=PTC see.PRS.1SG.MID
 “I will appear to you.” (KUB 14.14 rev. 15, NH/LNS)

Note that other NH/NS attestations of middle forms of *au-ⁱ* all come from fragmentary contexts, thus seriously hampering their interpretation. Moreover, agent expressions, which would be decisive in opting towards either interpretations, are never attested, not even in copies (cf. Neu 1968a: 21-22). To sum up, middle forms of the base stem *au-ⁱ* are ambiguous between a passive ‘be seen’ and an anticausative ‘be(come) visible’ interpretation.

Derived *-ske/a-* forms of the verb provide a rather different picture. Forms inflected in either voice can be used both transitively and intransitively. For active forms, compare active transitive *uskanzi* in (293) with active intransitive *uskandu* in (297). Similarly, for middle verbs, compare intransitive *usgahhut* in (294) with the transitive use in (298), as shown by the use of the accusative clitic pronoun =*an*.

- (297) *nu uskandu*
 CONN see-IPMF-IMP.3PL
 “Let them watch (and listen).” (KBo 4.10 obv. 51, NH/NS)
- (298) *n=an=za=an mekki usgahhut*
 CONN=3SG.ACC=REFL=3SG.ACC much see-IPMF-IMP.2SG.MID
 “Keep a sharp lookout for her.” (KBo 19.43+ iii 49, NH/NS)

Notably, whereas with middle forms of the base stem *au-ⁱ* the Stimulus participant is encoded as subject, most *-ske/a-* middle intransitive forms take the Experiencer as subject. Evidence of a

Stimulus subject with *-ske/a-* middle forms is restricted to one example in (299), whose interpretation is however made difficult by the partly broken context in which it occurs (cf. Neu 1968a: 22, Mouton 2007: 259-206).

- (299) *kuiēs arha uskan[ɫ]at*
 REL.NOM.PL away see-IPMF-PST.3PL.MID
 “Who have been seen (?).” (KBo 47.239 iii 11, NH/NS)

Forms based on the derived *uske/a-* stem, which mostly come from NS texts, provide conflicting evidence when it comes to voice alternation. If one limits the observation to examples such as (293) and (299), it seems that active vs. middle alternation is parallel to what observed for simple *au-ⁱ*, with active forms being transitive and middle forms intransitive, most likely passive in function, with the Stimulus promoted to subject.

However, the majority of NH/NS occurrences shows a rather different picture. As discussed for (294) and (298), most middle forms of *uske/a-* appear with the particle =*za* in the meaning ‘watch out’, both in a transitive and in an intransitive construction (cf. Neu 1968b: 107). Notably, with these forms the subject always encodes the Experiencer. In this respect, they are syntactically and semantically similar to active forms such as (293), the difference in meaning ‘watch’ vs. ‘beware’ possibly due to the occurrence of the particle =*za*. Since all forms come from a single text, it is not clear to what extent this represents a local idiosyncrasy, or whether this represents a real usage.

To sum up, the different argument structure constructions of *au-ⁱ* and *uske/a-^{zi}* can be sketched as follows, and their features can be summarized as in Table 48: Argument structure constructions of *au-ⁱ* and *uske/a-^{zi}*.

A. Argument structure constructions of *au-ⁱ*:

- a. $[N_{1(NOM)} N_{2(ACC)} au-^i] = [SEM_{1.EXP} \text{ sees } SEM_{2.STIM}]$
- b. $[N_{1(NOM)} au-^i] = [SEM_{1.EXP} \text{ sees}]$
- c. $[N_{1(NOM,CL)} u-^{ta(ri)}] = [SEM_{1.STIM} \text{ is seen/becomes visible}]$

B. Argument structure constructions of *uske/a-^{zi}*:

- a. $[N_{1(NOM)} N_{2(ACC)} uske/a-^zi] = [SEM_{1.EXP} \text{ sees } SEM_{2.STIM}]$
- b. $[N_{1(NOM)} uske/a-^zi] = [SEM_{1.EXP} \text{ sees}]$
- c. $[N_{1(NOM)} uske/a-^{ta(ri)}] = [SEM_{1.STIM} \text{ is seen}]$
- d. $[=za N_{1(NOM)} N_{2(ACC)} uske/a-^{ta(ri)}] = [SEM_{1.EXP} \text{ looks out for } SEM_{2.STIM}]$

e. [=za N_{1(NOM)} uske/a-^{ta(ri)}] = [SEM_{1.EXP} looks out]

Table 48: Argument structure constructions of *au-ⁱ* and *uske/a-^{zi}*

	Active		Middle	
	TRANSITIVE	INTRANSITIVE	TRANSITIVE	INTRANSITIVE
<i>au-ⁱ</i>	Nom: Experiencer Acc: Stimulus	Nom: Experiencer	- ⁴¹	Nom: Stimulus
<i>uske/a-^{zi}</i>	Nom: Experiencer Acc: Stimulus	Nom: Experiencer	With =za Nom: Experiencer Acc: Stimulus	Nom: Stimulus With =za Nom: Experiencer

epp-/app-^{zi} ‘take’, *epp-/app-^{ta(ri)}* ‘be taken, take each other’

Semantics and aspectual construal:

The verb *epp-^{zi}* means ‘take’ (cf. *HW*² for discussion). Semantically, the verb *epp-^{zi}* indicates a two-participants telic event, which is mostly construed as instantaneous, i.e. as a reversible achievement. Consider example (300), in which a telic construal of the middle form *appattat* is further supported by the occurrence of the temporal adverb 3-ŠU ‘three times’.

(300) 3-ŠU ŪL arha *appattat*
 three.times NEG away take.PST.3SG.MID

“Thrice it was not taken away (i.e. it was not ascertained through oracle).” (KBo 2.2 ii 42, NH/NS)

Active forms of the verb display the same aspectual construal, as comparison between (300) and (301) shows.

⁴¹ Transitive use of the middle of the base stem *au-ⁱ* is limited to a single occurrence (KUB 17.10 ii 35, OH/MS), *austat=an^dKamarusepas* ‘K. saw.PST.3SG.MID him’ (cf. Neu 1968a: 21). Given that the text is a MS copy of a OH original, one cannot be sure that this transitive use of the middle is linguistically real, as the form *austat* can well be a scribal error for the corresponding active form *austa*.

(301) *namma=za=kan* GUD *usantarin* SI *epzi*
 then=REFL=PTC cow fertile.ACC horn take.PRS.3SG
 “She grabs the fertile cow by the horn.” (KUB 12.58 iv 7, NH/NS)

Clearly, based on world-knowledge and on the semantics of the participants involved, the event can also be construed as unfolding over time. For instance, when the verb refers to the military occupation of a town, it is likely that the event is construed as unfolding over time before coming to completion (see discussion under *asās-ⁱ*), as in (302).

(302) URU-*an* *epta*
 city.ACC take.PST.3SG
 “He took the town.” KBo 4.4 ii 15 NH/NS

Etymology:

The verb has been long connected with Skt. *āpnoti* ‘reach, to gain’ and Lat. *apīscor* ‘get, to grab’, all reflecting a PIE root **h₁ep-* (Kloekhorst 2008 *s.v.*, *LIV*²).

Argument structure and relationship with voice:

The verb *epp-^{zi}* is consistently inflected as active since OH/OS, whereas middle forms of this verb are extremely sporadic, and most come from later texts.

The verb indicates a two-participants event involving an animate Agent and a Patient. Active forms of the verb are used in a transitive construction with the two participants encoded as subject and accusative direct object respectively, as the occurrence of the accusative object URU-*an* ‘city’ in (302) shows.

The only two middle occurrences of the verb in original come from a NH/NS oracular text, and they are difficult to interpret. Syntactically, middle forms are intransitive, as comparison between (300) and (302) shows. Note that the lack of the clitic subject in (300) can be explained if one assumes that the verb is used without a referential subject, following Neu (1968b: 24, see below), since non-referential subjects do not require encoding through clitic subjects (Hoffner & Melchert 2008: 281). Beside the one given in (300), the other occurrence is reported in (32).

(303) *kī* *kuit* *kūs* MUŠEN HURRI *kallaranni*
 DEM.NOM.N REL.NOM.N DEM.ACC.PL bird *h.* unfavorableness.DAT

arha appantat

away take.PST.3PL.MID

“Concerning the fact that these *hurri*-birds were taken away in unfavorableness.” (KBo 2.2 i 22, NH/NS)

As already discussed for (300), the occurrence of the temporal adverb 3-ŠU favors a telic reading of the verb and rules out a stative interpretation of the verb. The only option left is to interpret the verb as the passive counterpart of active *epp-^{zi}*. However, it must be remarked that both occurrences come from the same text, in which the verb *epp-^{tari}*, accompanied by the preverb *arha*, should be interpreted as a formula typical of oracular texts, employed with a specialized semantics as a variant of passive *handai-^{ta(ri)}* ‘be ascertained’ (Neu 1968a: 24, van den Hout 1998: 131 fn. 56). Therefore, on the ground of their semantic specialization, middle forms of *epp-^{ta(ri)}* can be hardly taken as synchronically providing the passive counterpart of active *epp-^{zi}*, although they are most likely based on an original passive meaning ‘be taken’.⁴² Note that the passive counterpart of active transitive *epp-^{zi}* is normally provided by a periphrastic construction based on the participle *appant-*.

If one broadens the observations to middle forms attested in copies, there is evidence that the middle voice is used to derive the corresponding reciprocal event from active transitive *epp-^{zi}* (cf. Neu 1968b: 109). Admittedly, evidence for this usage is restricted to a couple of examples from NS copies of earlier texts, but given the fact that the middle voice is also employed with other verbs as a reciprocal marker, it is likely that this reflects a real usage of middle morphology. Compare examples (304) and (305):

(304) *n=an* *hantantan* ÌR=KA ^dUTU-*us* *kisarta*
CONN=3SG.ACC trust.PTCP.ACC slave=2SG.POSS Sungod.NOM hand.INST

ep

take.IMP.2SG

“Sungod, take him, your trusted servant, by the hand.” (KUB 31.127 i 51, OH/NS)

(305) [*n*]*u=smas=kan* ^d10-*as* ^d*Dasmisuss*[=*a*] Š[U-*z*]*a*
CONN=3PL.DAT=PTC Stormgod.NOM T.NOM=CONJ hand.ABL

appandat

⁴² As rightly pointed out by Neu (1968a: 24 fn. 10), the *hapax* form *ap-pa-a-ru* (KBo 17.90 ii 15, NS; cf. F. Fuscagni (ed.), *hethiter.net*: CTH 458.29.1 (TX 13.10.2014, TRde 23.10.2013) does not belong to *epp-^{zi}* but rather to *appā-ⁱ* ‘finish’ (cf. also Kloekhorst 2008 *s. appā-ⁱ*).

take.PRS.3PL.MID

“The Stormgod and Tasmisu took each other by their hand.” (KUB 33.87 + i 16, NS)

In (304), the verb is used transitively to indicate an asymmetric event in which an Agent and a Patient are involved. By contrast, in (305), the middle verb *appandat* is used intransitively, as the lack of direct object shows, and it indicates a reciprocal symmetric situation, in which the two participants, here encoded as two coordinate subjects, simultaneously perform both the role of Agent and Patient.⁴³

***halzai-ⁱ* ‘shout, call’, *halzi-^{a(ri)}* ‘be called’**

Semantics and aspectual construal:

The verb *halzai-ⁱ* is often translated as ‘shout, call, invoke’, and semantically belongs to the class of verbs of speaking (see *HW²* for a full semantic treatment). The verb occurs both in the active and in the middle voice since OH. The aspectual construal of this verb more clearly emerges from active occurrences, which I discuss first. Let us start by discussing example (306).

(306) [xxx] 3-ŠU *halzāi*
3.times call.PRS.3SG
“[xxx] calls three times.” (KBo 17.36+ ii 19, OH/OS)

In (306), even if the left-sentence boundary is missing, the verb clearly occurs with the temporal expression 3-ŠU, which indicates that the action is brought to completion and repeated three times. As such, the verb can be attributed a cyclic achievement default aspectual construal: it profiles a change-of-state telic event that lacks internal temporal unfolding, and in which the Agent return to the initial phase once the event is completed.

Middle forms of the verb show the same aspectual construal, as in (307):

⁴³ According to Melchert (forthc.b: 11), this example would represent a case of the reinforcement of the middle voice as a reciprocal marker through the addition of a clitic reflexive marker. This is not necessarily the case, however, as the clitic pronoun =*smas* can be more easily interpreted as a dative pronoun used in an external dative possessor construction with the noun Š[U-z]a ‘their hand’.

- (307) [*ta* ^{KUŠ}NÍG.BÀR-*an hal(ziya)*]
 CONN curtain(N).N/A call.PRS.3SG.MID
 “And the curtain is called.” (KBo 17.11+ iv 17, OH/OS)

The verb is construed as an achievement even when used intransitively, as in (308), or with an infinitive of purpose, as in (309), showing that the occurrence of the direct object and lack thereof do not seem to affect the aspectual construal of this verb.

- (308) *sāwataras=a halzāi*
 horn.GEN=CONN call.PRS.3SG
 “The hornist performs an invocation.” (KBo 17.1+i 37, OH/OS)

- (309) *nu adanna halziyari*
 CONN eat.INF call.PRS.3SG.MID
 “There is a call to eating.” (KUB 45.47 + iv 8, MH/MS)

Finally, middle forms of the verb also occur with the meaning ‘be called (by name)’. This meaning only appears in NH, and in this case the verb co-occurs with the particle =*za*, as shown in (310):

- (310) *nu=wa=za zik assus halziyattari*
 CONN=QUOT=REFL 2SG.NOM good.NOM call.PRS.2SG.MID
 “You are called good.” (KUB 26.12 + iii 18, NH/NS)

Etymology:

For Kloekhorst (2008 *s.v.*) the verb goes back to a formation **h₂lt-oi-*, connected with Goth. *laþon* ‘call’, which also matches the Hittite form semantically. The verb is also attested in Luwian.

Argument structure and relationship with voice:

The verb *halzai*⁻ⁱ shows both active and middle inflection throughout the recorded history of Hittite.⁴⁴

⁴⁴ Neu (1968b: 155 fn. 154) suggests that the verb was originally a transitive deponent verb, much like *pars(i)*^{-a(rī)}. At the onset, the verb was used in ritual texts in the 3rd person *halziyari* ‘he calls’, but since the referent was already known from the context, it was reanalyzed as an impersonal construction (comparable to Gr. *esalpinksēn* ‘it was blown < the trumpeter blew’). This account is however problematic, since active forms of this verb are well attested since OH.

The event denoted by *halzai*ⁱ involves at least two participants: an Agent (human and volitional), who performs the invocation, and a Theme i.e. the entity invoked, which can either be animate or inanimate, as comparison between (311) and (312) shows.

Active forms occur in different constructions. First, the active verb can occur in a transitive construction with the Agent encoded as subject and the Theme as an accusative direct object, as in (311) and (312). Alternatively, the active verb can be used intransitively, as in (308). Unsurprisingly, in the latter case the verb displays unergative syntax, as it does not require a clitic subject.

(311) LUGAL-*un=kan* 3-*ŠU* [xxx]-*zi* MUNUS.LUGAL-*ann=a* *sāwātaras*
 KING.ACC=PTC 3.times [xxx].PRS.3SG queen.ACC=CONJ horn.GEN
halzai
 call.PRS.3SG

“The king [...]s three times, and the hornist calls the queen.” (KBo 17.1+i 35, OH/OS)

(312) *nu* KUR.KUR^{MEŠ} *hūmanda* *anda halzāi*
 CONN land(PL) all.ACC.PL.N in call.PRS.3SG

“And he calls all the lands.” (KUB 15.32 i 43, MH/NS)

The syntax of middle forms of the verb based on the meaning ‘call, invoke’ is particularly difficult to understand. These forms occur with one participant only, and they are syntactically ambiguous. In principle, these forms can either be interpreted as passive, with the single participant syntactically behaving as subject, or as impersonal, with the single participant functioning as direct object.

Notably, scholars disagree on which interpretation is the correct one. Neu (1968a: 36-37, 1968b: 110), followed by Melchert (forthc.b: 4) classifies *halzi*^{a(ri)} as an oppositional passive, interpreting the subject as corresponding to the object of the active counterpart, but acknowledges that the verb can also be interpreted as impersonal. By contrast, the verb is always treated as impersonal in the *HW*² (s.v.). In support of the impersonal interpretation, *HED* suggests a comparison with Akk. *sasu*, which normally has an impersonal meaning ‘there is an invocation, one invokes’.

Let us review the textual evidence in support of either interpretations. OS and MS attestations of *halzi*^{a(ri)} are all systematically ambiguous between the two readings. This ambiguity arises because only neuter nouns, which can be interpreted either as nominative subject or as accusative objects, occur as arguments of the middle verb. Consider example (307) above. In (307), the sentence can be either interpreted as an intransitive passive or as a transitive impersonal, since ^{KUŠ}NÍG.BÀR-*an* could be either a nominative or an accusative neuter singular. Compare this example with (313), in which

the active verb *halzai-i* is used with ^{KUŠ}NÍG.BÀR-*an* as an accusative direct object (here a subject reading is ruled out because of plural agreement on the verb):

- (313) ^{KUŠ}NÍG.BÀR-*an* *ūssia[nz(i)]*
 curtain(N).ACC open.PRS.3PL
 “They open the curtain.” (KBo 17.11+ i 31, OH/OS)

Unfortunately, common nouns or clitic subjects, which would bear compelling evidence for one of the two interpretations, never occur as arguments of middle forms of *halzai-i*. Overt encoding of an oblique agent would ascertain the passive interpretation of these sentences, but unfortunately agents of middle *halzai-i* are never expressed.

Evidence for an impersonal reading might come from contextual cues, as in (314) and (315).

- (314) [*ta* ^{KUŠ}NÍG.BÀR-*an* *hal*[(*ziya* *hatkanzi*)]
 CONN curtain(n).N/A call.PRS.3SG.MID close.PRS.3PL
 “The curtain is called, and they close (it).” (KBo 17.11+ iv 17, OH/OS)
- (315) *nu adanna halziyari nu akuwanna pianzi*
 CONN eat.INF call.PRS.3SG.MID CONN drink.INF give.PRS.3PL
 “It is called to eating, and they give to drink.” (KUB 45.47 + iv 8, MH/MS)

In both (314) and (315), the verb *halziya(ri)* is asyndetically coordinated to the 3rd person plural active impersonal verbs, *hatkanzi* ‘they close’ and *pianzi* ‘they give’ respectively, suggesting that they share the same textual function of encoding an agent-defocusing situation. The fact that 3rd person plural forms of *halzai-i* with impersonal function are never attested in OH/OS might also be taken as evidence of the impersonal function being associated with middle 3rd singular *halziya(ri)*.

The only context in which the middle voice clearly operates as a passive marker is when the verb occurs in the meaning ‘call someone (by name)’ with the particle =*za*. With this meaning, which is restricted to NH texts, active forms of the verb show transitive syntax, as in (316), with the accusative of the person and the accusative of the name (see Hoffner & Melchert 2008: 247). By contrast, as comparison between (310) and (316) suggests, the middle form is used intransitively. Crucially, in (310), the occurrence of a nominative subject *zik* ‘you’ that agrees with the verb in number and person and of the nominative complement *assus* ‘good’ unambiguously point to a passive function of the verb (but see Miller 2013: 402 fn. 61 for a different interpretation of the verb as reflexive ‘you can call yourself’).

(316) *nu=mu=za* LUGAL-*un* *labarnan* ***halziēr***
 CONN=1SG.ACC=REFL king.ACC *l*.ACC call.PRS.3PL
 “The called me, the King, labarna.” (KUB 29.1 i 24 ff., OH/NS)

Summing up, the middle verb *halzi-^{a(ri)}* ‘call, invoke’ can be analyzed either as a transitive impersonal verb (with direct object but omitted non-referential subject) or as a passive (with Patient promoted to topical subject and Agent demoted). Decisive evidence in favor of a true passive interpretation of the verb is limited to one NH/NS occurrence only, as discussed under (310), in which the verb shows the specific meaning ‘call someone (by name)’. Even though projecting back the passive value to OH based on this occurrence is tempting, one should be careful in doing so, as this can well be a later development. Note in this respect that, whereas OH and MH middle forms of *halzai-ⁱ* all take the *-a(ri)* ending, consistently with other *hi*-verbs (Melchert forthc.b), the NH occurrence in (310) shows the ending *-tta(ri)*, which is productively used in NH in passive use (Melchert forthc.b).

***hantae-^{zi}* ‘align (tr.), determine, fix’, *handai-^{tt(ri)}* ‘align (intr.), be determined’**

Semantics and aspectual construal:

The verb *hantae-^{zi}* shows different related meanings in texts, ranging from the most concrete meaning ‘align’ to the more abstract ones ‘fix’, ‘prepare’, and ‘determine (by oracle)’, the latter extremely frequent in NH/NS oracular texts (see *HW²* for a semantic treatment). The verb occurs both in the active and in the middle voice.

The aspectual construal of middle forms has already been discussed by Neu (1968a: 41-44), who observes that the verb can refer to either a dynamic event or to a state. In fact, he explicitly remarks that all of the OS occurrences instantiate the Stative-middle function (*StBoT* 26, *s.v.*). As stative, the putative meaning of the verb is ‘be in line with’, as in example (317), which shows the structure in which all of the OS occurrences of the verb are found.

(317) [*m*]an=*āsta* GAL=*ŠUN*[*U* LUGAL-*i* ***ha*]ndāitta**
 when=PTC chief=3PL.POSS king.DAT align.PRS.3SG.MID
pēdi=smi=pat ZAG-*ni* 1-*SU* *wahanzi*
 place.DAT=3PL.POSS.DAT=FOC right.DAT once turn.PRS.3PL

“When their chief is in line with the king, they turn to the right in their place once.”
(KBo 20.14 i 9, OH/OS)

It is however not clear on what basis Neu interprets the verb in (317) as stative, since a dynamic interpretation fits the context equally well. For example, Hoffner & Melchert (2008: 383), give a dynamic interpretation of the verb, and translate the first part of (317) as ‘When their leader draws even with the king’ (for a similar reading see also *HW*² s.v.).

Similarly, a dynamic construal of this verb is likely at play in MS occurrences such as (318), where the verb is translated as indicating a motion event by Güterbock & van den Hout (1991: 27) and Miller (2013: 115):

(318) *n=at=kan* *ŠA*^{GIŠ} *kalmusas* D[UMU].É.[GAL] *ŪL* *handā[it]t[ar]i*
 CONN=3SG.NOM=PTC of l.GEN palace.servant NEG align.PRS.3SG.MID
 “He does not line up with the palace servant of (= who carries) the lituus.”
 (IBoT 1.36 iii 44, MH/MS)

Finally, the verb is possibly construed as dynamic even when it has a passive reading (see below), as in example (319), in which the adverb EGIR-*an* ‘later’ suggests that the event referred to by the verb is a telic event taking place within a given temporal line.

(319) *n=as* *apedani=ya* EGIR-*an* S[*IxSÁ-at*]
 CONN=3SG.NOM DEM.DAT=also back determine.PST.3SG.MID
 “Later she was ascertained for that as well.” (KUB 50.6 ii 55, NH/NS)

Nevertheless, some occurrences clearly speak in favor of a stative construal of the event denoted by *handai*-^{ta(ri)}. Consider examples (320) and (321):

(320) *mān* GAL M[*EŠ*]EDI=*ya* *handaittari* *ŠA*^{LÚ} *MEŠEDI-as* É[*hī*]li
 if chief bodyguard=also aling.PRS.3SG.MID of bodyguard.GEN court.DAT
ēszī
 be.PRS.3SG
 “If also the chief of the bodyguards is present, (that is) if he is in the court of the bodyguard, (then the commander of 10 of the bodyguard conveys it to the chief of the bodyguard.)” (IBoT 1.36 i 39-40, MH/MS)

(321) *mān tamais=ma kuiski BELUM handāitta kuis*
 if other.NOM=CONN INDF.NOM lord align.PRS.3SG.MID REL.NOM
hantezzi[a]nni arta
 front.DAT stand.PRS.3SG.MID

“But if some other lord is present who is standing in front of the line, (then it is he who bows.)” (IBoT 1.36 iv 20-21, MH/MS)

In both (320) and (321) the verb *handai*-^{tt(ri)} apparently profiles only a state resulting from a change of location, rather than the motion event itself, as was the case for (317) and (318).

As the examples discussed in this section show, the event denoted by verb *handai*-^{tt(ri)} can be understood either as being construed as a reversible directed achievement or as a transitory state. Notably, the interpretation of the aspectual construal of this verb is heavily dependent on contextual cues. For instance, when indicating a motion event, the verb occurs with a dative indicating the endpoint of the motion, and is also accompanied by the regular occurrence of the verb with the local particle =*asta*, which is associated with “contexts referring to arrival at a goal” (Hoffner & Melchert 2008: 383), as in (317), and with =*kan*, which highlights completion and telicity of the predicate (cf. Josephson 2008), as in (318).

By contrast, as stative construal is only compatible with contexts in which there are no items profiling the direction of the motion event, as in (320) and (321). Moreover, in both examples a stative reading is further suggested by the occurrence of a stative verb in the following sentence, *ēszi* ‘he is’ and *arta* ‘he stands’.

This alternative construal of the verb *hantae*-^{zi} is based on the operation of selection/metonymy, whereby in certain change-of-state verbs speakers can alternately profile either the process leading to the change of state or the resulting state itself (Croft 2012: 93).

Active forms of *hantae*-^{zi} also display a default aspectual construal of an achievement, as shown in (322). In this case, even in absence of evidence from temporal adverbs, it is likely that the event is construed as occurring instantaneously without internal temporal unfolding.

(322) *LÚ GIŠBANSUR NINDA zippulasne GIŠarimpi hantāizzi*
 man table z.bread(N).ACC a.vase.DAT align.PRS.3SG

“The table attendant aligns the *zippulasne*-bread with the *arimpa*-vase.” (KBo 17.21+ obv. 9 OH/OS)

Since MH/MS, the active forms of the verb develop a more specific meaning ‘prepare’, in which case it is likely that the underlying event is construed as unfolding over time, i.e. as an accomplishment. Consider example (323), in which an accomplishment reading is also suggested by the multiplicity of entities involved.

- (323) *nu=smas adanna ki handānzi*
 CONN=DAT.PL eat.INF DEM.ACC.PL.N prepare.PRS.3PL
 “And they prepare these things for them to eat.” (KBo 15.16 + ii 9, MH/MS)

Etymology:

The verb is a denominal *-o-ye/o- formation from an unattested noun **hanta-*, which has no cognates elsewhere (Kloekhorst 2008). As Kloekhorst discusses, Oettinger’s (1979: 367) suggestion of a connection with the noun *hant-* ‘forehead, front’ is unattractive on semantic and morphological grounds. Puhvel (*HED* s.v.) suggests that the verb derives from *hānt-*, the participle of *hā-* ‘trust’. Semantically, the shift from ‘trust’ to ‘fix’ is arguably paralleled by Grm. *betreuen* ‘take care of’ from an original meaning ‘true’. This interpretation is however unlikely, given the fact that plene spelling *ha-a-* is attested only three times and in NS texts (Kloekhorst 2008 s.v.).

Argument structure and relationship with voice:

Active and middle forms of *hantae-^{zi}* coexist alongside since OS and give rise to a meaningful voice opposition, but their relationship changes over time. Note that since the verb belong to the *hatrae-* class, it possibly originated as an *activum tantum* (Kloekhorst 2008: 133).

In its basic meaning ‘align’, the verb *hantae-^{zi}* denotes a spatial event involving an Agent and a Theme that undergoes a change of Location with respect to another entity. Semantically, the predicate can be described as a lexical reciprocal spatial event, as it indicates a spatial event whereby two entities become aligned to one another. This meaning is exemplified in (324)a-b.

- (324) a. *n=asta māhhan sarkantin ANA LÚ.MEŠ MEŠEDUTIM handānzi*
 CONN=PTC when petitioner.ACC to guard(PL) align.PRS.3PL
 “When they bring the petitioner in line with the guards.” (IBoT 1.36 iii 20, MH/MS)
- b. *[m]an=āsta GAL=ŠUN[U LUGAL-i ha]ndāitta*
 when=PTC chief=3PL.POSS king.DAT align.PRS.3SG.MID
 “When their leader draws even with the king...” (KBo 20.14 i 9, OH/OS)

As comparison between as in (324)a-b shows, active forms of the verb occur in a transitive construction with the Agent encoded as subject and the Theme as object, here *sarkantin* ‘the petitioner’ in (324)a. By contrast, the Theme is the subject of middle forms of the verb, as in the case of GAL=ŠUN[U] ‘their chief’ in (324)b. Therefore, active and middle forms can also be described as object- and subject-oriented reciprocals (Inglese 2017), as comparison between (324)a-b shows. Middle forms of the verb are consistently used intransitively, and they take clitic subjects, as in (318) and (319), showing that the verb patterns with unaccusative predicates (Garrett 1996: 91).

Note that active and middle forms are always used in a syntactically discontinuous construction, with one of the two reciprocants encoded as a core argument, either the object of the active verb or the subject of the middle verb, and the second one as a dative oblique, as in shown by the occurrence of ANA LÚ.MEŠ MEŠEDUTIM ‘the guards’ and LUGAL-*i* ‘the king’ in (324)a-b respectively.

Reciprocity of this spatial relationship is inherent to the base verb, and it is not triggered by the use of middle voice. As the pair in example (324) shows, with the meaning ‘align’ the middle voice rather operates as a marker of reciprocal anticausative alternation (also Melchert forthc.b: 6). The active voice indicates an induced object-oriented spatial reciprocal event, whereby two entities are aligned by an external causer, as in (324)a, whereas the middle voice indicates that the event is instigated directly by the participants involved in the motion event, without the need of an external causer, as in (324)b. To be more precise, the middle verb indicates an autocausative (Creissels 2006) or endoreflexive event (Haspelmath 1987; see also Geniušienė 1987: 86-89), since the plain event is not conceived as coming up spontaneously, but as intentionally initiated by the internal participant. That the active voice encodes the induced causative counterpart of plain middle forms is further suggested by the fact that this verb does not have a causative *-nu-* derivative.

Summing up, in OH/OS, active vs. middle voice alternation with *hantae-^{zi}* ‘align’ is connected to reciprocal anticausative alternation. Classification of the middle form as indicating a reflexive event (e.g. Neu 1968a: 75, *HW*²) is biased by German translations with verbs involving a reflexive marker *sich* and should be abandoned.

Post-OH data complicate the picture outlined so far. In the first place, the middle voice continues to be associated with anticausative alternation in MH/MS texts. However, two new patterns emerge. On the one hand, middle forms of the verb in anticausative function start to be optionally reinforced by =*za*, as in (325).

(325) *ap[ed]as=za anda kuwat handaittat*

DEM.DAT.PL=REFL in why align.PST.2SG.MID

“Why have you joined up with them?” (KUB 14.1 + KBo 19.38 rev. 90, MH/MS)

On the other hand, there is at least one MS occurrence in which the anticausative event is encoded by an active form of the verb, as shown in example (326):

- (326) *mān* ^{LÚ}HAZANNU=*ma* *nasma* UGULA NIMGIR.ÉRIN^{ME}[^Š
 if mayor=CONN or chief herald(PL)
handaitt]ari *nu=smas=kan* *apē* *handanzi*
 aling.PRS.3SG.MID CONN=3PL.DAT=PTC DEM.NOM.PL align.PRS.3PL
 “But if the mayor or the chief of the military heralds is present, then they line up with them.” (IBoT 1.36 iii 47, MH/MS)

Example (326) is extremely interesting with respect to voice alternation of *hantae*^{-zi} in MS. In the first sentence, the middle form *handaittari* (admittedly partly reconstructed) occurs, which, for the reasons discussed above, is likely to profile a stative state of affairs. The second sentence features the active form *handanzi*. Notably, this form is used intransitively and it indicates an internally caused motion event, as also evidenced by the occurrence of the dative pronoun =*smas* and the particle =*kan*, thus being equivalent to middle forms in examples such as (317). Formally, example (326), if one does not wish to deal away with it as scribal error, provide evidence for the emergence labile use of active voice with respect to anticausative derivation in MS.

Remarkably, middle forms of *hantae*^{-zi} with anticausative function are not attested in NH/NS texts, and in addition to that, active forms start to develop a new specialized meaning ‘prepare’, as in (323), which is the only one attested in NH/NS texts (see data in the *HW*²).

In the second place, starting with MH/MS, one finds occurrences in which the middle verb has a passive reading with the specialized meaning ‘be ascertained, be determined (by oracle)’, which is the only function attested in NH/NS texts. Passive function of middle forms of *handai*^{-tta(ri)} clearly emerges from comparison of pairs such as (327) and (328)

- (327) MUŠEN^{HI.A} **SIxSÁ-andu**
 bird(PL) determine.IMP.3PL
 “Let the birds determine by oracle.” (KUB 5.11 i 14, NH/NS)
- (328) *nu=ssi* *IŠTU* MUŠEN^{HI.A} *Û* *IŠTU* SU^{MEŠ} *handaittat*
 CONN=3SG.DAT by bird(PL) and by flesh(PL) determine.PST.3SG.MID
 “And it was determined for him by the bird and flesh oracles.” (KBo 4.4 ii 51, NH/NS)

In (327), the active imperative form of the verb takes a single participant ‘birds’ as subject, which is the participant actively carrying out the ‘determining’ event. By contrast, in (328) the middle form *handaittat* is used in passive function, and the subject of the active verb ‘birds’ is here demoted to oblique agent, as shown by its occurrences in an adpositional phrase with *IŠTU* ‘by, through’.

Further evidence for the use of agent phrases is provided by examples (329) and (330), in which one finds the human oblique agents *IŠTU* ^dUT]U-ŠI ‘by his majesty’ and *IŠTU* ^{MUNUS}ŠU.GI ^{LÚ}IGI.MUŠEN=*ya* ‘by the old woman and the augur’ respectively.

- (329) *n=at mahhan IŠTU* ^dUT]U-ŠI *handāittari*
 CONN=3SG.NOM.N as by my.majesty determine.PRS.3SG.MID
 “As it is determined by his Majesty, (should I treat it likewise?)” (KBo 16.97 + KBo 40.48 rev. 38-39, MH/MS)
- (330) *IŠTU* ^{MUNUS}ŠU.GI ^{LÚ}IGI.MUŠEN=*ya* **SIxSÁ-at**
 by old.woman augur=CONJ determine.PST.3SG.MID
 “It was ascertained by the Old Woman and the augur.” (KUB 22.35 ii 8, NH/NS)

As already discussed by Neu (1968b: 42-43), middle forms with passive meaning ‘be determined (through oracle)’ can either be used impersonally, in which case the verb does not require a clitic subject, as show in (331), or the verb can take an overt subject, either a full NP, as in (319), an infinitive, as in (332), or a clitic subject pronoun, as in (329). In this respect, anticausative ‘align (intr.)’ and passive ‘be determined’ middle forms both show unaccusative syntax.

- (331) *hantaittat=wa*
 determine.PST.3SG.MID=QUOT
 “(And the leader of the augurs speaks as follows:) the oracle has been performed (lit. it has been ascertained).” (KUB 5.11 i 25, NH/NS)
- (332) [ANA ^mU]r[hi-^dU-]-ub=*m*[a u]iyawanzi [Ū]L **SIxSÁ-at**
 to U.=CONN send.INF NEG determine.PST.3SG.MID
 “It was not ascertained to send to Urhitessub.” (KUB 50.6 iii 46-47, NH/NS)

To sum up, the interaction between active and middle voice with *hantae-^{zi}* can be summarized as in Table 49.

Table 49: Diachrony of *hantae-^{zi}*

	OH	MH	NH
Anticausative alternation	<i>hantae-^{zi}</i> ‘align (tr.)’, <i>handai-^{tt(a)(ri)}</i> ‘align (intr.)’	<i>hantae-^{zi}</i> ‘align (tr. and intr.); prepare’, (=za) <i>handai-^{tt(a)(ri)}</i> ‘align (intr.)’	<i>hantae-^{zi}</i> ‘prepare’
Passive alternation	-	<i>hantae-^{zi}</i> ‘determine’, <i>handai-^{tt(a)(ri)}</i> ‘be determined’	<i>hantae-^{zi}</i> ‘determine’, <i>handai-^{tt(a)(ri)}</i> ‘be determined’

Tentatively, this diachronic distribution can be explained as follows. In OH/OS, the middle voice was opposed to the active voice in anticausative alternation. Later on, middle forms of the verb became increasingly associated with a passive reading, which was also semantically limited to the meaning ‘be determined’. Within this scenario, the fact that since MS both active voice and middle voice with =za start to be used in anticausative context might be interpreted as a result of an attempt to renovate anticausative alternation, which had partly been weakened by the newly developed passive function.

***happ-^{zi}* ‘join (tr.)’, *happ-^{(t)a(ri)}* ‘join (intr.), work out’**

Semantics and aspectual construal:

The verb *happ-^{zi}* is sporadically attested, so that its semantic interpretation remains rather uncertain. The verb occurs both in the active and in the middle voice. The only OH/OS occurrence of the verb, which is quoted under (333), comes from a highly fragmentary text, where it is impossible to provide a reliable interpretation of its syntax and semantics (cf. Neu 1968a: 45).

- (333) [xxx] *hantizziyan=tet* ***happaru***
 first.N/A.N=2SG.POSS.N/A.N join.IMP.3SG.MID
 “Let your first be joined/work out (?).” (KBo 25.123 8, OH/OS)

More evidence comes from later texts. The verb occurs multiple times with the meaning ‘work out’ in a single MH/MS text, as shown in (334), and the meaning is also attested in NH/NS, as shown in (335). When the verb is used with the meaning ‘work out’, it refers to the successful completion

of a given event, so that its aspectual construal is best viewed as an incremental accomplishment, i.e. a telic event unfolding over time. This is exemplified in (334), in which the ‘storming’ of the city encoded by the infinitive *epurawanzi* clearly refers to an accomplishment event.

- (334) *nu=nnas=kan epurawanzi ŪL hapdat*
 CONN=1PL.DAT=PTC storm.INF NEG work.out.PST.3SG.MID
 “(Every time we tried to storm the town), the storming (of the town) did not work out for us.” (KBo 18.54 rev. 14-15, MH/MS)

- (335) *nu=smas=kan ŪL kuēzqa kuit hapdat*
 CONN=3PL.DAT=PTC NEG INDF.ABL because work.out.PST.3SG.MID
 “(They began to cast spells over me,) because they were not successful in any other way (lit. because it did not work out for them).” (KUB 1.1 ii 76, NH/NS, translation after van den Hout 1997: 202)

An occurrence in which a middle form of the verb shows the meaning ‘attach’ is attested in NH/NS, as show in (336). In this case, the underlying event is possibly construed as a directed achievement. Note that in this case, Neu (1968a: 44) interprets the verb as indicating a state ‘be attached to’, but there is no compelling evidence in favor of a stative reading of the verb.

- (336) *nu=kan apāss=a pula[z] ANA ^dU ^{URU}Nerik DUMU=KA*
 CONN=PTC DEM.NOM=also lot.ABL to Stormgod *N.* son=2SG.POSS
āssiyanti hapdat
 be.loved.PTCP.DAT join.PST.3SG.MID
 “He too became attached by destiny the Stormgod of Nerik, your beloved son.” (KUB 21.27 i 11-12, NH/NS)

The interpretation of active forms of the verb is also problematic, given the scarcity of attestation. An active form is attested in a MH/MS text, quoted in (337). Even though this form comes from an otherwise readable context, its translation is purely tentative (cf. *HW*², Hoffner 2009: 84 fn. 12).

- (337) *nu=war=an hapti*
 CONN=QUOT=3SG.ACC join.PRS.2SG
 “Hold him accountable (lit. make him join?).” (KUB 31.79 26, MH/MS)

Etymology:

Kloekhorst (2008) derives the verb from the root **h₂ep-*, connected with Lat. *aptus* (cf. *HED*). This reconstruction is shared by the *LIV*², where the PIE root **h₂ep-* is reconstructed as a stative present. Unfortunately, the Hittite form has no verbal cognate elsewhere.

Argument structure and relationship with voice:

Owing to the difficult interpretation of the occurrences of *happ-^{zi}*, it is not easy to establish its argument structure and its relationship with voice.

With the meaning ‘work out’, the verb refers to a complex event whereby an Agent successfully brings about an event. Notably, in this case the verb inflects almost exclusively in the middle voice. There is one single occurrence in which the verb inflects with the active voice, as shown in (133):

- (338) *takku=smas ŪL=ma hapzi ta natta hazziyanzi*
if=3PL.DAT NEG=CONN work.out.PRS.3SG CONN NEG stick.PRS.3PL
“If it does not work out for them, they do not stick it (i.e. the pig).” (KBo 11.34 i 5, OH/NS)

With this meaning, the verb always occurs in the 3rd person without a referential subject and is used intransitively. As such, it does not require clitic subjects, and can occur with an infinitive, as in (334). Notably, the verb occurs with dative clitic pronouns, as in the case of *=nnas* ‘us’ and *=smas* ‘them’ in (334) and (335) respectively. Syntactically, one may classify these as instances of non-canonical dative subjects.

With the meaning ‘join’, the verb refers to a lexical spatial reciprocal event, whereby two entities end up involved in a symmetric spatial relationship. When the verb occurs in the middle, it is intransitive, i.e. it encodes a subject-oriented reciprocal event. Notably, as example (336) shows, the verb is used in a syntactically discontinuous construction, with one reciprocant encoded as subject, and conceived as instigating the action, and the other one encoded as an oblique dative NP.

Finally, as comparison between (336) and (337) shows, active forms of the verb could be used in a transitive construction, involving an Agent, encoded as subject, and a Patient, encoded as object. The argument structure constructions in which the verb occurs can be summarized as follows.

- A. $[N_{1(DAT)} V_{(INF)} \textit{happ-}^{ta(ri)/zi}] = [\text{SEM}_{1.EXP} \text{ succeeds in doing } \text{SEM}_V]$
B. $[N_{1(DAT)} \textit{happ-}^{ta(ri)/zi}] = [\text{SEM}_{1.EXP} \text{ is successful}]$
C. $[N_{1(NOM)} N_{2(DAT)} \textit{happ-}^{ta(ri)}] = [\text{SEM}_{1.AG} \text{ joins } \text{SEM}_2]$

D. $[N_{1(NOM)} N_{2(ACC)} \textit{happ}^{-zi}] = [\text{SEM}_{1.AG} \text{ make } \text{SEM}_2 \text{ join?}]$

Based on the extant material discussed so far, one can tentatively draw the following picture of the relationship of the verb *happ*^{-zi} with voice.

In OS, the verb displays middle inflection only, and Kloekhorst (2008 *s.v.*) suggests that this reflects the original situation, with active voice being a post-OS innovation. Since the only OH/OS occurrence is too fragmentary to give a reliable interpretation, it is still unclear what was the original meaning of the verb. Tentatively, the meaning ‘join’ should be regarded as primary, since the development from the concrete meaning ‘join (intr.)’ to the more abstract ‘work out’ is more likely than the reverse, even though the latter is attested only in NH/NS times. One can therefore speculate that the verb was originally a *medium tantum* indicating a lexical reciprocal spontaneous event ‘join (intr.)’.

Later on, two developments took place. On the one hand, middle forms of the verb partly developed the specialized meaning ‘work out’. The fact that active forms were used with this meaning, as shown in (338), clearly reflects a later sporadic innovation. Interestingly, example (338) comes from a later copy of an original OH text, as the use of the subordinating conjunction *takku* ‘if’ and the sentence connective *ta* show, and it is entirely possible that originally the verb inflected as middle and was only later replaced by the active form by a NS scribe.

On the other hand, based on the spatial meaning ‘join (intr.)’ new active forms were created. These active forms are transitive in syntax, and possibly represent the induced counterpart of the plain event indicated by middle *happ*^{-ta(ri)}. If this is the case, voice alternation with this verb was used as a marker of reciprocal anticausative derivation, with the active verb denoting a spatial object-oriented reciprocal event and the middle a spatial subject-oriented reciprocal event encoded through a syntactically discontinuous construction (see Inglese 2017). Note that the occurrence of the ablative *pula*[z] in (336) does not necessarily entail a passive reading of this example, since it can well be an inanimate cause rather than an agent phrase. However, this shows that the verb indicates a change-of-state over which the Agent does not exert control.

***harra*⁻ⁱ ‘grind, splinter up (wood), crush (bread), destroy’, *harra*^{-ta(ri)} ‘be destroyed, go to waste’**

Semantics and aspectual construal:

The verb *harra*⁻ⁱ generally mean ‘destroy, crush’ and occurs both in the active and in the middle voice. Active forms of the verb refer to a change-of-state event, and semantically belong together

with highly transitive verbs of physical direct effect (cf. Tsunoda 1985) such as *parsiye/a*-^{zi} ‘break’ and *tuhs*-^{a(ri)} ‘cut’. Depending on the referential features of the entities involved (cf. *HW*² for a thorough treatment of the occurrences), the event can be profiled with different degree of granularity as either an incremental accomplishment, as in (339), or an achievement, as in (340) (see also discussion under *kars(iye/a)*-^{zi} ‘cut’).

- (339) *n=at* *mallai* *harrai*
 CONN=3SG.ACC.N grind.PRS.3SG crush.PRS.3SG
 “And he grinds and crushes it (i.e. the grain).” (KUB 25.23 iv 52, NH/NS)
- (340) *NINDA.GUR₄.RA=ma* *kisan harranzi*
 loaf.of.bread=QUOT thus crush.PRS.3PL
 “They break the loaf of bread as follows.” (KUB 44.29 ii 8, NS)

The verb occurs in the middle voice only twice in the entire corpus, and the interpretation of these forms remains somewhat tentative. The form *harrattari* in (341) occurs in a severely fragmentary MH/MS text, and is tentatively translated by Schuler (1965: 120) as ‘goes missing, gets lost’. The form *harratta* in (342) is likewise interpreted as ‘get lost’ (cf. Neu 1968a: 48, *HW*² s.v.; note that Puhvel’s translation of this form as ‘be crushed’ is partly unwarranted given the overall context, cf. *HED* H: 135). Notwithstanding the difficult interpretation of this example, it is clear that middle forms of the verb also profile a change-of-state event.

- (341) [*man ... kuitk*]i *harrattari*
 if INDF.NOM.N crush.PRS.3SG.MID
 “If something goes missing/get lost.” (KUB 23.77 obv. 38, MH/MS)
- (342) *n=at* *harratta*
 conn=3sg.nom.n crush.PRS.3SG.MID
 “(Have not they taken the wolf with their hand? Have not they kept the lion still with their knee? Have not they thrown [it] in the stream of the river?) Has it got lost/has it been crushed?” (KUB 12.63+ obv. 31-32, OH/NS)

Etymology:

The verb *harra*-ⁱ ‘crush, destroy’ can be connected with PIE **h₂erh₃-* ‘plough’, reflected in e.g. Lat. *arō*, Gr. *arōō*, Lith. *àrti* ‘plough’. As Kloekhorst (2008 s.v.) observes, this reconstruction is formally convincing, but semantically one has to assume that the root originally meant ‘crush’ and that only

later it developed a specialized meaning ‘plough < crush the soil’. The former meaning was retained in Anatolian, as also evidenced by Luwian *harra-* ‘crush’, whereas the latter was a post-Anatolian common innovation. Alternatively, Puhvel suggests a borrowing from Akk. *harāru* ‘grind’ (*HED s.v.*).

Argument structure and relationship with voice:

Active forms of the verb *harra-*ⁱ indicate a two-participant event involving a causing Agent and a fully affected Patient that undergoes a change of state. The active verb occurs in a transitive construction with the two participants encoded as subject and direct object respectively, as shown in examples (339) and (340). By contrast, middle forms of the verb refer to a one-participant event involving the Patient only. Syntactically, middle forms occur in an intransitive construction and display unaccusative syntax, as the occurrence of the clitic subject =*at* in (341) shows.

As comparison between (340) and (341) shows, with the verb *harra-*ⁱ the middle voice operates as a valency reducing strategy.⁴⁵ In example (341), it is more likely that the middle verb refers to a spontaneous change-of-state event, as opposed to the induced active counterpart in (340). Therefore, with this verb voice alternation can be interpreted as indicating anticausative alternation. This is not however the only viable interpretation, as in principle middle forms with passive meaning ‘be crushed’ are plausible as well.

Evidence for an anticausative reading of the base also comes from the participle of this verb. As common to most transitive verbs, the participle of *harra-*ⁱ profiles the resulting state of the Patient participant, and the change-of-state event is profiled as occurring spontaneously. This is particularly clear in example (343), in which the context rules out the occurrence of an external agent and the participle *harānza* means ‘become, go bad’. More generally, even when used in reference to inanimate concrete entities, the participle largely means ‘be ruined, damaged, spoiled’, and never occurs in a periphrastic passive construction with an agent phrase (see *HW*² *s.v.* for occurrences).

- (343) [(*mān* MU^{KAM}-*za*)] *harānza*
 if year.NOM go.bad.PTCP.NOM
 “If the year has become bad (and in the land people die).” (KUB 9.31 i 2, NS)

⁴⁵ The verb *harra-*ⁱ displays a causative derivative *harranu-*^{zi}, which is identical to the base verb in its syntax and semantics. The verb *harranu-*^{zi} occurs once in the middle voice in an isolated derived *-ske/a-* form *har-ra-nu-us-ki-it-ta* (KBo 6.34 ii 28), but this is possibly a scribal mistake, as this middle form is functionally identical to active *har-ra-nu-us-kan-zi* occurring earlier in the same text (ibid. 23, cf. Neu 1968 a: 48 *s. harra-* fn. 3).

harp-^{ta(ri)} ‘separate and re-associate oneself, join (intr.)’, *harp*-^{zi} ‘join, pile up (tr.)’

Semantics and aspectual construal:

As convincingly argued by Melchert (2010), in OH the verb *harp*-^{ta(ri)} had the complex meaning ‘separate and reassociate oneself’, as shown in example (344). As other verbs meaning ‘join’ (see *happ*-^{zi}), *harp*-^{ta(ri)} can be classified among spatial lexical reciprocal predicates.

(344) *takku* GU.APIN.LÁ *takku* ANŠE.KUR.RA *tūriyawas* *takku* GUÁB *takku*
 if plow.ox if horse hitch.VN.GEN if cow if
 ANŠE.KUR.RA MUNUS.AL-*as* *hālēas* ***harpta***
 horse female corral.DAT.PL reassociate.PRS.3SG.MID

“If a plow ox, a draft horse, a cow, or a mare strays (lit. separate and reassociate) into (another) corral.” (KBo 6.2 + iii 47-48, OS/OH)

Based on the two OH/OS occurrences available (the second is entirely parallel to (344)) the verb can be assigned a default aspectual construal of reversible directed achievement. The meaning ‘join’ is attested in NH/NS texts as well, as shown in (345).

(345) *nu=mu=kan* GU₄-*i* GIM-*an* *huittiyawanzi* ***harpiyahhuhut***
 CONN=1SG.DAT=PTC bull.DAT as draw.INF join.IMP.2SG.MID

“Join me as a bull to draw!” (KUB 6.45 iii 72, NH/NS)

When multiple entities are involved, the event can be construed as unfolding over time before coming to completion, as shown by example (346), where the active form *harpzi* occurs.

(346) 9 NINDA ERÍN^{MEŠ} ***harpzi***
 9 bread troop(PL) join.PRS.3SG

“He piles up nine army loaves.” (KUB 7.13 rev. 6)

Etymology:

Kloekhorst (2008 s.v.), following Melchert (2010), reconstructs the verb as **h₃erb^h-to*, and connects it with Lat. *orbis* ‘bereft of’, Arm. *orb* and Gr. *orphanós* ‘orphan’, OIr. *orb(b)* ‘inheritance’ (already

Polomé 1954: 159-60, see further Massetti 2017). No verbal cognates are attested. In NH, one finds a new stem *harpiye/a-* inflecting both in the active and in the middle voice, as e.g. *harpiyahhuhut* in (345).

Argument structure and relationship with voice:

According to Melchert (2010), the verb originally inflected in the middle voice only and indicated a complex one-participant event ‘separate and reassociate oneself’. Later on, the semantics of this predicate was partly blurred, and the predicate acquired the meaning ‘join (intr.)’.

At this phase, the middle verb can be described as a subject-oriented lexical reciprocal spatial event. Syntactically, the verb is intransitive and is used in a discontinuous construction, with one reciprocant encoded as the subject and the other one as a dative NP, as in (345). Notably, the middle verb shows unaccusative syntax, as it requires a clitic subject (Garrett 1996: 91), as in example (347).

- (347) *nasma=at=kan harpantari*
 or=3PL.NOM=PTC join.PRS.3PL.MID
 “Or they join (another partner).” (KBo 6.3 ii 19, OH/MS)

Based on this meaning, a new active counterpart of the verb was created in post-OH times (Kloekhorst 2008 s.v.). The active verb indicates an object-oriented spatial reciprocal event, with the subject encoding the external Agent, and the direct object the Patient reciprocants, as in (346). Once the verb was transferred to the active inflection, the alternation between active and middle voice became one of reciprocal anticausative alternation, with the middle voice denoting the plain ‘join (intr.)’ and the active voice the induced counterpart ‘join (tr.)’, as pointed out by Luraghi (2010a: 145). Semantically, since the subject is conceived as intentionally bringing about the event, the verb belongs together with autocausative predicates. There is no evidence for a passive reading of middle forms of this verb.

Moreover, one also finds active forms used intransitively, as in (348) (there is no evidence for the use with clitic subjects).

- (348) *nu=ssan <ŪL> LUGAL-i MUNUS.LUGA-i harapsi*
 CONN=PTC NEG king.DAT queen.DAT join.PRS.2SG
 “(But when you, Sun God, break the oath,) and you do not join the king and queen.” (KBo 11.72 ii 38, MH/NS)

In (348), the active form *harapsi* is used intransitively to refer to a one-participant change-of-state event, much in the same vein as middle forms, as comparison with (345) shows. This possibly constitutes a later development, and pairs such as (346) and (348) attest to the rise of labiality in encoding the anticausative alternation for this verb.

hai(n)k^{-*ta(ri)*}, *hink*^{-*a(ri)*} ‘bow (intr.)’, *hai(n)k*^{-*zi*} ‘offer’

Semantics and aspectual construal:

As convincingly argued by Oettinger (1979: 171-7), in OS the verb *hai(n)k*^{-*ta(ri)*} only means ‘bow’, being thus synonymous to *aruwae*^{-*zi*}. Given its semantics, it is likely that the event denoted by this verb shows a default aspectual construal of cyclic achievement. Dynamicity of the verb is confirmed by occurrence such as (349):

(349) *mān zinnizi=ma ANA LUGAL hekta*
 when finish.PRS.3SG=CONN to king bow.PRS.3SG.MID
 “When he finishes, he bows to the king.” (KBo 20.10+ i 5, OH/OS)

Clearly, the two actions in (349) are sequential, as the dependent clause signals the ending of a previous ritual operation, after the completion of which the priest performs the act of bowing. A stative meaning is therefore ruled out. The classification as cyclic achievement is also suggested by (350), in which the adverb *namma* clearly indicates that the action can be reiterated multiple times. Note that the participle of this verb is unattested.

(350) *n=as namma hinga*
 CONN=3SG.NOM again bow.PRS.3SG.MID
 “And he bows again.” (KBo 20.11 ii 5, OH/OS)

A stative reading of the verb is attested once in a single occurrence, quoted in (351).

(351) *KAKSAL-an=ma INA KUR^{URU} KÙ.BABBAR-ti hi[n]ga*
 way.NOM=CONN to land *H.* bow.PRS.3SG.MID
 “The way turns into the land of Hatti.” (KBo 50.28 iii 16, NH/NS)

In example (351), the verb *hinga* must be interpreted as indicating a stative event, as it describes a stative spatial configuration. This construal is imposed by the semantics of the subject NP, which is inanimate and refers to a ‘way, path’. Notably, this constitutes a case of the phenomenon known in cognitive linguistics as *fictive motion* (see e.g. Langacker 2008 and Talmy 2011 with references), i.e. the use of motion verbs to describe the stative configuration of a path (cf. Eng. *the road goes up the hill*) that results from subjectification (Langacker 2006: 26).

Etymology:

Kloekhorst (2008 *s.v.*) treats as forms of a single lemma the stems *hai(n)k-*, *hink-*, *hi(n)k-*, (*contra* e.g. *HED*) and concludes that the form must be mechanically reconstructed as **h_{1/2}einK-* for which no IE cognates are known.

Argument structure and relationship with voice:

In OS, the verb inflects as middle only, and synchronically it indicates a spontaneous non-translational motion event involving a moving Agent (*pace* Neu’s 1968b: 81 classification as reflexive). The entity in respect to which the bowing is performed is often overtly encoded in the dative case, which indicates Goal and not Location, and can also surface as an Akkadian adpositional phrases, as in (349).

The verb is syntactically intransitive, and, as example (350) shows, it requires clitic subjects (Garrett 1996: 97). As a matter of fact, according to Hoffner & Melchert (2008: chap. 18, fn. 14), in OS the verb appears both with and without a clitic subject, as contrast between (349) and (350) shows, and possibly fully acquired unaccusative syntax only at a later stage (Luraghi 2010a).

In post-OS, one finds a wealth of occurrences of the active counterpart *hink-^{zi}* (including later copies of OH texts, cf. *HW²* for occurrences). As Oettinger (1979: 171-7) discusses, in OS and MS the middle verb always means ‘bow’ whereas the active verb means ‘offer’.⁴⁶ This alternation is nicely shown in (352), in which the middle form *hingari* is used intransitively with the meaning ‘bow’, followed by the active transitive form *hikzi* ‘offer, entrust’.

(352) GAL DUMU^{MEŠ} É.GAL=*ma* EGIR-[*an*] **hingari** nu LUGAL
 chief son(PL) palace=CONN back bow.PRS.3SG.MID CONN king

⁴⁶ To be more precise, in later texts one sporadically finds active forms used intransitively with the meaning ‘bow’ in place of middle forms of the verb (e.g. KUB 10.98 i 7 LNS), but this clearly constitutes a later innovation (Melchert 2017b: 479).

E[GI]R-*pa ANA GAL MEŠEDI hikzi*
 back to chief guard offer.PRS.3SG

“The chief of the palace servants bows after it, and entrusts the king to the chief-of guards.” (IBoT 1.36 ii 24-25, MH/MS)

Kloekhorst (2008 *s.v.*) argues that the middle verb was originally reflexive ‘offer oneself’ and later developed the intransitive meaning ‘bow’. Even if this is the case, this verb cannot synchronically be taken as evidence for the productivity of the reflexive function of the middle voice, as active and middle forms are synchronically unrelated. That active vs. middle voice alternation with this verb is not synchronically motivated is also shown by the fact that the induced counterpart of middle *hai(n)k-ta(ri)* ‘bow’ is provided by the *nu*-causative verb *hinganu-zi* ‘make bow’. Notably, this constitutes a case of lexicalization of the middle voice (Chap. 1).

***hulāliye/a-^{zi}* ‘entwine, encircle’, *hulāliye/a-^{ta(ri)}* ‘be encircled’**

Semantics and aspectual construal:

The verb *hulāliye/a-^{zi}* shows the meaning ‘wrap up’ (cf. *HW*² for a detailed description of the occurrences). Active forms of the verb are likely to refer to an incremental change-of-state event, i.e. an accomplishment (cf. Frotscher 2013: 212), as shown in (353).

(353) [ŠA] ERIN^{MEŠ} LÚKÚR *tuzzin anda hulaliyanun*
 of troop(PL) enemy army.ACC in encircle.PST.1SG
 “I encircled the army of the enemy.” (KUB 23.11 ii 23, NS)

The aspectual construal of the only MH/MS middle occurrence, quoted under (354) is unclear, and heavily depends on the syntactic interpretation of this passage, as discussed below. In principle, it can either be interpreted as indicating an accomplishment, much in the same way as active forms of the verb, or as profiling the ensuing state only (thus Neu 1968b: 94). There are no overt linguistic cues in support of either interpretation.

(354) *nu apē[d]ani tezzi hūlaliēttat=wa*
 CONN DEM.DAT say.PRS.3SG encircle.PST.3SG.MID=QUOT

“To him he says: it has been/is encircled.” (IBoT 1.36 iii 53-54, MH/MS)

Etymology:

The verb is likely a denominal formation from ^{GIŠ}*hulāli-*, as also supported by the occurrence of the figura etymologica ^{GIŠ}*hulali- hulaliyazzi* ‘he enwraps the distaff’ in KUB 59.2 ii 8 (Kloekhorst 2008 s.v.). Based on its affinity to the domain of manufacturing of wool, it is likely that the noun is connected to the root **hul-* on which *hulana-* ‘wool’ and *huliya-* ‘wool’ are based.

Argument structure:

The verb *hulāliye/a-^{zi}*, denotes an event involving at least three entities: an Agent, a Patient, the entity entwined, and possibly an Instrument. The verb displays active vs. middle voice alternation.

Active forms of the verb indicate an induced event carried out by a volitional Agent and are syntactically transitive, with the Agent and the Patient encoded as subject and direct object respectively, as in (353). The only middle form of the verb, shown in (354), displays intransitive syntax and fails to show clitic subjects. This is at best at odds with the usual behavior of stative/passive verbs, which tend to be syntactically unaccusative (Garrett 1996). Tentatively, one can explain the absence of the clitic subject in (354) as reflecting an impersonal usage of the verb. The middle intransitive form is treated as stative by Neu (1968b: 94), but this is partly misleading. As a matter of fact, the only occurrence can also be interpreted as a passive event with an anterior reading, hence the focus on the resulting state of the event ‘has been encircled’. Note that with this verb a spontaneous anticausative reading is ruled out by the presence of agent-meaning components on the base verb.

ARAD-(n)ahh-ⁱ ‘enslave, subjugate’, **ARAD-(n)ahh-^{ta(ri)}** ‘become slave’

Semantics and aspectual construal:

The verb *ARAD-(n)ahh-ⁱ* is a factitive verb based on the noun *ARAD* ‘slave’ (previously read as *ÌR*) and means ‘enslave, subjugate’ (see Friedrich 1952: 278 for occurrences), as in example (355).

- (355) ^{KUR}*Alasiyan=ma=za=kan pide=ssi* [ÌR -*nahhu*]*n*
A.ACC=CONN=REFL=PTC place.DAT=3SG.POSS.DAT *enslave.PST.1SG*
“But the land of A. I subjugated on the spot.” (KBo 12.38 i 7-8, NH/LNS)

Moreover, as examples (356) and (357) demonstrate, the participant performing the role of Agent in active forms is not demoted to oblique agent with middle form, but is rather encoded as a dative Beneficiary/Recipient, and is not conceived as actively involved in bringing about the state of affairs described by the verb.

***isiyahh*⁻ⁱ ‘announce, reveal’, *isiyahh*^{-ta(ri)} ‘be revealed, appear’**

Semantics and aspectual construal:

The verb *isiyahh*⁻ⁱ means ‘announce, reveal’, and occurs both in the active and in the middle voice. Morphologically, we are dealing with a factitive *-ahh*- formation from a base *isi*- unattested in Hittite (see further *HEG* I: 396, and *HED* I: 412 for discussion of possible etymologies of this form). The verb refers to a two-participant change-of-state event that is mostly construed as lacking an internal temporal unfolding, i.e. as an achievement, as shown in examples (358) and (359), both compatible with a telic construal of the verb.

(358) *kī=kan* GIM-*an* ŠA^dUTU URU PÚ[-*na*] [xxx] ŠÀ Û-TI
 DEM.NOM.N=PTC as of Sungoddess A. inside dream

isiyahtat

reveal.PST.3SG.MID

“As this was shown in the dream of the Sungoddess of Arinna.” (KUB 16.31+ iii 23-24, NH/NS)

(359) *s=an* LÚ^{URU} *Huntarā* ***isiyahhis***
 CONN=3SG.ACC man H. reveal.PST.3SG

“(Nunnu, the royal representative of the city of Hurma [...] did not deliver the silver and the gold [...] and the man of Huntara denounced him.” (KUB 36.104 i 11, OH/OS)

Argument structure and relationship with voice:

The verb *isiyahh*⁻ⁱ indicates a two-participant change-of-state event involving an Agent and a Patient. Active forms of the verb are used in a transitive construction, with the two participants encoded as subject and an accusative direct object respectively, as the occurrence of the accusative clitic pronoun =*an* shows (359). By contrast, middle forms of the verb are intransitive, as in (358), and display unaccusative syntax, as evidenced by the occurrence of the clitic subject pronoun =*at* in (360).

(360) *nasma=at=si* *IŠTU* SU^{MEŠ} [*nasm(a IŠTU)*] MUŠEN^{HLA}
 or=3SG.NOM.N=3SG.DAT by flesh.oracle(PL) or by bird.oracle(PL)
isiyahtari
 reveal.PRS.3SG.MID
 “Or (if) this is revealed by flesh-oracles or bird-oracles.” (KBo 15.11 iv 7, NS)

According to Neu (1968a: 75), middle forms of *isiahh⁻ⁱ* constitute the passive counterpart of active transitive forms of the verb. A passive function of the middle voice is supported by comparison between (359) and (358). Moreover, in (360) the occurrence of the agent phrase introduced by *IŠTU* openly support a passive reading (note that even if one takes the two *IŠTU*-phrases to encode instrument rather than agent, still passive remains a better interpretation, see discussion under *ariye/a^{-zi}* and *handae^{-ta(ri)}*). However, this is not the only possible reading of middle forms of the verb. In fact, example (358) is perfectly compatible with a spontaneous interpretation of the event ‘appear in dream’.⁴⁷

Summing up, with *isiahh⁻ⁱ* the middle voice operates as a detransitivizing device, with either a passive ‘be revealed’ or an anticausative ‘appear’ reading, as opposed to the active induced event ‘reveal’. Due to the overall scarcity of attestations (Neu 1968a: 75 counts three occurrences), all coming from NS manuscripts, it is not possible to establish a relative chronology between the two functions.

istamass^{-zi} ‘hear’, *istamass^{-ta(ri)}* ‘be heard’

Semantics and aspectual construal:

The verb *istamass^{-zi}* indicates an event of aural perception ‘hear, listen’ (cf. *HW*²). Similarly to what observed for *au⁻ⁱ* ‘see’, verbs denoting human perceptual events often show an alternation between a stative and an inchoative construal. Notably, such alternation is often paired with alternative construal of the predicates as either uncontrolled ‘hear’ or controlled ‘listen’, depending on the involvement of the Experiencer in the event. These considerations hold for Hittite *istamass^{-zi}* as well. Since the verb

⁴⁷ Neu (1968a: 75) translate this sentence as ‘als dieses von seiten der Sonnengöttin von Arinna im Traum angezeigt wurde’. This translation is partly misleading, as it suggests that the adpositional phrase *ŠA* ^dUTU encodes the agent of the passive. This is however unlikely, since the genitive case, and the corresponding Akkadian preposition *ŠA*, are never used in this function (cf. Neu 1968b: 113-115; Hoffner & Melchert 2008: 305).

is predominantly attested in the active voice, I discuss first its semantics based on active forms. Let us begin by comparing (361) and (362).

(361) *nu āssu uttar [i]stamas*
 CONN good.ACC.N word(N).ACC hear.IMP.2SG
 “(Bend your hear), and listen to the good word!” (KBo 7.28 obv. 13, OH/MS)

(362) GIM-*an=ma=an istamassun*
 when=PTC=3SG.ACC hear.PST.1SG
 “(I did not know of it), but when I knew (lit. heard) it.”⁴⁸ (KUB 31.66+ iv 17, NH/NS)

As examples (361) and (362) show, the verb *istamass-^{zi}* can be construed in two different ways. In (361), the verb profiles an ongoing perceptual event whereby an experiencer is continuatively exposed to an auditory stimulus, and actively exerts control over the event, as evidenced by the occurrence of the verb in the imperative mood. By contrast, in (362), the verb refers to a punctual uncontrolled event of hearing, which is construed as an achievement. Here, the change-of-state component is clearly recoverable from the context, as the preceding sentence shows. It should be observed that, whereas alternative construal for verbs like *see* is linked to either a stative or an inceptive reading, the telic reading of *istamass-^{zi}* does not indicate the entry into the state of ‘hearing’ but rather in the state of knowledge ensuing from the event of hearing. This is an instance of a well-known tendency of perceptual verbs to turn into knowledge verbs (for the comparable use of verbs of aural perception as verbs of knowledge in Ancient Greek see Luraghi & Sausa forthc.). As in the case of *au-ⁱ*, alternative construal of *istamass-^{zi}* is reflected in the behavior of its participle, which can mean either ‘hearing’ or ‘heard’ (for discussion see Dardano 2014a: 244).

The achievement construal, associated with the knowledge meaning, is also shown by the only NH/NS middle occurrence of the verb, quoted in (363):

(363) [*n=*]*a[s] isdammastari*
 CONN=3SG.NOM hear.PRS.3SG.MID
 “(If a Kaskean sleeps within the town), and he is discovered (they throw him into prison).”
 (KUB 21.29 iii 30-32, NH/NS)

Argument structure and relationship with voice:

⁴⁸ Following Cammarosano (2009: 187), the common gender clitic =*an* must be here a scribal mistake for neuter =*at*.

1PL.DAT=CONN=QUOT=3PL.NOM.N=PTC close.PRS.3PL.MID

“(If they build a fortress, will not the roads lie open [*hiswandari*] to them?) But to us they will be closed.” (ABoT 1.60 obv. 18, MH/MS; transl. Hoffner 2009: 176)

In (365), the verb is used as an antonym in parallel with the stative middle *hiswai-tta(ri)* ‘lie open’. Hoffner (2009: 176) translates the verb as a state ‘be/stay closed’, in line with the translation of this verb as a *stative* middle ‘verschlossen sein’ in Neu (1968a: 77, 1968b: 94) ‘.

A closer look at the context however suggests that the verb should be better interpreted as construing a change-of-state event rather than a state. As discussed under *hiswai-tta(ri)*, the passage at hand reports that the building of a Hittite fortress in a certain place will have implications on the viability of the routes of communications in the area. If the Hittites build a fortress, then they will secure the maintenance of the passage on the route, hence the stative interpretation of *hiswai-tta(ri)*. Nevertheless, this entails that for their enemies the same route will not be viable any longer. In this sense, the route undergoes a change of state from being open to being closed, thus disfavoring a purely stative reading of the verb *istappandari*.

Similarly to what discussed for *hās-i*, the participle of *istāp-i* is resultative in meaning, and can profile either a state, as in (366), or a passive event, as in (367):

(366) *ser=ma=at=kan* *IŠTU* ^{GIŠ}MA *istappan*
upon=PTC=3PL.NOM.N=PTC with fig close.PTCP.NOM.N
“They (viz. the containers) are filled (lit. closed) with figs.” (KBo 5.1 ii 40, NS)

(367) *n=as=kan* KAxU-*is* *kizza* *IŠTU* KÙ.BABBAR GUŠKIN
CONN=3SG.NOM=PTC mouth.NOM DEM.ABL with silver gold
NINDA.KUR₄.RA=*ya* *istappanza* *ēsdu*
thick.bread=CONJ close.PTCP.NOM be.IMP.3SG
“His mouth shall be stuffed (lit. closed) with this silver, gold, and thick bread.” (IBoT 3.146 iii 50-52, NS)

Etymology:

Kloekhorst (2008 *s.v.*) suggests a connection with PGrm. **stup-*, Eng. *stuff*, OHG *stopfōn*, both on formal and semantic grounds. However, as Kloekhorst observes, the mismatch between PGrm. **stup-* and Hitt. *istāp-* < **stop-*, requires an entirely *ad hoc* explanation, in lack of other cognates. Puhvel (*HED*) rather reconstructs the form as **step-/steb-*, thus cognate with e.g. OE *steppan* ‘step’.

Argument structure and relationship with voice:

The active verb *istāp⁻ⁱ* indicates a two-participant event involving an Agent and a Patient. Syntactically, active forms of the verb are transitive, with the two roles encoded as subject and object respectively, as in (364). Conversely, the middle verb is intransitive, with the Patient encoded as subject. The verb shows unaccusative syntax (Garrett 1996: 91), as evidenced by the occurrence of the clitic subject =*at* in (365).

The verb *istāp⁻ⁱ* is generally inflected in the active voice, and evidence for middle inflection is restricted to one single occurrence. Clearly, such an unbalanced distribution seriously flaws any attempt to describe the principle behind this verb's voice selection. Whereas active forms of the verb clearly refer to an induced event 'close (tr.)', as shown in (364), the interpretation of the middle occurrence in (365) is more complex. Once a stative interpretation has been ruled out, as discussed above, the intransitive middle form can in principle either indicate a spontaneous or a passive event, verbs of closing and opening being notoriously involved in passive as well as in anticausative alternations (cf. Eng. *the door opens* vs. *the door is opened by the man*.) Unfortunately, due to lack of an overt agent expression, it is impossible to argue in favor of either interpretations, even though the discourse context might be more compatible with an anticausative reading.

***istarni(n)k^{-zi}* 'afflict', *istarni(n)k^{-ta(ri)}* 'become ill'**

Semantics and aspectual construal:

The verb *istarni(n)k^{-zi}*, which is a *-nin-* infixed derivative from *istar(k)^{-zi}* (Oettinger 1979: 143, 196, Kloekhorst 2008 *s.v.*), means 'afflict', and semantically belongs together with verbs of illness (cf. *istar(k)^{-zi}*, see *HED* for occurrences). The verb generally inflects in the active voice, and occurs only once in the middle voice. In either case, it profiles a change-of-state event, as shown in (368) and (369):

- (368) *t=an* ***istarnikzi***
CONN=3SG.ACC afflict.PRS.3SG
“(If anyone beats up a man) and makes him suffer.” (KBo 6.2 i 16, OH/OS)
- (369) [*nu*]=*smas* ***istarniktat***
CONN=3PL.DAT afflict.PST.3SG.MID
“He got ill (while) with them.” (KBo 3.34 ii 39, OH/NS)

In (368), the context supports a telic change-of-state construal of the verb, as the event denoted by *istarnikzi* is a direct consequence of the event described in the preceding clause. Based on (368) and similar contexts, the verb can be assigned an achievement default construal.

The occurrence in (369) is admittedly difficult to interpret, due to the lack of contextual cues. In principle, either a change-of-state ‘turn ill’ or a state ‘be ill’ reading is compatible with this occurrence, and most scholars opt for the former interpretation (e.g. Neu 1968a: 78, Dardano 1997: 55, *HED* ‘he turned ill’). Also, the interpretation of the aspectual construal of the middle form in (369) largely depends on one’s interpretation of the function of the middle voice with this predicate, as I discuss below.

Argument structure and relationship with voice:

The syntax of *istarni(n)k^{-zi}* is of remarkable interest, especially when compared to *istar(k)^{-zi}*. Formally, the former constitutes the causative nasal infixed present of the latter (Oettinger 1979: 143, 196, Kloekhorst 2008 *s.v.*), and both verbs show active and middle inflection.

The active verb *istarni(n)k^{-zi}* indicates a causative two-participant experiencer event, involving a Causer and an Experiencer. In the active voice, the verb occurs in a transitive construction, with the two participants encoded as subject and direct object respectively, as in (368). The only middle occurrence of this verb shows intransitive syntax, with the Experiencer encoded as subject. Oddly enough, unlike its synonymous *irmaliye/a^{-ta(ri)}*, the verb does not show a clitic subject in (369). This anomalous behavior can be possibly explained by assuming that the clitic pronoun was lost due to a scribal mistake of apology and that the sequence should be edited as *nu-us-ma-as-{as}*. In the middle voice, *istarni(n)k^{-zi}* encodes a spontaneous event, as discussed above, and therefore stands in anticausative alternation with the active. Notably, this alternation must be old, as the verb is attested in the middle form in OH.

Active *istar(k)^{-zi}* indicates a spontaneous change-of-state event and means ‘be(come) ill’, as discussed above. The verb is most often involved in impersonal constructions with the Experiencer in the accusative case, as in (177), and only marginally in personal construction with an ‘illness’ subject (179). In addition, the stem *istar(ak)kiye/a-* can also inflect in the middle with the meaning ‘become ill’, as shown in (175).

Neu (1968a: 78) observes that in the pair *istar(k)^{-zi}* vs. *istarni(n)k^{-zi}* the causative function of the suffix *-nin-* is not visible. This is however inaccurate, as the causative infix *-nin-* has bearing on the

syntax of the verb. Whereas *istar(k)-^{zi}* is used impersonally, causative *istarni(n)k-^{zi}* is transitive, hence it has nominative subject encoding the stimulus and an accusative object encoding the experiencer.⁵⁰

Overall, leaving aside later transitive usages of *istar(k)-^{zi}* with an ‘illness’ subject, the relation between the different stems discussed so far can be schematized as follows. One detects two layers of anticausative alternation. On the one hand, the anticausative alternation is instantiated through voice alternation in the case of *istarni(n)k-^{zi}* ‘afflict (tr.)’ vs. *istarni(n)k-^{ta(ri)}* ‘become ill (intr.)’. On the other hand, the same alternation is encoded through *-nin-* infixation with the pair *istar(k)-^{zi}* ‘become ill (impers.)’ vs. *istarni(n)k-^{zi}* ‘afflict (tr.)’. Note also that active *istar(k)-^{zi}* and middle *istarni(n)k-^{ta(ri)}* are extremely close in meaning, since both encode a spontaneous change of state. However, they differ in their syntax, since the former is used mostly in impersonal constructions whereas the latter regularly takes a nominative subject. As discussed above, middle inflection for *istar(ak)kiye/a-^{ta(ri)}* in NH/NS possibly constitutes a later development.

***karp(iye/a)-^{zi}* ‘pluck, raise, finish (tr.)’, *karp(iye/a)-^{ta(ri)}* ‘be taken, raise, finish (intr.)’**

Semantics and aspectual construal:

The verb *karp(iye/a)-^{zi}* indicates caused motion event with contextual meaning ranging from ‘pick, raise, lift’ to ‘remove, steal’ (see *HED* K: 91-98 for occurrences). Since active and middle forms partly differ in meaning, I first treat active forms and then proceed to the discussion of middle forms. I focus on two meanings of the verb that are relevant to understand its relationship with the middle voice, viz. the meaning ‘raise, pluck’ and the meaning ‘bring to completion’.

When it means ‘raise, pick up’ the verb indicates an induced change of location, hence the underlying event is mostly construed as telic. The verb is clearly construed as indicating a punctual event, i.e. an achievement, in occurrences such as (370), where telicity is further suggested by the temporal adverb 3-*ŠU* ‘three times’.

(370) *IŠTU GAL KÙ.BABBAR* ^{DUG}*harsiyallaz* GEŠTIN *sarā* 3-*ŠU* ***karapzi***
 with cup silver pithos.ABL wine up 3.times take.PRS.3SG

⁵⁰ That *istarni(n)k-^{zi}* is used in a personal transitive construction with a nominative subject is evident because of attestation of the verb in forms other than the 3rd person singular, as e.g. the 1st plural *is-tar-ni-in-ku-en* ‘we afflicted’ (KBo 3.45 obv. 4).

“With a silver cup, he takes up wine from the pithos three times.” (KUB 10.11 v 1-3, LNS)

In addition, the verb also shows the meaning ‘bring to completion, end’, both when inflected in the active and in the middle voice. This seems to be a very specific meaning of the verb, quite distant from the base meaning ‘pick up’, and I will return to this shortly. In these occurrences, the verb indicates an incremental change-of-state developing through time. Compare example (371) in the active voice with examples (372) to (374) in which the verb occurs in the middle voice.

(371) GIM-*an=ma=za=kan* EZEN^{MEŠ} *karapmi*

when=PTC=REFL=PTC festival(PL) finish.PRS.1SG

“But when I complete the festivities.” (KUB 16.98 ii 13, NH/NS)

(372) [*nu*]=*kan mahhan* [*I*]NA É *Ziparwa* INA UD.2.KAM [E]ZEN

CONN=PTC when in temple Z. in 2.days festival

karaptari

finish.PRS.3SG.MID

“When in Z.’s temple the feast is concluded in two days.” (KUB 11.22 i 6-8, NH/NS)

(373) *n=asta mān* ^{URU}*Hattusi* EZEN.ŠE^{HLA} *hūdak karpantari*

CONN=PTC when H.DAT ritual(PL) suddenly finish.PRS.3PL.MID

“And when the rituals in Hattusa are suddenly completed.” (KUB 55.43+ obv. 12, NH/NS)

(374) GIM-*an=ma=kan arkuwar tiyauwar karaptari*

when=PTC=PTC plead.VN put.VN finish.PRS.3SG.MID

“(He makes them into a plea to the gods.) When the presentation of the plea is finished, (thereafter he breaks three white thick breads and one red, for the male gods of all the lands.)” (KUB 6.45 iv 47-48, NH/NS)

In example (371), the occurrence of the object EZEN^{MEŠ} ‘festivity’ which itself refers to an event unfolding through time, favors an accomplishment reading of the verb, which means ‘bring to completion’. Similarly, in example (372) the occurrence of the adverbial phrase *INA UD.2.KAM* ‘in two days’ profiles the temporal unfolding of the event before completion, showing that the verb is construed as an incremental accomplishment. When the verb occurs with the adverb *hūdak* ‘suddenly’, as in (373), it profiles the sudden completion of the event, thus implying an incrementality of the change-of-state event. Finally, in (374), the verb indicates a dynamic event during the course

of a ritual, so that the entire change-of-state event whereby the pleas are completed is profiled, rather than the resulting state only.

In these examples, the aspectual construal of the verb suggests that we are dealing with an eventive reading of the predicate, as I discuss below. If one looks at other occurrences of middle forms of *karp(iye/a)^{-zi}*, even in case of absence of temporal adverbs, an eventive reading fits well with most contexts, so that there is no compelling evidence to maintain that the verb could also simply profile a transitory state (*contra* Neu 1968a: 81).

Etymology:

Already since OS, one finds the stem *karp-* beside *karpīye/a-*, which might reflect an opposition between a root aorist **KerP-* and a derived present **KrP-ye/o-* (Melchert 1997: 84 ff.). On formal ground, the verb is likely connected with Lat. *carpō*, from a PIE root **kerp-* (Kloekhorst 2008 s.v.).

Argument structure and relationship with voice:

The relationship between active and middle voice of *karp(iye/a)^{-zi}* is difficult to evaluate, on account of the difference in meaning between active and middle forms.

Both in the meaning ‘pluck, take away’ and ‘bring to completion’, active forms of the verb refer to a two-participants event involving a causing Agent and an affected Patient. The active verb is used in a transitive construction, with the two participants encoded as subject and object respectively, as in examples (370) and (371).

By contrast, middle forms of the verb refer to a one-participant event involving a Patient only, and are used intransitively with a nominative subject, as in (372) to (374). As the verb only occurs with nominal or pronominal subjects, there is no evidence to assess its behavior with clitic subjects. There is one passage, quoted under (375), in which no clitic subject occurs, but since the left sentence boundary is partly restored, this occurrence is not compelling, as the subject could also be expressed in the lacuna (see F. Fuscagni (ed.), hethiter.net/: CTH 489 (TX 02.03.2011, TRit 01.03.2011 for further references and discussion).

(375) [*kui*]tmann=a=kan **karaptari**

until=CONJ=PTC finish.PRS.3SG.MID

“Until the feast is brought to completion (they shall not hit nor fight anyone).” (KBo 17.65 obv. 50, MS)

As comparison between (371) and (372) shows, with *karp(iye/a)^{-zi}* the middle voice operates as a valency reducing marker, but its exact function is not easy to assess.

In the first place, according to Neu (1968a: 81), middle forms of the verb can act as oppositional middles to the active meaning ‘raise, lift up’ with the meaning ‘raise (intr.)’. This function is possibly illustrated by examples such as (376).

(376) *apā*[*t=ma=kan*] *BELU* *lē* *karaptari*
 DEM.INST=PTC=PTC lord NEG raise.PRS.3SG.MID
 “For this reason, the lord should not raise up.” (KUB 19.26 iv 4, NS)

If this interpretation is correct, example (376) would provide evidence for an anticausative alternation being instantiated by voice alternation with the meaning ‘raise (tr.)’ vs. ‘raise (intr.)’. However, example (376) comes from a partly fragmentary text, and judging from the available context, a passive reading ‘should not be taken, i.e. arrested’ is perfectly plausible as well, as Neu (1968a: 81) himself remarks.⁵¹ The other occurrence (KUB 33.93+ iv 31) also comes from a quite fragmentary manuscript and is therefore unreliable.

Moreover, as comparison with the Lat. cognate *carpō* ‘pluck’ suggests, the original meaning of the verb was possibly ‘pluck’ later broadened to ‘pick up, raise’. Since the former meaning is incompatible with an autocausative reading due to the presence of agent-oriented components (Haspelmath 1987), it is unlikely that originally the middle voice was connected to anticausative alternation with *karp(iye/a)^{-zi}* in its base meaning, and a spontaneous interpretation became available only once the verb shifted from ‘pluck’ to more general ‘raise’. Notably, the passive of the basic

⁵¹ Eichner (1979: 60-61) rejects both interpretations and rather interpret the form as belonging to a homophonous but distinct lemma *karp(iye/a)^{-ta(ri)}* ‘be(come) angry’, followed by Puhvel (HED *s.v.*) and Kloekhorst (2008 *s.v.*). Beside the passage in (376), the verb *karp(iye/a)^{-ta(ri)}* is attested only in the following passage: ^dUTU-*us karpiyatta* ‘the sun-god is angered’ (KUB 9.34 iii 35). The interpretation of the verb relies on comparison with the noun *karpi-* ‘wrath’, and is also backed up by the existence of a fientive verb *karpiess^{-zi}* ‘become angry’. However, as discussed at length by Vansévère (2014: 1002-1004), the noun *karpi-* is limited to the denotation of divine wrath. This interpretation fits well with the occurrence of the verb in KUB 9.34 iii 35, where the subject is a god, but it does not fit equally well the context in (376), in which the subject is rather a human being. Therefore, Neu’s interpretation of the form *karaptari* as belonging to *karp(iye/a)^{-zi}* ‘rise’ is still plausible, if not preferable (thus also Kronasser 1966: 103). Note that the interpretation of *karaptari* as a denominal form of *karpi-* ‘wrath’ is also difficult on morphological grounds, as denominal verbs are usually derived with a suffix *-iye/a-*, but the verb here shows a base stem *karp-*. The interpretation of *karpiyatta* as a *-iye/a-* denominal verb based on *karpi-* is in turn entirely plausible.

The verb *kars(iye/a)^{-zi}* basically means ‘cut’ (see *HED* a full discussion of the occurrences). Since the semantics of middle forms of the verb is more difficult to disentangle, I first illustrate the semantics of the active forms.

In its meaning ‘cut’, the active verb belongs together with highly transitive verbs of physical direct effect on the Patient (cf. Tsunoda 1985) such as *parsiye/a^{-zi}* ‘break’ and *tuhs^{-a(ri)}* ‘cut’, as shown in (378) and (379):

(378) *nu=kan* ^{GIŠ}ERIN *karasta*
 CONN=PTC tree cut.PST.3SG
 “He cut the cedar trees down.” (KUB 8.51 iii 12, LNS)

(379) *kī=wa* GIM-an ŠU.SAR *arha karsun*
 DEM.ACC.N=QUOT as string away cut.PST.1SG
 “And as I cut this string.” (KUB 41.21 iv 11, LNS)

Similarly to *parsiye/a^{-zi}* ‘break’ and *tuhs^{-a(ri)}* ‘cut’ (see discussion under the individual lemmas), the verb *kars(iye/a)^{-zi}* profiles a telic event, and its internal temporal structure partly depends on the referential features of the participant involved. For instance, the occurrence of multiple Patient participants in (378) favors an accomplishment construal of the verb, whereas the features of the participant ‘string’ involved in (379) support license an achievement construal. Alternating construal aspectual between (378) and (379) reflects different granularity in the conceptualization of the event in terms of scalar adjustment (see further Croft 2012: 92 ff.).

An achievement construal also underlies the meaning ‘separate, segregate’, as in (380), in which a literal meaning ‘cut’ is ruled out by the context, since the person in question is not cutting a part of the pig but rather taking away the entire animal:

(380) *takku ŠAH.TUR kappi* *karaszi*
 if pig(N) small.NOM.N cut.PRS.3SG
 “If someone steals a small pig (he steals it).” (KBo 6.3 iv 18, OH/NS)

Determining the aspectual construal of middle forms is not an easy task, partly because they show differences in meaning. First, middle forms of the verb are occasionally used as quasi-auxiliaries with the infinitive with the meaning ‘fail at something’, as in (381).

(381) *nu* 1-as 1-as INA É DINGIR^{LIM} *sarā* *sēsūwanzi*

CONN 1.NOM 1.NOM in house god upwards sleep.INF

karastari

fail.PRS.3SG.MID

“And let not a single one fail to sleep in the temple.” (KUB 13.4 iii 5-6, MH/NS)

In this case, the construction of *kars(iye/a)^{-zi}* with the infinitive shifts the profile of the event denoted by the infinitive to the completion phase only (cf. Croft 2012: 107).

When the verb has a passive interpretation (see below for discussion), it likely retains the base aspectual construal of the base verb, as comparison between (378) and (382) shows.

(382) *nu=war=at=kan* GIR^{MEŠ} *arha* [***k***]*arsantat*
 CONN=QUOT=3PL.NOM=PTC foot(PL) away cut.PST.3PL.MID
 “Their feet were cut off.” (KBo 47.239 iv 13-14, NH/NS)

Finally, middle forms of *kars(iye/a)^{-zi}* can also be used with the meaning ‘stop’ (cf. Neu 1968a: 83), as in (383) and (384).

(383) [(*nu uizzi* AN)]A DINGIR^{MEŠ} NINDA.GUR₄.RA.^{HLA} DUGⁱ*ispant*[(*uzzi*
 CONN come.PRS.3SG to god(PL) bread(PL) libation.NOM
 UDU^a*auliuss=a* ***karsantari***)]
 sheep.ACC.PL=CONJ finish.PRS.3PL.MID

“So it has come to pass that the offering of bread, the libations, and the offering of animals to the gods have stopped.” (KUB 24.4 i 7, MH/MS; transl. Singer 2002: 52, restored after KUB 24.3 MH/NS)

(384) *nu ANA* DINGIR^{MEŠ} BE[LU^{MEŠ} xxx] *ispantuzzi* ***karastari***
 CONN to god(PL) lord(PL) libation.NOM finish.PRS.3SG.MID

“(And if they too die,) the offering bread and the libation for the gods will be cut off.” (KUB 14.12 rev. 9-10, NH/NS, trans. Singer 2002: 57)

The aspectual construal of middle forms of *kars(iye/a)^{-zi}* in (383) and (384) is difficult to evaluate. In these cases, the verb is often translated as ‘stop’ (Singer 2002: 52, but note the inconsistent translation ‘be cut off’ in the second example), ‘be neglected, omitted’ (Lebrun 1980: 169, García Trabazo 2002: 295). Clearly, the verb still refers to a change-of-state event. However, it is unclear

whether the verb profiles the entire incremental accomplishment event or the resulting state only (cf. Croft 2012: 109 on English Resultative Adjective/Stative Passive construction).

Etymology:

Kloekhorst (2008 s.v.) reconstructs the verb as **krs-ie/o-*, thus cognate with TochAB *kārs-* ‘know’, Gr. *keirō* ‘cut’ (cf. also *LIV*²). This verb also shows stem alternation *kars-* vs. *karsiya-* from OS, and this might reflect an alternation between root aorist vs. **-ye/o-* present formations (cf. Melchert 1997: 86).

Argument structure and relationship with voice:

The verb *kars(iye/a)^{-zi}* occurs both in the active and in the middle voice. Whereas occurrences of the former date back to OH/OS, middle forms are attested from MH/MS onwards. The relationship between active and middle forms of *kars(iye/a)^{-zi}* is complex to evaluate, partly following out of the different meanings that middle forms of *kars(iye/a)^{-zi}* show in texts.

In its basic concrete meanings ‘cut, sequester’, the active verb encodes a two-participants event associated with an Agent and a Patient. Active forms of the verb are used transitively, with the two participants encoded as subject and direct object, as in examples (378) to (380).

By contrast, middle forms of the verb are used intransitively with the subject encoding the Patient of the corresponding active verb, and show unaccusative syntax, as evidenced by the occurrence of the clitic subject *=at* in (382).⁵²

When instantiating the base meaning ‘cut’, comparison between (378) and (382) suggests that middle forms can be used with passive function, even in absence of an overt agent phrase.

The interpretation of occurrences such as (383) and (384) is more problematic. In these cases, as shown by most scholars’ translations of this passage, one is tempted to interpret the middle form as indicating a spontaneous event ‘stop, come to an end’ and this also applies to instances in which the verb means ‘fail’, as in (381). This interpretation is the only one available in context such as (385), where the flood is conceived as coming to its endpoint without an intervening external force:

⁵² According to Neu (1968a: 82-83), middle forms of *kars(iye/a)^{-zi}* can also be used transitively, but this interpretation is partly unwarranted. First, example (381), interpreted as transitive by Neu, should be better interpreted as an intransitive construction of *kars(iye/a)^{-zi}* plus the infinitive. Another occurrence, *n=at miyan [arha ka]rsanda* (KUB 27.16 i 9-10 [MH/NS]), treated by Neu as transitive ‘and they cut them ripen’, can easily be interpreted as passive as well ‘and they are cut ripen’. Finally, forms of *karsa* in KBo 19.142 (ii 23, iii 24), might not even be middle forms of *kars(iye/a)^{-zi}* (cf. Wegner 1995: 203-204).

(385) [xxx *kar*]izzas *karsa[ntari]*
 flood.NOM.PL finish.PRS.3PL.MID

“The flood will stop.” (KBo 8.19 obv. 16, NS)

The fact that middle forms of *kars(iye/a)^{-zi}* show either a passive and an anticausative reading remains somewhat puzzling, and can be explained as the diachronic layering of different functions. The active verb *kars(iye/a)^{-zi}* clearly refers to the event of ‘cutting’. Being the most concrete meaning, this is likely to be the original one, and this was possibly the meaning inherited from the PIE root **ker-*, as shown by e.g. Gr. *keirō* ‘cut’. If this is correct, then originally the middle voice cannot have been used as an anticausative marker, *cut*-verbs being notoriously unavailable for anticausative alternation due to their inherent agent-oriented meaning components (Haspelmath 1987). A possible way to reconcile the evidence is to explain the semantic shift from transitive active ‘cut’ to intransitive middle ‘stop, fail’ as a change from passive to anticausative function (see Kulikov 2011).

Diachronically, the scenario runs as follows. The middle voice originally indicated the passive counterpart of the active verb ‘cut’ vs. ‘be cut’, with backgrounding of the Agent and promotion to subject of the Patient, as in (382). In cases in which the Agent was entirely removed for discourse reasons, the passive would have been interpreted as an agentless passive or impersonalized passive (Kulikov 2011: 250). For instance, in (383) and (384) the context strongly favors an impersonal reading: what is being said in this text is that because the shepherds and cowherds that used to give offerings to the gods have died, then the offerings stopped as a consequence (lit. were cut). Now clearly in this case the event is an agentless passive at best, the agent of the event having already died. Note that from this interpretation it follows that the event is aspectually construed as a change-of-state situation, thus disfavoring a simply stative reading. From such contexts, a spontaneous event reading, i.e. ‘stop, finish’ could have been taken over, as in (385), and this possibly constitute the starting point for the development of the meaning ‘fail’, which is synchronically impossible to interpreted as a passive from.

The development of the middle voice with *kars(iye/a)^{-zi}* can be summarized as follows:

passive ‘be cut (by someone)’ > agentless passive ‘be cut’ > spontaneous ‘stop’ > ‘fail’

The textual chronology of the various functions suggests that this change was completed by MH times, in which the meaning ‘fail’ is first attested. The fact that the only certain passive occurrence comes from a NH/NS text is hardly compelling counterevidence to the shift suggested here, as given

the overall scarcity of the occurrences of middle forms of *kars(iye/a)-^{zi}*, lack of middle forms with passive function in earlier texts can simply be due to chance.

***lā-ⁱ* ‘release, remove’, *lā-^{i/ta(ri)}* ‘be released, be removed’**

Semantics and aspectual construal:

The verb *lā-ⁱ* shows various related meanings ‘unbind, take off, release’ (see *CHD* s.v. for a thorough discussion of the occurrences). The verb profiles an irreversible achievement event, as in (386), in which the middle form *lattat* occurs.

- (386) *anda* KU₆-*us* *hantiyaras* ***lattat***
 in fish.NOM riverbed(?).DAT.PL release.PST.3SG.MID
 “The fish was released inside the riverbed (?).” (KBo 3.8 iii 20-21, OH/NS)

In example (386), the event denoted by the verb is construed as punctual, i.e. as an achievement, since it profiles the instantaneous change-of-state undergone by the fish. Example (387) shows the specialized meaning of middle forms of *lā-ⁱ* with the meaning ‘be removed, be resolved’, which is also likely to be construed as an achievement.

- (387) INIM ^{f.d.}*IŠTAR-atti=nas=kan* *apez* *m[e]minaza* ***littari***
 matter S.=1PL.DAT=PTC DEM.ABL deed.ABL release.PRS.3SG.MID
 “The affair of Sausgatti is solved for us (lit. is removed) by that deed.” (KBo 2.6 iii 48, NH/NS)

Note that the event denoted by the verb is mostly construed as telic, but alternative construals of its internal temporal unfolding are available, partly following from the semantic features of the referents involved. Compare examples (386) and (388).

- (388) *am[mug]=at* *kāsa* EGIR-*pa* ZAG-*az* ***lānun***
 1SG.NOM=3PL.ACC.N here back right release.PST.1SG
 “(He twined them like a cord. They were twined to the left), I have untwined them to the right.” (KUB 29.7 rev. 35-36, MH/MS)

Whereas in (386) the verb profiles an punctual change of state, in (388) world-knowledge suggests an incremental accomplishment construal of the event, since what is described is the progressive untwining of a cord which was previously twined.

Etymology:

The verb shows both *hi-* and *mi-* endings, the former attested since OS and possibly original, and the latter taking over from MH times onwards (Kloekhorst 2008: *s.v.*). Etymologically, the verb must reflect a root **leh₁-* thus cognate with e.g. Goth. *letan* ‘let go’.

Argument structure and relationship with voice:

The verb *lā⁻ⁱ* occurs both in the active and in the middle voice. The event frame associated with *lā⁻ⁱ* involves three participants: an Agent, who carries out the releasing event, a Patient, i.e. the entity released, and a Source, which often indicates the (abstract or concrete) negative condition from which the Patient is freed.

Active forms of the verb display transitive syntax. Interestingly, one can detect at least two different constructions available for this verb, which differ in the encoding of the Patient and the Source participants. Compare examples (389) and (390):

(389) *ishiyantan=man=kan ishiyalaz arha lāuen*
 bind.PTCP.ACC=IRR=PTC bond.ABL away release.PST.1PL
 “We released from the bond him who was bound.” (VBoT 120 iii 2-3, MH/NS)

(390) *tarassanas taksupiman lāu*
 throat.GEN screaming.ACC release.IMP.3SG
 “Let him remove the screaming of (his) throat. (= let him free his throat from the screaming)” (KUB 17.54 i 9, OH/MS)

In the first place, the verb can be used with the accusative of the Patient and the ablative of the Source, as in (389), where the Patient is encoded by the direct object *ishiyantan* ‘he who is bound’ and the Source by the ablative *ishiyalaz* ‘bond’. In the second place, the encoding of the two entities involved can be reversed, with the Source encoded as direct object, and the Patient encoded as an adnominal and genitive modifier of the Source, as shown in (390). These two constructions can be schematized as follows:

$$A. [N_{1(NOM)} \textit{lā}^{-i} N_{2(ACC)} N_{3(ABL)}] = [SEM_{1.AG} \textit{frees} SEM_{2.PAT} \textit{from} SEM_{3.SOUR}]$$

B. $[N_{1(NOM)} \bar{l}\bar{a}^{-i} N_{2(GEN)} N_{3(ACC)}] = [SEM_{1.AG} \text{ remove } SEM_{3.SOUR} \text{ of } SEM_{2.PAT}]$

Middle forms of the verb show intransitive unaccusative syntax, and require a clitic subject (Garrett 1996: 91), as shown in (391).

(391) *n=at* *lāttaru*
 CONN=3PL.NOM.N release.IMP.3SG.MID
 “Let them (i.e. the words) be dispelled.” (KBo 11.1 rev. 18, NH/NS)

As comparison between (386) and (387) shows, middle forms of the verb pattern with active forms of the verb in that they show two different constructions, based on their encoding the Source or the Patient as the nominative subject.

- A. $[N_{1(NOM.CL)} \bar{l}\bar{a}^{-tta(ri)}] = [SEM_{1.PAT} \text{ is released}]$
 B. $[N_{1(NOM.CL)} \bar{l}\bar{a}^{-tta(ri)}] = [SEM_{1.SOUR} \text{ is removed}]$

According to Neu (1968a: 103, 1968b: 111) middle forms of $\bar{l}\bar{a}^{-i}$ have passive meaning. That voice alternation encodes passive alternation with this verb is supported by comparison between examples (386) and (392).

(392) *n=an* *arha* *lair*
 CONN=3SG.ACC away release.PST.3PL
 “(Now they have treated that bird), and they have released it.” (KBo 11.1 rev. 10, NH/NS)

In (386), the middle voice functions as an intransitivizing device, with the direct object of the corresponding active verb, as in (392), encoded as subject. In this sentence, a non-passive reading of the event can be safely ruled out, since the participant is animate and yet is not agentively bringing about the event, as the context suggest, thus ruling out an anticausative reading. Interestingly, in this case it is the Patient direct object which is promoted to subject.

It should be observed that the majority of the occurrences of middle forms (and as a matter of fact all NH/NS ones), are parallel to (387) in syntax and semantics, that is, they are associated with the

‘remove, resolve’ meaning. In this case, the Source participant is promoted to subject, so that these forms constitute passive counterpart to transitive constructions such as the one exemplified in (390).⁵³

Note that example (387) features an ablative NP *apez m[e]minaza*, which being inanimate is ambiguous between an Agent/Instrument reading, as shown by various translations of similar passages as ‘by/through the deed’. Even in case one treats it as Instrument, nevertheless this supports a passive reading of the predicate since it entails the presence of an external agent performing the deed.

***lāk-ⁱ* ‘knock out, turn’, *lag-^{ā(rī)}* ‘fall’**

Semantics and aspectual construal:

The verb *lāk-ⁱ* occurs in the active voice with different meanings, which are possibly tied to different idiomatic expressions ‘knock out (a tooth), turn (one’s ears or eyes), train (a wine)’, (see *CHD s.v.*, Kloekhorst 2008 *s.v.* for occurrences and a thorough semantic treatment). In OH texts, active *lāk-ⁱ* is used either with a direct object indicating ‘tooth’, in which case the verb is commonly translated as ‘knock out’, or with ‘eye, hear’ as objects, in which case the verb rather means ‘turn’. These usages are exemplified in (393) and (394). In both cases, the event is profiled as punctual, without an internal temporal unfolding, i.e. as an achievement.

(393) *takku* LÚ.U₁₈.LU-*an* *ELLAM* *kuiski* KAxDU=ŠU ***lāki***
 if man.ACC free INDF.NOM tooth=3SG.POSS turn.PRS.3SG
 “If someone knocks out the tooth of a free man.” (KBo 6.2 i 9, OH/OS)

(394) *assū* IGI^{HI.A}=KA ***lāk***
 good.ACC.PL.N eye(PL)=2SG.POSS turn.IMP.2SG
 “Turn your benevolent eyes.” (KBo 7.28 obv. 11, OH/MS)

That the verb refers to a change of state is also suggested by the fact that in order to refer to the resultative state of ‘being turned’ a ‘stative’ construction with the participle *lagant-* plus the verb

⁵³ In (387), the Patient participant is not encoded through a genitive possessor as in (390), but through the clitic dative pronoun =*nas* ‘us’. In this case, the dative pronoun instantiates an external possessor construction, which is the most usual way to express pronominal possessor in NH texts (cf. Luraghi 2018).

hark- (most often in the imperative) is used (cf. Dardano 2014b, Inglese & Luraghi forthc.), as in example (395):

- (395) *nu=mu* DINGIR^{LUM} *istamanan lagan* *hark*
 CONN=1SG.DAT god ear(N).ACC bend.PTCP.N/A.N have.IMP.2SG
 “O god, keep your ear inclined to me.” (KUB 24.1 i 16-17, NH/NS)

Active forms of *lāk-ⁱ* are mostly confined to OH texts, and are later replaced by a causative verb *laknu-^{zi}* ‘fell, knock over’ that shows the same syntax and semantics as simple *lāk-ⁱ* (Kloekhorst 2008 s.v.). Compare examples (393) and (396):

- (396) *nu=kan* GIŠ^SBANŠUR *laknut*
 CONN=PTC table turn.PST.3SG
 “(A dog entered the temple) and overturned a table.” (KUB 5.7 obv. 25, NH/NS)

The verb also occurs in the middle voice. Middle forms of *lag-^{ā(ri)}* also refer to a change-of-state event involving a single participant, and the event is also construed as punctual, i.e. as an achievement. Compare (393) and (397):

- (397) *nu=kan* *mān* KUR^{URU} *Lala[nda d]apian=pat* *lagāri*
 CONN=PTC if land L. all.ACC=FOC turn.PRS.3SG.MID
 “If it is only all of Lalanda which falls.” (KUB 19.23 rev. 18, NH/NS)

Etymology:

Etymologically, the verb *lāk-ⁱ* has been related to PIE **leg^h-* ‘lie down’ since Sturtevant (1930: 216-217), even though the morphological details remain problematic (Oettinger 1979: 425, *LIV*² s. **leg^h-*, Yoshida 2007b, Kloekhorst 2008 s.v., Villanueva Svensson 2010: 7-8). Notably, as pointed out by Kloekhorst (2008), from a formal standpoint the stem *lāk-ⁱ*, mostly written with plene spelling *la-a-*, reflects a present causative formation **log^h-eye-* ‘make lie down’, whereas middle forms *lag-^{ā(ri)}* go back to a specific Hittite formation **lg^h-ó-*.

Argument structure and relationship with voice:

The relationship of the verb *lāk-ⁱ* with voice is particularly interesting.

The active verb *lāk-ⁱ* (post-OH *laknu-^{zi}*) indicates a change-of-state event involving two participants, an Agent and Patient. Active forms of the verb show transitive syntax, with the two roles encoded as subject and direct object respectively, whereas middle forms show intransitive syntax, with the Patient as subject, as comparison between (393) and (397) shows. Middle forms show unaccusative syntax (cf. Garrett 1996: 91), as shown by the occurrence of the clitic subject =*at* in (398).

(398) *n=at=kan* *lagāri*
 CONN=3SG.NOM.N=PTC turn.PRS.3SG.MID
 “And it falls down.” (KBo 34.116 iv 8, NS)

Active and middle forms of the verb stand in a functional opposition. Luraghi (2012: 13) observes that the verb synchronically displays anticausative alternation connected with voice. Transitive active forms of *lāk-ⁱ* encode the induced event ‘knock out’ as opposed to intransitive middle forms of *lag-^{ā(ri)}* that denote the plain counterpart ‘fall’, as comparison between (393) and (397) shows.

This picture is however complicated if one takes a closer look at the pre-history of this verb. If one accepts Kloekhorst’s (2008 *s.v.*) etymology, active forms of the verb go back to a causative **log^h-eye-* formation ‘make lay down’ > ‘bend, turn’, whereas middle forms go back to **lg^h-ó-* ‘lay down’. As such, the verb etymologically does not display voice alternation, as active and middle forms are based on different stems, and causative alternation is encoded through the transitivizing causative suffix **-eye-*. In any case, in middle forms of the verb there is no trace of the passive reading ‘be made laid’ suggested by Kloekhorst (2008 *s.v.*). Note further that middle forms take more frequently the *-a(ri)* ending, with *-ta(ri)* occurring only once in a NS text (*la-ga-a-it-ta-ri* in KUB 5.7 obv. 18; on this from see Yoshida 2007b).

Historically, one can assume that the verb started out as a *medium tantum* ‘lay down, fall’, out of which an old **-eye-* causative was created. However, due to regular sound changes, non-derived middle forms and **-eye-*causatives partly merged into a single paradigm, so that the verb could be synchronically taken by speakers as showing voice alternation connected to the encoding of the anticausative alternation, as suggested by Luraghi (2012: 13).⁵⁴ The causative alternation was later

⁵⁴ Villanueva Svensson (2010: 7-8) proposes an alternative scenario, whereby active *lāk-ⁱ* continues an original PIE middle root aoris **lóg^h-e*, cf. Gr. *lékto*, whereas middle *lag-^{ā(ri)}* reflects an old middle present formation **leg^h-ór*. Without going further into the details of Villanueva Svensson’s hypothesis, it suffices here to stress that even according to this

restructured by the creation of a new causative verb *laknu-^{zi}* (for a parallel development see also *asās-ⁱ* >> *asesanu-^{zi}*).

Unfortunately, the chronology of the occurrences does not entirely support this reconstruction. Indeed, active forms of *lāk-ⁱ* are attested since OH/OS, whereas middle forms, despite being etymologically old, are attested only at a later stage, with most occurrences coming from NS texts (cf. Yoshida 2007: 804). Therefore, there is no compelling evidence that the verb originally belonged to the *media tantum*. This is why Oettinger (1979: 425), followed by *LIV*² (*s. leg^h-*), suggests that the middle forms constitute a later NH development, possibly on the model of *kist-^{ā(ri)}* ‘perish’ vs. *kistanu-^{zi}* ‘extinguish’. Whichever the diachronic scenario, with this verb the middle voice clearly behaves as an anticausative marker.

***lazziye/a-^{ta(ri)}* ‘be(come) good, be favorable’, *lazziye/a-^{zi}* ‘set straight’**

Semantics and aspectual construal:

The verb *lazziye/a-^{ta(ri)}* is a deadjectival *-ye/a-* verb based on the adjective *lazzi-* ‘good’ (Kloekhorst 2008: *s.v.*). It shows a number of related meanings, including ‘recover, get well’, ‘prosper’ and also ‘be favorable’ when used in reference to oracles. Concerning its aspectual construal, it is often treated as profiling either a state or a change-of-state (cf. *CHD*, *HED*, Kloekhorst 2008, Luraghi 2010b: 247).

Evidence for a change-of-state construal of the verb comes from examples such as (399) and (400).

(399) *nu* *È-ri=si* *anniskizzi* *kuitmān=as*
 CONN house.DAT=3SG.DAT substitute-IPFV-PRS.3Sg until=3SG.NOM

lāzziatta

become.good.PRS.3SG.MID

“He shall provide substitution in his house until he recovers”. (KBo 6.2 i 17-18, OH/OS)

(400) *nu=kan* *INA ŠÀ* *KUR^{URU}GIDRU-ti* *hin[kan]* ***SIG₅-yatta[ru]***

CONN=PTC in inside land *H*.DAT death.NOM become.good.IMP.3SG.MID

“And might the pestilence subside (lit. become good) in the land of Hatti.” (KUB 14.11 iii 23, NH/NS)

alternative reconstruction, the patten of synchronic voice alternation associated with *lāk-* is the outcome of the merger into a single paradigm of historically different formations, that did not instantiate voice alternation in the parent language.

In (399), the verb occurs in a temporal clause introduced by *kuitman* ‘until’ that indicates that the event in the main clause takes place until the event in the subordinate clause is brought to completion. In this context, a telic reading of the verb *lāzziatta* as indicating a change of state is preferable, as the verb most likely indicates a gradual process of recovery. In (400), the context shows that the event refers to a change of state, as the sentence refers to Mursili’s wish that the plague afflicting the land of Hatti might soon come to an end. These examples show that the verb *lazziye/a-^{ta(ri)}* can be construed as an incremental accomplishment and that it specifically belongs to the class of *degree verbs*.

That the verb refers to an event incrementally unfolding over time is further suggested by example (401):

- (401) *IŠTU* DINGIR^{LIM} *parā parā SIG₅-iskattari*
 by god forth forth become.good-IPFV-PRS.3SG.MID
 “(When I began to observe the good will of the goddess,) thanks to the god, (the situation) is gradually improving.” (KBo 6.29 i 11, NH/NS)

In (401), the verb occurs with the *-ske/a-* suffix, which is usually unavailable to stative verbs, but is perfectly compatible with a gradual change-of-state predicate. Moreover, the occurrence of the reduplicated adverb *parā parā* ‘gradually, little by little’ (Yates 2014), underscores the incrementality of the change of state event.

Active forms of the verb meaning ‘set straight’ indicate a dynamic induced change-of-state event as well, possibly construed as accomplishment, as in example (402).

- (402) *ug=at* SIG₅-*ziyami*
 1SG.NOM=3SG.ACC.N set.straight.PRS.1SG
 “(And if it not your fault), I will (also) set it straight.” (KUB 33.24 i 45, OH/NS)

Finally, a change-of-state interpretation is possibly at play in NH/NS occurrences of the verb with the meaning ‘be favorable’ as in (403). In this context, what is profiled is clearly the wish that the oracular procedure turns out to be favorable, therefore implying a change-of-state component, as also evidenced by imperative inflection of the verb.

- (403) *nu* TE^{MEŠ} SIG₅-*ru*
 CONN exticipy(PL) be.favorable.IMP.3SG.MID

“Let the exticipy be favorable.” (KUB 5.6 ii 64, NH/NS)

It must be observed that the resultative participle SIG₅-*ant*- ‘which is good, which has been made good’ would support the telic reading of the verb, but since it is consistently written logographically, it is doubtful whether the underlying form is the adjective *āssuwant*- instead (Frotscher 2013: 249).⁵⁵

Evidence for a stative construal of the verb is rather scanty, but in some occurrences only a stative interpretation fits the context, as in example (404):

(404) MU.2.KAM *hameshanza* SIG₅-*atta*
2.years spring.NOM be.good.PRS.3SG.MID
“For two years, the spring will be good.” (KUB 29.11 ii 6, NS)

In (404), the occurrence with a temporal adverb indicating length in time MU.2.KAM ‘for two years’ clearly points to the fact that the verb profiles a state (Bertinetto & Cambi 2006).

Argument structure and relationship with voice:

Middle forms of the verb *lazziye/a*-^{ta(ri)} encode a one-participant change-of-state/stative event involving an Experiencer (animate)/Patient (inanimate).

The middle verb is used in an intransitive construction, and displays unaccusative syntax (Garrett 1996: 91), as shown in (399) by the occurrence of the clitic subject =*as*. By contrast, active forms of the verb are used transitively and encode a causative event, with the Agent encoded as subject and the Experiencer/Patient as direct object, as in example (402).⁵⁶

Comparison between active and middle forms of *lazziye/a*- in (402) and (399) suggests that with this verb voice alternation is functionally motivated and it encodes anticausative alternation (Luraghi 2010a: 145). Middle forms of the verb encode a spontaneous event (already Neu 1968a: 107), whereas active transitive forms indicate the corresponding induced event.

It must however be remarked that in OS and MS original compositions the verb *lazziye/a*-^{ta(ri)} inflects only in the middle voice. Active inflection is sporadically attested in two OH/NS and MH/NH

⁵⁵ In principle, one could argue that the participle has a resultative meaning because it derives from the causative active verb *lazziye/a*-^{zi} ‘set straight’. This is however implausible, since the participle is attested in OH, when no active form of the verb occurs (see below).

⁵⁶ Evidence for intransitive use of active forms with the meaning ‘prosper’ is virtually restricted to a single example (KUB 43.8 ii 9), in which however the logogram SIG₅ ight also be interpreted as standing for another verb (cf. *CHD*). There is thus no compelling evidence for a labile use of active forms.

“The daily bread (offerings) were refused/neglected.” (KUB 5.7 obv. 5, NS)

The form *markiyaru* in (407) comes from a highly fragmentary context that does not allow a reliable interpretation of the verb. In (408), the event is likely still construed as a dynamic event, possibly an achievement, as the context suggests.

Etymology:

According to Kloekhorst (2008 *s.v.*), the verb *markiye/a-^{zi}* can be connected to a PIE formation **mrk-ye/o-*, whose root is attested in Skt. *marc-* ‘hurt’, Lat. *murcus* ‘mutilated’. Although the verb is often considered derived from *mark-* ‘divide’ (cf. Neu 1968a: 113), Kloekhorst rejects this connection and treats this verb as an independent lexical entry.

Argument structure and relationship with voice:

The verb *markiye/a-^{zi}* occurs both in the active and in the middle voice, even though attestations are somewhat chronologically scattered.

The verb *markiye/a-^{zi}* indicates a two-participants change-of-state event involving a human Agent and Patient, which can be either animate or inanimate. Active forms of the verb, either with or without =*za*, occur in a transitive construction with the two roles encoded as subject and direct object respectively. The transitive construction of *markiye/a-^{zi}* is exemplified in (405) and (406).

As comparison between (405) and (408) illustrates, middle forms of *markiye/a-^{zi}* display intransitive syntax, with the Patient participant encoded as subject. As the verb always occurs with subject NPs, there is no evidence for the use with clitic subject pronouns.

As comparison between (405) and (408) suggests, with this verb the middle voice operates as a passive marker (Neu 1968b: 111). Indeed, even though middle forms never occur with an oblique agent, other intransitive non-passive functions can be safely ruled out with this verb.

***marra-^{ta(ri)}*, *marriye/a-^{ta(ri)}* ‘melt (intr.), stew’, *marriye/a-^{zi}* melt (tr./intr.?)’**

Semantics and aspectual construal:

The verb *marriye/a-^{ta(ri)}*, occasionally occurring with a stem *marra-^{ta(ri)}*, denotes a change of physical state, whereby a solid object is turned softer through the application of heat, thus meaning either ‘melt’ or ‘stew’ depending on the substance undergoing the change (see the semantic treatment in *CHD s.v.*). Consider example (409):

(409) 1 UDU *suppistuwaras* INA DUGTU *marritta*
 1 sheep unblemished.NOM in vessel melt.PRS.3SG.MID

“One unblemished sheep stews into the vessel.” (KBo 17.43 i 6, OH/OS)

Example (409) constitutes the only OS occurrence of the verb. In principle, the verb is compatible with two different aspectual construals. It either profiles the verb as a directed activity, when the resulting state is not profiled, or as an incremental accomplishment, when the predicate includes profiling of the final resulting state, in the same way as for *zē^{a(ri)}*.

Although occurrences of the participle *marriyant-* amount to a handful of cases, from our textual sources it is clear that the participle indicates the state resulting from the event profiled by the finite forms of the verb, and means ‘melted, ripened’, providing evidence for the default telic construal of the verb (Frotscher 2013: 243), as in (410):

(410) 6 ^{NINDA}*haraspauwantes* 6 [NINDA] SIG ŠA IÀ 5 NINDA *sarā*
 6 *h*.NOM.PL 6 bread flat of fat 5 bread up

marrantes

melt.PTCP.NOM.PL

“Six mushcakes, six flatbreads with fat, five breads melted fat on top.” (KBo 10.34 i 11, MH/NS, transl. *HED s.v.*)

Etymology:

The verb *mariye/a^{-tta(ri)}* is commonly connected with the PIE root **merh₂-*, reflected in Skt. *mṛnāti* ‘crush’ (Oettinger 1979: 279, and *LIV² s. *merh₂-*; see further *HEG* for alternative explanations). Kloekhorst (2008 *s.v.*) rejects this reconstruction, mainly on semantic grounds. As he points out, the reconstructed meaning of the root **merh₂-* is ‘crush, reduce to pieces’ whereas the Hittite verb indicates ‘soften/melt/dissolve by heating’. Kloekhorst himself does not provide any an alternative explanation, but suggest a possible inner-Hittite connection with *marhā-* ‘stew (?)’.

Argument structure and relationship with voice:

The verb *mariye/a^{-tta(ri)}* encodes a one-participant event involving a Patient which undergoes a spontaneous physical change of state. Syntactically, the verb is intransitive, as shown in (409). There is no evidence for the use with clitic subjects.

Neu (1968b: 76) observes that the verb attests to both active and middle inflection. Active and middle forms can be used intransitively. In addition, active forms are reported to occur in a transitive construction. This picture is rather puzzling, and things become clearer if one takes a closer look at the attestations.

OS texts attest to middle inflection only, and middle inflection remains quantitatively prominent even in post-OS times (data from *HED*, *CHD* and Kloekhorst 2008 *s.v.*). Note that whereas the stem *marra/i-* is attested since OS, the stem *mariye/a-* is of later attestation (cf. *HEG s.v.*). Active inflection is only attested twice in NS texts. Neu’s interpretation of these active occurrences as either transitive and intransitive is partly unwarranted, as they come in very fragmentary contexts that do not allow for a clear syntactic interpretation. Based on this data, one can assume that the verb was originally a *medium tantum* indicating a spontaneous event, and that later on an active counterpart indicating induced event was possibly created, establishing an anticausative alternation based on voice alternation (see Luraghi 2010a: 145). More importantly, since there is no OH evidence for active forms, one can safely rule out an original passive function of the middle voice with this predicate.

***mehuwandahh-/miyahuwantahh-ⁱ* ‘make old’, *mehuwandahh-/miyahuwantahh-^{ta(ri)}* ‘age’**

Semantics and aspectual construal:

The verb *mehuwandahh-ⁱ*, also occurring with a stem from *miyahuwantahh-ⁱ*, is a factitive verb meaning ‘make old’ based on the adjective *mehuwant-* ‘old’. The verb occurs both in the active and in the middle voice. The use of active forms of the verb is exemplified in (411):

- (411) [*kuin* *LÚ-a*]*n* *LÚŠU.GI-ahta*
REL.ACC man.ACC make.old.PST.2SG
“Which man you made old.” (KUB 24.7 ii 3, NH/NS)

In this case, the event is construed as an incremental accomplishment, as it indicates an incremental change-of-state whose final stage is profiled. Semantically, age being a gradable property, the verb belongs to the class of degree verbs (Bertinetto & Civardi 2015).

Middle forms of the verb attest to a slightly different aspectual construal, as shown in (412). In this case, the verb occurs in the present tense imperative and has a future reference, so that the final

stage of the incremental process is left unprofiled. As a result, the verb can be better interpreted as construed as a directed activity.

(412) *nu=kan ANA ŠU DUTU-ŠI assuli mihuntahhut*
 CONN=PTC to hand my.majesty good.DAT make.old.IMP.2SG.MID

“And under the good hand of my Majesty you shall grow old.” (KBo 4.10 ii 11, NH/NS)

Argument structure and relationship with voice:

Active forms of *mehuwandahh⁻ⁱ* encode a two-participant change-of-state event involving a causing Agent and an affected Patient. By contrast, middle forms are associated with a Patient participant only. In both cases, the Patient is conceived as not having control over the change of state, which can be either induced by the Agent, most often a divine entity, or come about spontaneously.

Syntactically, active forms of the verb show transitive syntax, with the two participants encoded as subject and object respectively, whereas middle forms are intransitive, as comparison between (411) and (412) shows. There is no evidence for the use of clitic subjects with this verb.

As comparison between (411) and (412) shows, the middle voice with *mehuwandahh⁻ⁱ* acts as a valency changing marker. Specifically, voice alternation with this verb encodes anticausative alternation, whereby the active verb denotes the induced event and the middle verb the corresponding plain event.

Middle forms of *mehuwandahh⁻ⁱ* are semantically close to two other verbs derived from the same adjectival base: *miyahuntē^{-zi}* ‘be(come) old’, that reflects an old *-e*-stative formation (Watkins 1971), and the fientive derivative *miyahuntēss^{-zi}* ‘become old’. Therefore, anticausative alternation ‘be old’ vs. ‘make old’ could be either encoded via verbal morphology, i.e. active vs. middle voice alternation, or via derivational strategies (Luraghi 2012).

***nai⁻ⁱ* ‘turn, send’, *nē^{-a(ri)}* ‘turn (intr.), be sent’**

Semantics and aspectual construal:

The verb *nai⁻ⁱ* shows the basic meaning ‘turn (oneself)’, and occurs both in the active and the middle voice. Various secondary related meanings develop out of this concrete spatial meaning. Among these, a noticeable semantic shift undergone by active forms is the development of the meaning ‘send’ out of ‘turn (tr.)’, when used with reference to messages and/or messengers. For reasons of space, I do not illustrate here all the contexts and the constructions in which the verb occurs, but refer to the

thorough treatment in the *CHD* (see also Neu 1968a: 123-126, Kloekhorst & Lubotsky 2014), and I will focus on the ones relevant to understand the verb’s relationship with voice.

In OH and MH texts, one predominantly finds occurrences in the middle voice with the basic spatial meaning ‘turn’, as in (413) and (414):

(413) ^{LÚ}.MEŠ HÚB.BÍ *nēanda*
 dancer(PL) turn.PRS.3PL.MID

“The dancers turn around.” (KBo 17.9+ ii 29, OH/OS)

(414) *nu* ^m*Attarissiyas ANA* [^m*Ma*]*dduwatta* [xxx] *nēat*
 CONN A.NOM to M. turn.PST.3SG.MID

“Then Attarissiya turned away from Madduwatta.” (KUB 14.1 + KBo 19.38 obv. 65, MH/MS)

In (413) and (414), the event denoted by *nai*⁻ⁱ shows the aspectual construal of a reversible directed achievement, since the verb profiles the endpoint of a change-of-state event lacking internal temporal unfolding.

Punctuality of the event denoted by *nai*⁻ⁱ clearly emerges from occurrences in which the verb acquires the meaning ‘turn out, happen’, as in (415):

(415) ŠÀ É^{TI}=KA=wa=ta=kkan *kuit* *neyattat*
 inside house=2SG.POSS=QUOT=2SG.DAT=PTC REL.NOM.N turn.PST.3SG.MID

“(I will show you,) what has happened in your house.” (KUB 31.71 iii 6, NH/NS)

In NH, middle forms based on the meaning ‘send’ appear, as in (416). As I discuss below, these forms differ from the use of the verb exemplified in (413) and (414) as they are passive in meaning.

(416) *nu=ta=k[kan]* *ammēl* *:kuwayatā parā niyaru*
 CONN=2SG.DAT=PTC 1SG.GEN fear.NOM forth send.IMP.3SG.MID

“Let (news of) my difficult situation be sent forth to you.” (KBo 4.14 ii 14, NH/NS)

Derived *-ske/a-* forms of the verb are also attested, in which the suffix *-ske/a-* gives different semantic contributions. Compare examples (417) and (418).

(417) *n=asta apās* ^{LÚ}KÚR *kuwapi* *naiskittari*

CONN=PTC DEM.NOM enemy wherever turn-IPFV-PRS.3SG.MID

“Where that enemy is heading, (write it to me.)” (HKM 27 obv. 8, MH/MS)

(418) *nu=ssan parā nāeskettari*

CONN=PTC forth turn-IPFV-PRS.3SG.MID

“And it shall be henceforth carried out.” (KBo 11.1 obv. 27, NH/NS)

In (417), the suffix *-ske/a-* possibly construes the event as a directed activity, as it profiles the ongoing incremental change indicated by the motion verb without profiling the ending point (habitual and distributive readings do not fit this context: the event has a singular participant and it indicates a one-time war operation). By contrast, in (418) the verb possibly indicates habituality with future reference.

Etymology:

The verb *nai⁻ⁱ* has been traditionally reconstructed as going back to PIE **néih_{3/1}-o*, connected with Skt. *nay-* ‘lead’, Av. *naiieiti* ‘he drives’ (Kloekhorst 2008 *s.v.*, *LIV*²). This view has been recently challenged by Kloekhorst and Lubotsky (2014), who convincingly show that the Hittite stem *nē^{-a(ri)}* and *nai⁻ⁱ* cannot reflect anything but a root **neh₁-*, which coincides with the root usually reconstructed as **(s)neh₁-* ‘spin’ (*LIV*²).

Throughout the history of Hittite, the verb displays a certain degree of stem variation (see also Kloekhorst & Lubotsky 2014). Specifically, new middle forms, such as *naishut* and *naisdumat*, were created on the basis of a new active stem *nais-*, in turn issued from the 2pl.imp.act *naisten*, reanalyzed as *nais-ten* (but see Jasanoff 2012 for an elaborate alternative scenario).

Argument structure and relationship between the active and the middle voice:

The verb *nai⁻ⁱ* displays active vs. middle voice alternation since OS. Kloekhorst’s (2008) observation that in OS “we mostly find middle forms, which indicates that originally the middle paradigm was dominant” should be taken with care, since the overall amount of attestation is rather low and hence not decisive. Active and middle forms of the verb coexist throughout the history of Hittite, and give rise to a meaningful voice alternation.

Active forms of *nai⁻ⁱ* are transitive, and indicate a two-participant event involving an Agent and a Patient that are encoded as subject and direct object respectively. By contrast, middle forms are mostly intransitive, as comparison between (413) and (419) shows.

(419) *n=asta* ^{GIŠ}*hulugannin* EGIR-*pa neyanzi*

CONN=PTC cart.ACC back turn.PRS.3PL

“And they turn the cart back.” (IBoT 1.36 iii 68, MH/MS)

In (413), the middle *neanda* verb is used intransitively and agrees with the subject ^{LÚ.MEŠ}HÚB.BÍ ‘the dancers’. Conversely, in (419) the active from *neyanzi* is used with the accusative direct object ^{GIŠ}*hulugannin* ‘cart’.

In OH and MH, voice alternation is mostly confined to encoding the anticausative alternation, with the middle verb indicating the spontaneous event, and the active verb indicating the induced causative counterpart (see Luraghi 2010a: 145, 2012: 17, Melchert forthc.b), as comparison between (413) and (419) neatly shows. Note that Neu’s (1968b: 62) classification of the verb as reflexive is partly misleading. Since the participant involved in the plain event is mostly animate and conceived as intentionally carrying out the action by himself, the verb is better grouped with *autocausative* or *endoreflexives*. However, one finds also occurrences in which the verb takes an inanimate subject that cannot be the instigator of the action of turning, as in example (415). Clearly, this suggests that the verb can also be classified as a decausative verb, and that the classification ultimately depends on the referential features of the participant involved.

The relationship outlined so far between voice and valency alternation is however partly blurred by sporadic occurrences in which active forms of the verb are used intransitively, as in (420), in which the form from *neyami* is active and yet does not take a direct object. Such forms constitute evidence for the existence of a labile anticausative pattern with active forms of the verb, as they occur both in the transitive and the intransitive construction. Note that these forms are only attested in NH texts.

(420) *nu=kan ANA EZEN^{MEŠ} neyami nāwi*
 CONN=PTC to festival(PL) turn.PRS.1SG not.yet
 “I have not yet turned to the festivals.” (KBo 9.96 i 6, NH/NS)

In NH, middle forms of *nai⁻ⁱ* with passive function occur, but they are confined to the meaning ‘send’. Compare examples (421) and (416):

(421) *n=an=kan INA KUR^{URU} Kum[(manni p)]arā nāir*
 CONN=3SG.ACC=PTC to land K. forth send.PST.3PL
 “They dispatched it to Kummanni.” (KUB 43.50 + obv. 17, NH/NS)

In example (421) the active from *nāir* ‘they send’ is used transitively, as shown by the occurrence of the clitic object pronoun =*an*. By contrast, in (416) the middle verb *niyaru* ‘let be sent’ is used intransitively, and constitutes the passive counterpart of (421). Clearly, this passive usage is secondary; not only is it restricted to NH, but the passive function of the middle voice with this verb could have developed only once the basic meaning of the verb ‘turn’ was enlarged to ‘send’ and the verb fully acquired transitive syntax, thereby being liable to stand in functional opposition with a passive counterpart.

Summing up, active vs. middle voice alternation with *nai-ⁱ* is mostly used to encode anticausative alternation ‘turn (tr.)’ vs. ‘turn (intr.)’. Passive use of middle forms is restricted to the meaning ‘send’ vs. ‘be sent’, and occurs in NH only. Notably, as examples (417) and (418) show, the same pattern of voice alternation also applies to derived *-ske/a-* forms. Moreover, in NH active forms show signs of lability, as they can also be used intransitively, as discussed for (420), but this pattern never gained much ground.

Syntactically, Garrett (1996: 92) classifies the middle of *nai-ⁱ* as unaccusative intransitive, as the occurrence of clitic subjects =*as* in (422) shows.⁵⁷

- (422) EGIR-*pa=ma=as=kan* ZAG-*ni* **neyari**
 back=PTC=3SG.NOM=PTC right.DAT turn.PRS.3SG
 “Then he turns again toward the right.” (KUB 45.3 i 15-17, MS)

Note that, when used with respect to a body part, such as ‘turning the head, the eyes’ the verb inflects as active in OS, as in (423), whereas it has been observed that in other IE languages grooming and non-translational verbs can take a direct object while retaining middle inflection, as in Gr. *luomai tás kheîras* and It. *mi lavo le mani* ‘I wash my hands’ (Kemmer 1993: 54-55 and fn. 37).

- (423) [(4 ^{LÚ.MEŠ}SANGA ^{URU}*Kāsha* IGI.^{HI.A})]-*wa* ÍD-*a* **neanzi**
 4 priest(PL) K. eye.ACC.PL.N river.ALL turn.PRS.3PL
 “Four priests from K. turn their eyes toward the river.” (KUB 53.14 iii 14, OH/NS)

⁵⁷ There is one ambiguous OH example (KBo 17.43 i 12, OH/OS), in which the initial clitic chain is spelled as *a-ap-pa-ma-as-ta ne-e-a* ‘but he turns back’. It is unclear whether one should read the passage as *āppa=ma=as=sta* or as *āppa=ma=asta*. In the latter case, the verb would be used without a clitic subject. Following Luraghi (2010a), this would be evidence for the fact that the verb fully acquired unaccusative syntax only at a later language stage, in line with other verbs denoting non-directed motion.

Moreover, Neu (1968a: 213) argues that middle forms of *nai*-ⁱ occasionally display transitive syntax. Evidence in favor of this interpretation boils down to a few of examples such as (424) and (425):

- (424) [A.ŠÀ] A.GÀR=*ma=kan* GEŠTIN *miyatar* **neyari**
 field field=PTC=PTC vineyard fertility.NOM turn.PRS.3SG.MID
 “(In) the field and fallow (and in) the vineyard, fertility will ensue.” (KBo 11.1 obv. 25, NH/NS, transl. *CHD s.v.*)
- (425) *nu=za=kan* IGI^{HI.A}-*wa etez* ANA ⁱ*Pittapara* **neyahhat**
 CONN=REFL=PTC eye.ACC.PL DEM.ABL to P. turn.PST.1SG.MID
 “And from here I turned my eyes to Pittapara.” (KBo 5.8 iii 18, NH/NS)

Example (424) is interpreted as transitive by Neu, who considers A.ŠÀ ‘field’, A.GÀR ‘field’ and GEŠTIN ‘vineyard’ the direct objects of the verb *neyari*. However, since these Sumerograms do not bear any phonetic complementation, there is no compelling evidence that they should be interpreted as accusative direct objects of the verb, and can be also taken as nominative. It is therefore entirely plausible to interpret the verb as intransitive, with the meaning ‘happen’, as in the translation provided by the *CHD*. Concerning example (425), comparison with active counterparts such as (423), may suggest that the verb is used transitively with the accusative IGI^{HI.A}-*wa* ‘eyes’ as direct object. However, as Neu himself observes (1968a: 125 fn. 14), it is not unlikely that in these occurrences the accusative IGI^{HI.A}-*wa* started out as a partitive apposition ‘I turned (with respect to) my eyes’, and that this brought about the equivalence in syntax with active forms (the construction is also attested in KBo 16.98 iii 15). Further evidence for the non-object status of IGI^{HI.A}-*wa* comes from its behavior in passive alternations. Compare examples (426) and (427):

- (426) *namma=an=kan* IGI^{[HI.]A}-*wa* ANA KUR ^{LÚ}KÚR *andan* **neyanzi**
 again=3SG.ACC=PTC eye(N).ACC.PL to land enemy in turn.PRS.3PL
 “Then they turn him with its eyes to the land of the enemy.” (KUB 7.54 iii 13-14, NS)
- (427) *nu=kan* *kuis* ^{UDU}*iyanza* IGI^{[HI.]A}-*wa* ^dUTU-*i* **neanza**
 CONN=PTC REL.NOM sheep.NOM eye(N).ACC.PL sun.DAT turn.PTCP.NOM
 “(I pull a tuft of wool from) what sheep is turned (with its) eyes toward the sun.” (VBoT 24 iii 11-12, MH/NS)

(429) [EGIR-*an a*]rha=war=as=mu=za

Ū[L *namma nēari*]

back away=QUOT=3SG.NOM=1SG.DAT=REFL NEG again turn.PRS.3SG.MID

“He won’t let me alone (lit. he won’t turn away from me).” (ABoT 1.65 rev. 15, MH/MS)

The various constructions in which the verb *nai-* occurs and its relationship with voice can be summarized as shown in Table 50: constructions of active and middle forms of *nai-i* ‘turn’.

Table 50: constructions of active and middle forms of *nai-i* ‘turn’

OH	NH
ANTICAUSATIVE ALTERNATION	ANTICAUSATIVE ALTERNATION
[N _{1(NOM)} N _{2(ACC)} <i>nai-i</i>] = [SEM _{1.AG} turn SEM _{2.PAT}]	[N _{1(NOM)} N _{2(ACC)} <i>nai-i</i>] = [SEM _{1.AG} turn SEM _{2.PAT}]
[N _{1(NOM)} <i>nai-a(ri)</i>] = [SEM _{1.AG} turns]	[(=za) N _{1(NOM)} <i>nai-a(ri)</i>] = [SEM _{1.AG} turns]
	[(=za) N _{1(NOM)} <i>nai-i</i>] = [SEM _{1.AG} turns]
	PASSIVE ALTERNATION
	[N _{1(NOM)} N _{2(ACC)} <i>nai-i</i>] = [SEM _{1.AG} send SEM _{2.PAT}]
	[N _{1(NOM)} <i>nai-a(ri)</i>] = [SEM _{1.PAT} is sent]

nini(n)k-zi ‘set in motion (tr.)’, *nini(n)k-ta(ri)* ‘mobilize (intr.)’

Semantics and aspectual construal:

The verb *nini(n)k-zi* is associated with different meanings ranging from ‘mobilize’ to ‘disturb, break open, loosen’ (cf. *CHD* s.v.). The most basic meaning, from which the others can be variously derived, is the causative motion meaning ‘set in motion, move (tr.)’.⁵⁹ In this case, the verb profiles the inception phase of a motion event, and as such can be conceived as a directed achievement. Consider the occurrence of the middle form *niniktari* in (430). This example neatly shows that the verb refers

⁵⁹ Since all MH/MS and NH/NS attestations of the verb in the middle voice show the basic spatial meaning, in the rest of this section I will not discuss the other meanings of the verb, for which I refer the reader to the discussion under the lemma *nini(n)k-zi* in the *CHD*. See also Puhvel (2009) for a different interpretation, whereby the base meaning of the verb would be ‘soak, shake’.

only to the onset of the motion event, which is then profiled as completed by the telic motion verb *pai^{-zi}* in the following sentence.

- (430) *nu mān* ^{LÚ}*KÚR kuiski niniktari* *n=as apēdas*
 CONN if enemy INDF.NOM mobilize.PRS.3SG.MID CONN=3SG.NOM DEM.DAT.PL
ANA ZAG^{HI.A} GUL-ahhuwanzi paizzi
 to border(PL) strike.INF go.PRS.3SG
 “If some enemy mobilizes and goes to attack these borders.” (FHL 57+ iii 46-47, NH/NS)

Etymology:

The verb *nini(n)k^{-zi}* is derived through the causative nasal infix *-nin-* from a root **neik-*, connected with Gr. *neîkos* ‘fight’, OCS *vъz-nikъ* ‘they raised themselves’ (Kloekhorst 2008 *s.v.*, following Oettinger 1992). Puhvel (2009) also suggests a connection with Hitt. *nink-* ‘sate oneself’.

Argument structure:

The verb *nini(n)k^{-zi}* occurs both in the active and in the middle voice. Active forms of the verb indicate a caused change-of-state motion event involving a causing Agent, who instigates the event, and a Patient, who undergoes a change-of-location. Active forms of the verb occur in a transitive construction with the two participants encoded as subject and as object respectively, as in (431):

- (431) [*n=a*]*t nininkun*
 CONN=3PL.ACC mobilize.PST.1SG
 “(The armies that were with me), I set them in motion.” (KUB 19.37 iii 8-9, NH/NS)

By contrast, middle forms of the verb encode a one-participant motion event involving an Agent, and are used intransitively, as in (430). According to Garrett (1996: 91), when intransitive the verb requires a clitic subject, as in (432), hence its classification as unaccusative.

- (432) *ped[e]=ssi=ya=at=kan lē niniktar[i]*
 place.DAT=3SG.POSS.DAT=CONJ=3SG.NOM.N=PTC NEG mobilize.PRS.3SG.MID
 “(Behold, I have fixed in place the king’s oath, curse, blood and tears [...]) let it not come loose in its place.” (KBo 24.4+ rev. 7-10, NS)

The etymology of this verb as a causative formation suggests that active inflection with this verb is original, and that middle voice constitutes a later development. Concerning the function of the middle voice, Neu's (1968b: 105) classification of middle *nini(n)k-^{ta(ri)}* as 'activity middle', i.e. reflexive, is partly unwarranted, and likely to be influenced by the German translation 'sich erheben'. With this verb, voice alternation is better interpreted as encoding an anticausative alternation of the anticausative type, whereby the active verb indicates an induced event as opposed to the middle voice which indicates a plain event, as comparison between (430) and (431) neatly shows (thus Melchert forthc.b: 3). Note further that the verb can be interpreted as either autocasative or decausative depending on the occurrence of a volitional subject, as shown in (430) and (432). It is interesting to observe that the original causative nasal infix plays no role in valency alternation with this predicate, which is rather encoded by inflectional morphology only.

***punuss-^{zi}* 'ask, question, consult', *punuss-^{ta(ri)}* 'be asked, investigated'**

Semantics and aspectual construal:

The verb *punuss-^{zi}* means 'consult, ask, investigate' (see *CHD s.v.*). Since the verb is predominantly attested in the active voice, I first discuss the semantics of active forms. As a verb of communication, it is likely to construe the speech event as a punctual irreversible achievement, as in example (433).

(433) *nu=tta* *uwanzi* *apēdani* *uddanī* *IŠTU* *É.[GA]L^{LIM}*
 CONN=2SG.ACC come.PRS.3PL DEM.DAT matter.DAT about palace

UL punu[ss]a[n]zi

NEG ask.PRS.3PL

"Will it not result in their questioning you on this matter about the palace." (HKM 54 21-24, MH/MS)

Telicity of this predicate is suggested by its P-oriented participle ÈN.TAR-*kan* 'asked' (only one occurrence in IBoT 2.219 obv. 30).

In some occurrences, the verb is translated as 'investigate', and in this case, the event is most likely to be construed as a non-incremental accomplishment, i.e. it is construed as unfolding over time before completion. Boundedness of the verb in (434) is suggested by the overall textual structure, whereby the event of investigating is conceived as completed before the event of compensation takes place.

(434) *n=at* ***punnusmi***

CONN=3SG.ACC.N ask.PRS.1SG

“(Mumulanti said: ‘One person died,) I will investigate this matter (and pay compensation).” (KUB 31.51 rev. 6, NH/NS)

The latter construal is possibly at play in the only middle occurrence of this verb, quoted under (435), as Hoffner’s (2009: 148) translation suggests.

(435) *hūman* *apēdani* *u[ddanī]* [*par*]ā ***punustari***

all.N/A.N DEM.DAT matter.DAT forth ask.PRS.3SG.MID

“Everything will be investigated in that way.” (HKM 29 rev. 9-10, MH/MS)

Etymology:

Owing to the unusual *-u-* vocalism, the verb has so far resisted an etymological explanation in PIE terms (cf. Kloekhorst 2008 *s.v.*). So far, two etymologies have been proposed, connecting the verb with either Gr. *pnēō* ‘breathe’, which is semantically unconvincing, or with Gr. *pēpnūmai* ‘be smart’, in which case the *-s-* of the Hittite stem may be regarded as a desiderative suffix ‘want to be smart’ > ‘ask’. Based on these observations, Kloekhorst (2008 *s.v.*) sets up a pre-form **pneuH-s*.

Argument structure and relationship with voice:

The active verb *punuss^{-zi}* indicates a three-participant speech event involving an Agent, a Theme, which is the content of the speech act, and an Addressee. Syntactically, as comparison between (434) and (435) shows, active forms of the verb are used in a transitive construction, whereas the only middle form displays intransitive syntax (but see below). There is no evidence for the use with clitic subject pronouns.

With transitive forms of the verb, the direct object can either encode the Addressee or the Theme. Compare (433), in which the Addressee is encoded via the accusative direct object =*tta* ‘you’ with (434), that features the accusative encoding of the Theme =*at* ‘this matter’. Also, as example (433) shows, when the two roles are both expressed, the Addressee is encoded as direct object, whereas the Theme is encoded as a dative oblique. This pattern of selection of the direct object goes against the thematic role hierarchy by van Valin (2001: 32), Themes being notoriously preferred for object encoding as compared to Recipients/Addressees. This deviant pattern can be tentatively explained by

the specific semantics of this verb as ‘interrogate, question’ that profiles a greater saliency of the Addressee as compared to the Theme.

Concerning its relationship with voice, evidence for voice alternation of this verb boils down to a single occurrence, quoted in (435), that comes from a rather fragmentary text, so that any analysis remains highly speculative. If one treats the substantivized adjective *hūman* ‘everything’ as the nominative subject, the verb can be interpreted as an intransitive with passive function, as Hoffner’s (2009: 148) does, other non-passive intransitive derivations being incompatible with the context. Note that in this case it is the Theme participant that is promoted to subject.

sārr-ⁱ ‘divide (tr.), transgress’, *sarra-^{ta(ri)}* ‘split up (intr.), be split, transgress’

Semantics and aspectual construal:

The verb *sārr-ⁱ* occurs both in the active and in the middle voice and has two basic meanings ‘divide’ and ‘transgress’ (see *CHD s.v.* for details, in both meanings it often occurs with the sentence particles =*asta* or =*kan*), as exemplified by the active forms *sarranzi* ‘they divide’ in (436) and *sarriēr* ‘they transgressed’ (437).

- (436) *n=an* *huiswandan* *sarranzi*
 CONN=3SG.ACC live.PTCP.ACC divide.PRS.3PL
 “(There remain, however, twelve oxen and 300 sheep), they divide them up (into groups) alive.” (KUB 9.3 iv 8-9, OH/MS)
- (437) *nu=kan* *NĪŠ* DINGIR^{LIM} LÚ^{MEŠ} URU *Hatti* *hūdāk* *sarriēr*
 CONN=PTC oath man(PL) *H.* suddenly transgress.PST.3PL
 “And suddenly the Hittite transgressed the oaths.” (KUB 14.8 obv. 18-19, NH/NS)

With both meanings, the event denoted by *sārr-ⁱ* is construed as an irreversible achievement, similarly to e.g. *pars(i)-^{a(ri)}*, as also evidenced by the occurrence of *hūdāk* ‘suddenly’ in (437).

Etymology:

According to Kloekhorst (2008 *s.v.*), who reconstructs it as **sórhi-ei*, this verb lacks a convincing PIE etymology. See *HEG* for further discussion and possible Anatolian cognates. Since forms belonging to the two meanings ‘divide’ and ‘transgress’ differ to large extent in their syntax, one

wonders whether in spite of their etymological connection it synchronically makes more sense to treat them as two distinct lemmas (cf. Melchert forthc.b: 6).

Argument structure and relationship with voice:

The verb *sārr-ⁱ* can be used in different constructions (cf. also Neu 1968b: 59) and displays a remarkably interesting interaction with voice.

In the first place, when associated with the meaning ‘transgress, transpass’ the verb denotes a two-participant event that involves an Agent and a Patient, the latter always indicating an oath or an obligation of sorts. Syntactically, the verb is used in a transitive construction with the two participants encoded as subject and direct object respectively, as in example (437). Notably, in this construction active and middle forms freely alternate, as comparison between (437) and (438) shows.

- (438) *n=asta ling[āu]s sarrattat*
CONN=PTC oath.ACC.PL transgress.PST.3SG.MID
“He transgressed the oaths.” (KUB 23.72 ii 14, MH/MS)

In the second place, the verb can have the meaning ‘divide’. In this case, the predicate semantically belongs to the class of lexical spatial reciprocal events, as the event indicates a reciprocal spatial configuration of separation between two or more entities (Inglese 2017). With the meaning ‘divide’, one can detect a functionally motivated relationship with voice.

Active forms of *sārr-ⁱ* convey a spatial object-oriented reciprocal situation. In this case, the event frame involves two reciprocants and an external causing agent, as in example (436) (see the discussion in Inglese 2017: 968). From a syntactic point of view, active forms of the verb are used in a transitive construction, with the reciprocants encoded as direct objects and the Agent as subject.

By contrast, middle forms of the verb display intransitive syntax and indicate a subject-oriented spatial reciprocal event, as shown in (439)a and (439)b. Notably, as the occurrence of the clitic subject pronoun *=as* in (439)b shows, when used intransitively middle forms pattern with unaccusative verbs (Garrett 1996: 91). Semantically, middle forms of the verb are polysemous. On the one hand, the middle voice can refer to an anticausative event, as in (439)a, in which the event of splitting is profiled as carried out by the subject participant. On the second hand, middle forms can indicate the stative/passive counterpart of active transitive forms, as in (439)b, in which the event of splitting is profiled from the perspective of the Patient but the presence of an external agent is still entailed. In the encoding of the passive function, the middle voice competes with the periphrastic passive encoded by the participle *sarrant-* plus the verb ‘be’.

- (439) a. *namma=as arha sarrattari*
 again=3SG.NOM away divide.PRS.3SG.MID
 “(The enemy arrives at night) and then splits up.” (KBo 5.6 i 22-23, NH/NS)
- b. TU_7^{HLA} *taksan sarrattari*
 stew(PL) in.half divide.PRS.3SG.MID
 “The stews are divided in half.” (KUB 20.76 i 15, NS)

In addition, the verb can be accompanied by the particle =*za*. When the particle occurs with active forms of the verb, the predicate acquires an indirect reciprocal reading (Inglese 2017: 971-972), a use which is attested since OS, as in (440).

- (440) [(*t*)]*a=z É=ŠUNU sarranzi*
 CONN=REFL house=3PL.POSS divide.PRS.3PL
 “(If a man having a TUKUL-obligation and his associate live together, if they have a falling out), if they divide their household among themselves.” (KBo 6.2 iii 8-11, OH/OS)

The particle is also sporadically attested in conjunction with the middle voice, in which case the predicate indicates a spatial subject-oriented reciprocal event, similarly to the middle voice alone, as comparison between (439)a and (441) shows. Note that this is likely to constitute a later development (Boley 1993: 143), as also suggested by the late dating of the text, and that the particle never occurs when the middle verb has passive function.

- (441) $DUMU^{MEŠ}$ *=ŠUNU=ma=za arha sarrandat*
 son(PL)=3PL.POSS=PTC=REFL away divide.PST.3PL.MID
 “His sons however split up.” (KBo 3.4 ii 52-53, NH/NS)

Summing up, the verb *sārr-i* is synchronically involved in the following constructions, whose features are summarized in Table 51: Constructions of *sārr-i*.

- A. $[N_{1(NOM)} N_{2(ACC)} s\bar{a}rr-i] = [SEM_1 \text{ divides } SEM_2]$
 B. $[=za N_{1(NOM)} N_{2(ACC)} s\bar{a}rr-i] = [SEM_1 \text{ divides } SEM_2 \text{ among } SEM_1]$
 C. $[(=za) N_{1(NOM)} sarra-ta^{(ri)}] = [SEM_1 \text{ split up}]$
 D. $[N_{1(NOM)} sarra-ta^{(ri)}] = [SEM_1 \text{ is split}]$

$$E. [N_{1(\text{NOM})} N_{2(\text{ACC})} s\bar{a}rr\text{-}^{i/ta(ri)}] = [\text{SEM}_1 \text{ transgresses SEM}_2]$$

Table 51: Constructions of *sārr-ⁱ*

Construction	A	B	C	D	E ₁	E ₁
Voice	active	active	middle	middle	active	middle
Particle =za	no	yes	optional	no	no	no
Transitivity	transitive	transitive	intransitive	intransitive	transitive	transitive
Meaning	spatial object- oriented reciprocal	subject- oriented indirect reciprocal	spatial subject- oriented anticausative reciprocal	spatial subject- oriented passive reciprocal	two- participant transitive predicate	two- participant transitive predicate
Dating	OH/OS	OH/OS	NH/NS	OH/NS	OH- MH/MS	MH/MS

As pointed out by Grestenberger (2014: 273-274), diachronic evidence for *sarr-ⁱ* is difficult to evaluate to get a precise chronology of the usages of this verb. The chronology of the attestations is not of much help. OH attests to both active transitive forms with the meanings ‘transgress’ and ‘divide’, the latter accompanied by the particle =za in indirect reciprocal function. Therefore, there is no textual evidence to establish which of the two meaning should be taken as primary. The distribution of middle forms voice is somewhat more problematic. Middle forms with the meaning ‘transpass’ are attested only from MH/MS onwards. Concerning oppositional middle forms based on the meaning ‘divide’, the passive usage is sporadically attested in OH/NS and later texts, and reciprocal anticausative is attested only in a couple of NH/NS occurrences, in which it can also be accompanied by =za. Whereas the combination of the middle plus =za is most likely a later development, the relationship between passive and anticausative is harder to handle. Despite the textual distribution, it is likely that the anticausative use of this verb preceded the passive usage, this being in line with the general grammaticalization path of passive morphology (Haspelmath 1990). What remains unclear is the chronology of the active causative and the middle anticausative function. The textual evidence speaks in favor of an earlier use of the active causative for this verb, with middle morphology being used as a productive marker of reciprocal spatial anticausative, perhaps on the model of verbs such as *immiya-^{zi}* and *tarupp-^{zi}* (cf. Inglese 2017: 965-968).

Grestenberger (2014: 273-274) points out that the transitive middle ‘transgress’ and the intransitive middle ‘split up (intr.)’ constructions are not synchronically related, and that the former

might be the older one. According to her, the verb originally was a deponent *medium tantum* (as already tentatively suggested by Neu 1968b: 60), which was later translated to active inflection. For this to be true, we have to assume that deponent *sarra-ta(ri)* originally meant ‘break, divide’ and could also be used metaphorically with the meaning ‘break (oaths), trespass’. Later on, for some reasons, middle forms specialized into the meaning ‘transgress (oaths)’, whereas in its most concrete meaning ‘divide’ the verb was transferred to active inflection. Since active forms occurs since OS and take *hi-* endings, this entire process must have happened quite early. Once active inflection developed, a new oppositional middle voice was created, with intransitivizing functions.

Unfortunately, textual evidence is not really compelling in this respect. Whereas its ‘trespass’ meaning the middle voice is more frequent than the active (count based on the *CHD*), both occur alongside since MS times. Active voice tends to take over with the course of time, as the replacement of middle forms in MS texts with active forms in NS copies neatly demonstrates, e.g. *sarrantati* KUB 30.12 i 18 (MH/MS) > *sarrir* KUB 24.3 + KUB 31.144 (MH/NS), as also discussed by Melchert (forthc.b: *passim*).

To sum up, it is possible that the synchronically puzzling distribution of the middle voice with *sarr-i* represents different layers of development. On the one hand, deponent syntax of the middle voice might be inherited from PIE and preserved only in metaphorical expressions ‘break an oath’ and related. On the other hand, new intransitivizing functions can be seen a secondary development in compliance with inner-Hittite productivity patterns of the middle voice as a valency decreasing marker. For the morphological history of this verb see also Oettinger (forthc.).

Stage I

**sarra-ta(ri)* ‘break’ and metaphorically ‘trespass’

Stage II (pre-OH)

**sarr-i* ‘break, divide’ vs. **sarra-ta(ri)* ‘break (oath), trespass’

Stage III (OH +)

sarr-i ‘divide’

=*za sarr-i* ‘divide among each other’

(=*za*) *sarra-ta(ri)* ‘split up, be divided’

suppiyahh⁻ⁱ ‘purify’, *suppiyahh*^{-a/ta(ri)} ‘purify oneself (with =za)’

Semantics and aspectual construal:

The verb *suppiyahh*⁻ⁱ, that is a factitive *-ahh-* derivative from the adjective *suppi-* ‘pure’, indicates the action of purification ‘make pure, purify’ and is mostly used in ritual contexts. The verb occurs both in the active and in the middle voice, as in (442) and (443).

(442) *nu* LUGAL-*u*[(*n su*)]*p*[(*piya*)*hhi*]
CONN king.ACC purify.PRS.1SG
“And he purifies the king.” (KBo 17.11+ i 40, OH/OS)

(443) LUGAL-*us=za* *suppiyahhati*
king.NOM=REFL purify.PST.3SG.MID
“The king has purified himself.” (KBo 25.112 ii 14, OH/OS)⁶⁰

In (442), the event encoded by the verb is possibly construed as an incremental accomplishment, and the verb semantically belongs to the class of degree verbs, purity being a gradable property. There is however no compelling evidence from the occurrence of temporal adverbs.

A similar construal is at play when the verb occurs with the preverb *sarā* that highlights the completion of the event, hence favoring a telic reading, as in (444):

(444) UGULA LÚ^{MEŠ} GIŠ^{GIŠ}BANŠUR *sarā* *suppiyahhi*
chief man(PL) table up purify.PRS.3SG
“The chief of the table-men completes the purification.” (KUB 43.30 ii 10, OH/OS)⁶¹

Argument structure and relationship with voice:

The verb *suppiyahh*⁻ⁱ indicates a factitive change-of-state event whereby a causing Agent makes a Patient participant acquire the property denoted by the verb. Active forms of the verb occur in a

⁶⁰ According to Neu (1968a: 158, 1983: 175; also Kloekhorst 2008: 789) the form *suppiyahhati* (also in KBo 25.112 ii 21) is a preterite. Based on the context, Yakubovich (2006: 98) instead suggest that this form should be interpreted as present. However, given that *-ti* enlarged forms preferably occur in the preterite, it seems safer to follow the traditional reading and interpret *suppiyahhati* as a preterite form with perfect value ‘has purified’, which is perfectly compatible with the context in which this form occurs (cf. Hoffner & Melchert 2008: 309-310 on this use of the preterite).

⁶¹ Concerning the syntactic interpretation of example (444), the *CHD* (*s. sarā*) assumes deletion of a referential direct object, so that the verb should be understood as construed exactly as in (442).

transitive construction, with the two participants encoded as subject and object respectively, as in (442). The verb can also be used intransitively (Luraghi 1990: 37) without a referential direct object, as in (445). When this is the case, the verb displays unergative syntax, since no subject clitic pronoun is required (Garrett 1996: 99), consistently with the behavior of other transitive verbs construed absolutely (cf. Luraghi 2010a).

- (445) *nu* *suppiyahhi*
 CONN purify.PRS.1SG
 “And he performs the purification.” (HT 95 rev. 7, OH/OS)

Middle forms of the verb are intransitive, as in (443). The verb occurs only with subject NPs in OH/OS, but the occurrence of the clitic pronoun =*at* in the passage in (446), which comes a later copy of a OH text, shows that the middle forms of the verb are unaccusative.

- (446) *n=at* *suppiahtari=pat*
 CONN=3SG.ACC.N purify.PRS.3SG.MID=FOC
 “(And what happens to his body), it is purified.” (KBo 17.78 i 1, OH/MS)

As comparison between (442) and (443) neatly shows, with *suppiyahh-i* the middle voice operates as a reflexive marker (cf. Neu 1968b: 75, Boley 1993: 161, Yakubovich 2006: 98). In this function, the verb is reinforced by the particle =*za* already in OH/OS.⁶² Middle forms with reflexive meaning without the particle come from a single OH/NS text, KBo 3.16 (cf. Neu 1968a: 158). Evidence for a passive function of middle forms of *suppiyahh-i* is restricted to the occurrence in (446). Note that in this case the verb displays the productive passive ending *-tari* and does not take the particle =*za*, supporting the hypothesis that the particle is associated with the direct reflexive reading of the predicate.

***dā-i* ‘take’, *da-ta(ri)* ‘be taken’**

⁶² It should be observed however that the dating of KBo 25.112 has been recently called into question: whereas the text is commonly regarded as an original OH/OS composition (thus also Goedegebuure 2014: 15), it is now marked as OS² in the *HPM* (last accessed 25.06.2018).

Semantics and aspectual construal:

The basic meaning of the verb *dā-ⁱ* is ‘take’, from which the related meanings ‘wed, decide’ can be easily derived (see Ciantelli 1978 for occurrences and semantics). The verb profiles the inverse event as the one indicated by *pai-ⁱ* ‘give’. With the meaning ‘take’, the verb occurs both in the active and in the middle voice, as illustrated in example (447) and (448).

- (447) LUGAL-*us* ^{GIŠ}BANŠUR-*az* NINDA-*an dāi*
king.NOM table.ABL bread.ACC take.PRS.3SG
“The king will remove the bread from the table.” (KBo 6.2 ii 44, OH/OS)
- (448) *n=at* *lē* *dattari*
CONN=3PL.NOM.N NEG take.PRS.3SG.MID
“They should not be taken away (from him).” (Bo 86/299 ii 3, NH/NS)

The default construal of this verb is possibly one of direct reversible achievement, since the verb indicates a change of position in the Theme participant but the event does not unfold incrementally over time.

Etymology:

The verb *dā-* has been etymologically connected with the PIE root **deh₃-* ‘give’ already since Hrozný (1915: 29), even though the semantics as well as the formal details remain somewhat debated (see Kloekhorst 2008 *s.v.* for discussion). Specifically, as Kloekhorst points out, hypothesises that the verb originated as middle and was transferred to active *hi*-inflection in pre-Hittite times (Eichner 1975a: 93, Oettinger 1979: 500, Melchert 1984: 25) should be given up, as it is more economical to interpret the verb as a *hi*-inflecting root present with original **o*-grade. See further *HEG* for other etymological proposals.

Argument structure:

The verb *dā-ⁱ* indicates a three-participants transfer event, whereby an Agent participant removes a Theme from a Source. Active forms of the verb occur in a transitive construction, with the Agent and the Theme encoded as subject and object respectively. When expressed, the Source can be encoded by e.g. a NP in the ablative case, as in (447). See further Ciantelli (1978) for the different constructions in which the active verb occurs. By contrast, the middle verb is intransitive, and requires a clitic subject, as comparison between (447) and (448) shows.

As pointed out already by Neu (1968a: 160), middle forms of *dā-* always encode the passive counterpart of active forms of the verb. Compare examples (447) and (448). In the former, the verb is used transitively and the Theme is encoded as an accusative direct object, whereas in the latter the Theme surfaces as the subject and the verb is used intransitively, as shown by the occurrence of the clitic subject pronoun. This interpretation holds even in absence of an overt agent phrase, since other meanings, e.g. anticausative, are clearly incompatible with this verb. Alternatively, the passive of this verb can also be encoded by a periphrastic passive construction based on the participle *dant-* ‘taken’ (cf. Cotticelli Kurras 1991: 151).

Interaction with the particle =za:

Active forms of the verb may occur with the particle *=za*, which either indicates the indirect reflexive event ‘take for oneself’ or shows the lexicalized meaning ‘take as wife, wed’ (cf. Ciantelli 1978, Boley 1993: 55-72). Middle forms of the verb never occur with the particle.

***tamāss-^{zi}* ‘press, oppress’, *tamass-^{ta(ri)}* ‘be oppressed’**

Semantics and aspectual construal:

The verb *tamāss-^{zi}* basically mean ‘press, oppress’. Events of exerting physical force can be variously construed, depending on different parameters, such as the argument structure construction the verb is involved in and the referential properties of participants. This variability is reflected for instance in the fact that one finds these verbs occurring with different temporal adverbs. As an example, consider the behavior of the English verb *press* in (449) (see Levin 1993: 137-138 for Push/Pull verbs in English and the discussion in Croft 2012: 364-374):

(449) <i>The sofa presses on the floor</i>	STATIVE
<i>Mark suddenly pressed the button</i>	ACHIEVEMENT
<i>Mark pressed the orange in a few seconds</i>	ACCOMPLISHMENT
<i>The crowd pressed at the doors for hours</i>	ACTIVITY

Turning to the Hittite verb *tamāss-^{zi}*, even though it does not occur with temporal adverbs, the contexts in which it appears suggest that its default aspectual construal is an atelic one, both when it occur in the active and in the middle voice. Consider example (450), featuring twice the active from *tamasta* ‘oppressed’, and (451), in which the middle from *tamastat* ‘was oppressed’ occurs.

- (450) *kēz=at* *hingananza* *tama[(asta* *kēz)=at]*
 DEM.ABL=3SG.ACC.N plague(N).ERG oppress.PST.3SG DEM.ABL=3SG.ACC.N
kururanza *tamasta*
 hostility(N).ERG oppress.PST.3SG
 “(O gods, again have pity on the land of Hatti.) On the one hand, the plague has oppressed it, and on the other hand, hostility has oppressed it.” (KUB 24.4 i 15-16, MH/MS)
- (451) *nu=wa* KUR^{URU} *Hatti* *hinganaz* *arumma mek[ki]* *tamastat*
 CONN=QUOT land *H.* plague.ABL very much oppress.PST.3SG.MID
 “And the land of Hatti was severely oppressed by the plague.” (KUB 14.10 i 7, NH/NS)

In (450) the active verb indicates an ongoing activity, as evidenced by the presence of the two ablatives referring to the ‘plague’ and the ‘hostility’, both profiling ongoing situations. Similar considerations hold for (451).

The participle of this verb, *tamassant-* ‘pressed’, apparently patterns with telic verbs, but this is inconclusive, since it can also have a passive activity reading, much in the same way as *pahs-ⁱ* ‘protect’ >> *pahsan-* ‘protected’, thus referring to an ongoing two-participant activity from the perspective of the Patient. In this case, the interpretation of the participle is triggered by the transitivity of the base verb rather than by its lexical semantics, similarly to stative transitive verbs such as *hā-* ‘trust’ > *hānza* ‘trusted’, and not ‘trusting’.

Etymology:

The verb is widely attested in Hittite. Early attestations point towards a *-ā-/-e/i-* ablauting stem, which given its uniqueness in the Hittite verbal system was easily analogically altered, thus explaining aberrant forms attested from MS onward (Kloekhorst 2008 *s.v.*). The verbs can be associated with the PIE root **dméh₂-*, thus cognate with Lat. *domāre*, Gr. *dámnēmi*, and Eng. *tame*. Though semantically and formally appealing, this reconstruction still leaves open the problem of the Hittite *-s-* extension, which is also found in other verbal stems e.g. *pahs-ⁱ*, and the unique ablaut pattern.

Argument structure and relationship with voice:

The verb *tāmass-^{zi}* ‘oppress’ indicates an event in which an Agent or a Force exerts (physical) force on a Patient. Active forms of the verb occur in a transitive construction, with the Agent and the Patient encoded as subject and object respectively, as in example(450). By contrast, middle forms are used

intransitively, with the subject encoding the Patient participant, as in example (451). There is no evidence for the use with clitic subjects.

As comparison between (450) and (451) shows, with the verb *tāmass-^{zi}* the middle voice acts as an intransitivizing marker with passive function. In (451), a passive interpretation is supported not only by the raising of the object of the transitive verb as subject, but also by the demotion of the active subject to the oblique agent *hinganaz* ‘by the plague’ in the ablative case.

According to Neu (1968a: 163-164), middle forms of *tāmass-^{zi}* can also be used transitively, without any discernible difference with active forms in syntax and semantics. Two of the examples discussed by Neu as evidence for such a deponent usage of middle forms are the ones discussed under (450), in which *hingananza* and *kururanza* are interpreted as ‘ergative’ *-ant-* formations, and the pronoun =*at* as object rather than subject pronoun. However, the form *tamasta* can be more easily interpreted as 3rd preterite singular active form (Kloekhorst 2008 *s.v.*), thus conforming to the regular transitive pattern of active forms. Note that interpreting these forms as preterite rather than present tense does not alter the overall meaning of the text.

If one excludes the examples in (450), evidence for a transitive use of middle forms boils down to one occurrence, quoted in (452).

(452) [*n*]=*an* GIG-*anza* *tamastat*
 CONN=3SG.ACC illness(N).ERG oppress.PST.3SG.MID
 “And illness oppressed her.” (KBo 4.6 obv. 25, NS)

In example (452), the sentence shows transitive syntax, with the ‘ergative’ subject GIG-*anza* and the accusative direct object =*an*, similarly to (450), but the verb from *tamastat* cannot be anything but a 3rd person singular preterite middle. Tentatively, the aberrant syntax of this example can be explained as a misinterpretation of *tamasta* forms in cases such as (450) as present middle forms used transitively, on the basis of which transitive syntax was erroneously extended to isolated middle forms such as (452).

damme/ishae-^{zi} ‘damage’, *damme/ishae-^{ta(ri)}* ‘be damaged’

Semantics and aspectual construal:

The verb *damme/ishae-^{zi}* ‘damage’ denotes an event in which one entity progressively undermines the physical integrity of another entity. In general, this type of event can be construed in at least in

two ways. First, one can refer to a sudden event of damaging whereby the affected entity undergoes a punctual change of state. In this case, the temporal unfolding of the event remains unprofiled, and the event can be classified as an achievement. Alternatively, the event can be construed as a progressive and incremental damaging process, the limit of which is determined by the physical properties of the entity affected. In this case, the verb can be treated as either an incremental accomplishment or (un)directed activity, depending on the profile of the attained resulting phase (notably, in this respect the verb semantically belongs to the class of degree verbs). In cognitive terms, these alternations are best viewed as outcome of scalar adjustment. The alternative construals of the event in English are shown by the use of the verb *damage* in (453):

(453) <i>He hit the wall with a hammer and damaged it</i>	ACHIEVEMENT
<i>The fire completely damaged the building</i>	INCREMENTAL ACCOMPLISHMENT
<i>Pollution damages the environment</i>	UNDIRECTED ACTIVITY

Evidence for the aspectual construal of Hittite *damme/ishae-^{zi}* is somewhat limited, and there are no occurrences with temporal adverbs. However, based on contextual clues, both the activity and the achievement construals can be attributed to *damme/ishae-^{zi}*. Consider the examples (454) and (455) (translation by Hoffner & Melchert 2008 *passim*):

(454) <i>man KUR-i LÚ^{KUR} ŪL dammishaizzi</i>	
IRR land.ACC enemy NEG damage.PRS.3SG	
“(If you your majesty were to send a lord), the enemy would not damage the land.” (HKM 46.15-17, MH/MS)	
(455) <i>kī=ya=an 1-an dammishanun</i>	
DEM.ACC.N=CONJ=3SG.NOM one.ACC damage.PST.1SG	
“In this way, I punished (lit. damaged) her.” (KBo 4.8 ii 13, NH/NS)	

In (454), the verb profiles an ongoing event, possibly involving multiple participants, i.e. either an undirected activity or an incremental accomplishment, whereas in (455) a single punctual event is profiled, as also suggested by the English translations.

Evidence for middle forms of *damme/ishae-^{zi}* is rather limited, and the occurrences are not particularly revealing of the aspectual construal of the verb, as in (456).

(456) <i>n=at lē dammishaittari</i>	
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CONN=3SG.NOM.N NEG damage.PRS.3SG.MID

“It should not be damaged.” (HKM 31 v 11-12, MH/MS)

Being *damme/ishae^{-zi}* a transitive verb, its participle *dammishant-* ‘damaged’ indicates the resulting state of the process only, and cannot refer to an ongoing activity (cf. Frotscher 2013: 218, who classifies the verb as an accomplishment).

Etymology:

This verb is denominal derivative from the noun *damme/ishā-* ‘damage’, itself cognate with the verb *tamāss^{-zi}* ‘press’, both from a PIE root **demh₂-*, cf. Lat. *domāre* ‘tame’ (see further *LIV²* s.v.).

Argument structure and relationship with voice:

The verb *damme/ishae^{-zi}* denotes a two-participants change-of-state event in which a volitional Agent physically affect a Patient, which can either be animate or inanimate.

The verb occurs both in the active and in the middle voice. When inflected in the active voice, the verb is used in a transitive construction with a nominative subject and an accusative object, as in (455). By contrast, middle verb forms of the verb consistently display unaccusative syntax, with the Patient encoded as subject, as evidenced by the occurrence of the clitic subject pronoun =*at* in (456).

As comparison between (455) and (456) shows, with this verb the middle voice operates as a valency decreasing device. Specifically, middle forms of the verb can be understood as encoding the passive counterpart of active transitive forms (Neu 1968a: 195, 1968b: 112). A passive interpretation of these forms is further confirmed by the occasional occurrence of the agent phrases, as for example the ablative *hinganaz* ‘by the plague’ in example (457):

(457) KUR ^{URU}Hatti *hinganaz* [*mekki*] *dammeshaittat*
land H. plague.ABL much damage.PST.3SG.MID

“And the land of Hatti was afflicted by the plague.” (KUB 14.14+ 38-39, NH/LNS)

Note that since the verb belong to the *hatrae*-class, it possibly originated as an *activum tantum* (Kloekhorst 2008: 133), and only later developed an oppositional middle voice.

***tarna⁻ⁱ* ‘let go, allow’, *tarna^{-ta(ri)}* ‘be released, be allowed’**

Semantics and aspectual construal:

The verb *tarna*⁻ⁱ occurs both in the active and the middle voice, and shows the basic spatial meaning ‘let go, release’. With this meaning, the verb is attested since OH/OS, as shown by the occurrence of the active from *tarnas* ‘let, released’ in example (458).

- (458) *s=us* *ÍD-a* *tarnas*
CONN=3PL.ACC river.ALL leave.PST.3SG
“And she let them to the river.” (KBo 22.2 obv. 3, OH/OS)

In (458), the verb indicates a change-of-state event lacking internal temporal unfolding, whence the classification of the verb as a directed reversible achievement. Notably, the profile of the endpoint of the event is also evidenced by occurrence in (458) of the noun *ÍD-a* ‘the river’ in the directive case (cf. Starke 1977: 38).

The same construal can be tentatively attributed to middle forms of the verb, even though there is no evidence from either the context or temporal adverbs, as in (459):

- (459) [xxx] [*k*]*arū* *tarnattat*
 already leave.PRS.3SG.MID
“[...] has been already released.” (HKM 17 rev. 41, MH/MS)

Etymology:

As discussed by Kloekhorst (2008 *s.v.*) the etymology of this verb is still debated, with derivations from either the root **terh₂-* ‘cross’ and **trk-n-h_{1/3}-* ‘let’, the latter being preferable on semantic and formal grounds (Kloekhorst 2008 *s.v.*).

Argument structure and relationship with voice:

The verb *tarna*⁻ⁱ encodes a two-participant caused motion event, involving an Agent entity that induces a change of location of the Patient/Theme. As the occurrence of the object clitic pronoun *=us* in (458) shows, the active verb is used in a transitive construction. By contrast, middle forms of the verb display intransitive unaccusative syntax (Garrett 1996: 91), as evidenced by the occurrence of the clitic subject *=at* in (460):

- (460) EGIR-*an=at=kan* *tarnattari*
 back=3SG.NOM.N=PTC leave.PRS.3SG.MID

“It will be left behind.” (KBo 4.10 obv. 12, NH/NS, translation of this passage unclear, cf. Devecchi 2015: 162 fn. 2)

The clitic subject is not required when the middle verb lacks a referential subject, as in example (461), consistently with the behavior of other ‘impersonal’ verbs (Hoffner & Melchert 2008: 281):

(461) *ammuk=ma IŠTU MUŠEN tarnattat*
 1SG.DAT=PTC by bird.oracle leave.PST.3SG.MID

“It was allowed to me (to proceed) by the bird oracle.” (KBo 5.8 i 22, NH/NS)

As comparison between examples (458) and (460) shows, with *tarnaⁱ* the middle voice operates as a valency decreasing device. According to Neu (1968a: 168, 1968b: 122) middle forms of *tarnaⁱ* should be interpreted as passive, with either the meaning ‘released’, as in (460), or ‘allowed’, as in (461). A passive reading is further supported by the occurrence of the agent/instrument phrase *IŠTU MUŠEN* ‘by the bird oracle’ in (461). Moreover, the occurrence of the adverb [*k*]arū ‘already’ in (459) suggests an eventive, and not stative, passive reading, since the adverb is only compatible with an anterior meaning of the predicate (cf. Boley 1984: 71, Bertinetto & Cambi 2006, Cambi 2007: 152).

***tarupp^{zi}* ‘gather (tr.)’, *tarupp^{ta(ri)}* ‘gather (intr.), be gathered, end (intr.)’**

Semantics and aspectual construal:

The basic meaning of the verb *tarupp^{zi}* is ‘collect, gather’, both when it occurs in the active and in the middle voice, as comparison between example (462) and (463) shows.

(462) *nu SÍG SA₅ anda taruppanzi*
 CONN wool red in gather.PRS.3PL

“And they collect red wool (and put it on the cloth).” (KBo 5.1 iv 1, NS)

(463) *DINGIR^{MEŠ}=ya hūmantas taruppantat*
 god(PL)=CONJ all.NOM.PL gather.PST.3PL.MID

“The gods gathered all together.” (KUB 36.97 obv. 6, NS)

Semantically, the verb can be classified as a lexical spatial reciprocal (Inglese 2017). Concerning its aspectual construal, with the meaning ‘gather’, the verb indicates an incremental accomplishment. This is the construal at play in (462), where boundedness of the event is further suggested by the context, as the event of gathering must be brought to completion before the subsequent event can take place.

Beside the meaning ‘gather’, middle forms of the verb also attest to the meaning ‘finish, be over’, as in (464).

(464) [(*nu mahha*)]*n* 7 NINDA.KUR₄.RA *tarupta*[(*ri*)]

CONN when 7 bread gather.PRS.3SG.MID

“[7 different kinds of bread are mentioned as involved in the ritual] When the 7 breads have been handled, (they give something to drink to the King).” (KUB 33.215+ iv 13)

Neu (1968a: 170-171, 1968b: 94) interprets these occurrences of *tarupp*^{-zi} as indicating a state. However, I suggest that it is more accurate to describe the aspectual construal of these occurrences as profiling an incremental accomplishment, as suggested by contextual factors. For instances, in (464), what is being profiled is the entire event of the handling of the bread coming to completion, rather than the stative resulting phase, since the event is presented as completed before others can take place. Clearly, starting out from these contexts, the incremental change can be easily dropped and the resulting phase can be the only one profiled (Croft 2012: 109, cf. discussion under *kars(iye/a)*^{-zi}).

Etymology:

As Kloekhorst states (2008 *s.v.*), “the etymological interpretation of this verb is quite unclear.” Proposed etymologies include connections with Lat. *turba* ‘turmoil’ (Holma 1916: 36) or with Gr. *thórubos* (Oettinger 1979: 229), all unconvincing for either formal or semantic reasons (Kloekhorst 2008 *s.v.*). Mechanically, the form can be reconstructed as **Treup-*.

Argument structure and relationship with voice:

The verb *tarupp*^{-zi} occurs both in the active and in the middle voice in different constructions. In discussing the constructions in which the verb *tarupp*^{-zi} occur, one should keep the two meanings ‘gather’ and ‘be finished (mid.)’ distinct.

In the first place, when meaning ‘gather’, active forms of the verb are used in a transitive construction, as in (462), in which an Agent brings about the reciprocal spatial relationship between

the two Reciprocants, which are encoded as objects. In other words, active forms of the verb syntactically behave as object-oriented reciprocals. Conversely, middle forms of the verb are used intransitively and display unaccusative syntax (Garrett 1996: 91), as the occurrence of the clitic subject =*at* in shows:

- (465) *n=at* *A[NA ŠU.SAR G]ÛB-laz taruptat*
 CONN=3SG.NOM to rope left.ABL gather.PST.3SG.MID
 “He has been bounded to the rope on the left.” (KUB 29.7+ rev. 44, OH/MS)

Middle forms of *tarupp-^{zi}* meaning ‘gather’ indicate the subject-oriented reciprocal counterpart of active forms of the verb. In this case, they can either occur in a simple construction, with the Reciprocants encoded as subjects, as in (463) and (466), or in a discontinuous construction, with one reciprocant encoded as subject and the other one as a comitative oblique, as in (465) and (467).

- (466) ^{MUŠEN.HI.A}*meyannas=si* *INA* ^{URU}*Hatti taruppantari*
m.bird.NOM.PL=3SG.DAT in *H.* gather.PRS.3PL.MID
 “The *m.* birds are gathered in the city of Hatti for him.” (KUB 29.1 ii 44, OH/NS)
- (467) [xxx] *QADU ERÍN^{MEŠ}=Š[UN]U anda taruppantati*
 with troop(PL)=3PL.POSS in gather.PST.3PL.MID
 “They gathered with their troops.” (KUB 23.12 ii 20, MH/MS)

From a functional standpoint, middle forms can be interpreted in two ways. On the one hand, they can encode an anticausative event in which the event is conceived as spontaneously brought about by the Reciprocants themselves. The anticausative reciprocal function of the middle is exemplified in (466) and (467). It must be stressed that the reciprocal interpretation of this predicate is limited to occurrences in which a plural subject, or a singular collective subject, occurs, or in which the second reciprocant is expressed via an adpositional phrase in a discontinuous construction. On the other hand, middle forms can be interpreted as passive reciprocals, i.e. as object-oriented reciprocals profiled from the perspective of the Patient, in which the Agent even though entailed by the event frame is left unprofiled. Passive reciprocal usage of middle forms of *tarupp-^{zi}* is exemplified in (466) and in (468). In the latter example, world knowledge suggests that the verb should be interpreted as having passive function, since it is most likely that the gathering of the troops is caused by external orders, rather than being spontaneous.

(468) *nu* ÉRIN^{MEŠ} *anda daruppantet*
 CONN troop(PL) in gather.PST.3PL.MID

“The troops who have been gathered there (and the horses that were with them, transfer them into the presence of My Majesty).” (HKM 20 6-7, MH/MS)

In the second place, middle forms of *tarupp-^{zi}* can be used with the meaning ‘be removed, end’. In this case, the event involves a single Patient/Theme participant, which is encoded as the subject of the intransitive verb, as in (469). Notably, the verb can also occur with an infinitive as subject, as in example (469):

(469) *nu=kan* IŠTU KUR^{URU} *Hat[ti] hinkan* [a]rha ŪL=*pat*
 CONN=PTC from land H. plague.NOM away NEG=FOC
tarupt[a]ri
 remove.PRS.3SG.MID

“Will the plague never be removed from Hatti.” (KUB 14.10 i 14-15, NH/NS, transl. Singer 2002: 57)

(470) *mahhan=ma warsuli akuwanna taruptari*
 when=PTC drink.ACC drink.INF end.PRS.3SG.MID
 “When the drinking finishes.” (ABoT 7+ v 35-36, NS)

Middle forms with the meaning ‘be finished, end’ represent a lexicalized use of the middle voice, which is synchronically unrelated to active forms of the verb. Notably, these forms are ambiguous between a passive ‘be completed, be handled’ and an anticausative ‘end, finish’ reading, as comparison between (464) and (470) shows.

In one occurrence, quoted under (471), the verb fails to show a clitic subject. As discussed under for the middle form of *hulāliye/a-^{zi}* in (354), absence of the clitic possibly reflects the impersonal use of the verb without a referential subject (Neu 1968a: 169; Hoffner & Melchert 2008: 281).

(471) *taruptat=wa*
 gather.PST.3SG.MID=QUOT

“(The chief of the bodyguard or the commander of 10 bodyguards or the military herald says to the king: it has been encircled,) it has been completed.” (IBoT 1.36 iii 54, MH/MS)⁶³

Summing up, the verb *tarupp*-^{zi} occurs in the following constructions:

- A. [N_{1(NOM)} N_{2(ACC)} *tarupp*-^{zi}] = [SEM₁ gathers SEM_{2(PL/COLL)}]
- B. [N_{1(NOM.CL)} *tarupp*-^{ta(ri)}] = [SEM_{1(PL/COLL)} gather, are gathered]
- C. [N_{1(NOM.CL)} N_{2(DAT)} *tarupp*-^{ta(ri)}] = [SEM₁ gathers with SEM₂]
- D. [N_{1(NOM.CL)}, V_{1INF} *tarupp*-^{ta(ri)}] = [SEM₁ ends]

Concerning the chronology of this verb, active forms of the verb with the basic spatial meaning ‘gather’ are attested since OS, with the first occurrences of the middle voice associated with this meaning showing up in MS texts. However, since some of them are found in OH/NS texts, one is tempted to project the oppositional middle voice back to OH times. It is possible that the middle voice originated as an anticausative marker and secondarily developed a passive meaning in specific contexts. The meaning ‘be finished’ possibly developed out of the more basic and concrete meaning ‘gather’ in passive sentences, based on the inference that if one has completed the gathering event on certain entities, then these entities can be conceived as being dealt with. Secondary development of the meaning ‘be finished’ is partly supported by the textual chronology, as most attestations stem from MH/NH texts. In some occurrences, the verb seems rather to indicate a spontaneous event of coming to end. This points to a further development of the verb, which has possibly undergone a change from passive to anticausative ‘be finished’ > ‘end’ (Kulikov 2011; see discussion under *kars(iye/a)*-^{zi} for a parallel development).

***das(sa)nu*-^{zi} ‘strengthen’, *das(sa)nu*-^{ta(ri)} ‘strengthen oneself (with =za)’**

⁶³ The interpretation of this occurrence is admittedly problematic. Semantically, it is not clear whether the verb still belong to the ‘gather’ domain, or should be translated as ‘finish’. Güterbock & van den Hout (1991: 29), partly followed by Miller (2013: 117), interpret the sentence as ‘it has been completed’, but as they also observe, in principle a reading ‘it has been assembled’, with a collective singular subject, cannot be ruled out (Güterbock & van den Hout 1991: 55).

Semantics and aspectual construal:

The verb *das(sa)nu-^{zi}* is a factitive verb meaning ‘strengthen, make strong’, as in example (472):

- (472) *nu=war=an* *dassanumi*
CONN=QUOT=3SG.ACC make.strong.PRS.1SG
“I will make her (i.e. the daughter) important.” (KUB 21.36, 10, NH/NS)

The event encoded by the verb *das(sa)nu-^{zi}* refers to the gradual acquisition of the property of strength by an entity. The verb belongs to the class of degree verbs, and the event that it indicates can be in principle construed as either an accomplishment or a directed activity, depending on the profile of the final stage and lack thereof. Unfortunately, occurrences of this verb are too scarce to draw compelling conclusions on its default aspectual construal, and the verb never occurs with temporal adverbs. The verb is classified as an accomplishment by Frotscher (2013: 219), who observes that the participle of this verb *dassanuwant-* ‘fortified’ is resultative, thus patterning with telic predicates. The only middle occurrence of this verb, quoted under (473), is not particularly revealing as to the aspectual construal of the event:

- (473) [*memi*]steni *tassanuhhut=wa=az*
say.PRS.2PL make.strog.IMP.2SG.MID=QUOT=REFL
“You say, strengthen yourself!” (KUB 13.27 obv. 46, NH/NS)

Etymology:

The verb is a *-nu-* factitive derivative from the adjective *dassu-* ‘strong’ paired with a fientive counterpart *dassēss-* ‘become pressing, heavy’ (cf. Luraghi 2012: 7). The adjective in its turn is cognate with Skt. *dāmsas-* ‘miraculous power’ and Gr. *didáskō* ‘learn’, from a PIE root **de/dNs-u-* (see Kloekhorst 2008 s. *dassu-* for discussion, and LIV² s. **dens-* on the PIE root).

Argument structure and relationship with voice:

The verb *das(sa)nu-^{zi}* refers to a factitive two-participant event, in which a causing Agent makes a Patient progressively acquire the property of strength. As example (472) shows, the active verb is used in a transitive construction, with the two roles encoded as subject and direct object respectively. Conversely, the only middle form of the verb displays intransitive syntax, as in (473). In this case, the Agent and the Patient are coreferential, the verb has a reflexive reading. There is no evidence for the use of clitic subjects.

As comparison between (472) and (473) shows, with the verb *das(sa)nu^{-zi}* the middle voice provides the reflexive counterpart of transitive active forms of the verb (Neu 1968b: 70). Note that in its reflexive function the verb is accompanied by the particle =*za*. The etymology of the verb further supports a reflexive interpretation of the middle from in(473). The verb *das(sa)nu^{-zi}* is a *-nu-* factitive derivative: the suffix *-nu-* constitutes a valency increasing device and adds the semantic feature of control to the agent participant (cf. Luraghi 2012: 7-8). As such, it is unlikely that middle voice of this verb indicates a spontaneous event, since this could already be encoded by the fientive counterpart, that is, *dassēss^{-zi}* ‘become strong’. Note that the middle of *das(sa)nu^{-zi}* plus =*za* and *dassēss^{-zi}* are quite close in meaning. The difference can be tentatively explained as one of profiling: the former profiles the Agent’s active involvement and control of the self-directed change-of-state event, whereas the latter profiles the event as spontaneously coming about without the interference of an external agent.

***usneske/a^{-zi}* ‘weight, balance (tr.)’, *usneske/a^{-ta(ri)}* ‘put up for sale’**

Semantics and aspectual construal:

The verb *usneske/a^{-zi}* is a *-ske/a-* derivative of the active verb *usniye/a^{-zi}*. Whereas the simple verb is an *activum tantum*, the derives *-ske/a-* stem occurs both in the active and in the middle voice. Both verb likewise indicate the act of putting something on sale, as exemplified in (474) and (475), in which the verb occurs in the middle voice.

(474) *usniyazi=ma=at=za* *kuwapi n=at* *harwasi lē*
 sell.PRS.3SG=PTC=3SG.ACC.N=REFL when CONN=3SG.PRS.N secretly NEG

usniyazi

sell.PRS.3SG

“But when he sells it (i.e. silver, gold, clothing or bronze utensils), he shall not sell it in secret.” (KUB 13.4 ii 40-41, OH/NS, transl. after Miller 2013: 255)

(475) [*takku LÚ.U₁₉.LU-an*] *dampupin kuiski usnesk[att]a*
 if person.ACC unskilled.ACC INDF.NOM sell-IPFV-PRS.3SG.MID

“If someone is selling an unskilled person (but another goes and strike first).” (KUB 29.29 ii 15, OH/OS)

Judging from the context of occurrences such as (474), the event denoted by *usniye/a^{-zi}* is possibly construed as a reversible directed achievement. Dynamicity of the verb is further suggested by its possibility of combining with the suffix *-ske/a-*, notoriously unavailable to stative predicates.

In derived *-ske/a-* forms of the verb, the suffix can be conceived as encoding imperfectivity, hence the verb is construed as a directed activity, so that the sentence in (475) should be translated as “If someone is selling, i.e. is in the process of selling...”.

As discussed at length by Melchert (2015: 413-414), there is evidence in Hittite for a non-commercial use of derived *-ske/a-* forms of the verb meaning ‘pledge, balance’ and used mostly in religious and ritual contexts, as in (476) and (477):

- (476) *nu=za apē[l] SAG.DU-an ZI=ŠU=ya ussanisket*
 CONN=REFL DEM.GEN head.ACC soul=3SG.POSS=CONJ pledge-IPFV-PST.3SG
 “He pledged his body and soul (until he rebuilt Nerik).” (KUB 21.27 iv 39-40, NH/NS)
- (477) *nu labarnas taluqaus MU^{HL.A}-us usneskemi*
 CONN labarna.GEN long.ACC.PL year.ACC.PL weight-IPFV-PRS.3SG
 “(I hereby lift up the scales), and weight out long years for the labarna.” (KBo 21.22 rev. 17-18, OH/MS)

Etymology:

The verb *usniye/a^{-zi}* is a Hittite denominal *-ye/a-* formation on the *n*-stem noun **us-n-* ‘sale’, reflected in Lat. *vēnum* < **ues-no-* and Gr. *ōnos* < **uos-n-os* - (Kloekhorst 2008 s.v., Melchert 2017b: 478), from PIE **wes-* ‘pledge in exchange’ (cf. Melchert 2015: 411-412 for this interpretation). Middle forms only appear in the *-ske/a-* derived stem *usneske/a-*.

Argument structure and relationship with voice:

When indicating a commercial transaction, the verbs *usniye/a^{-zi}* and *usneske/a^{-ta(ri)}* indicate a two-participants event involving an animate Agent (the seller) and an inanimate Theme (the entity sold). Notably, systematic lack of a Recipient participant further strengthens the interpretation of the verb as not profiling a completed commercial transaction, but only the event of ‘putting on sale’. As comparison between (474) and (475), active and *-ske/a-* derived middle forms of the verb equally occur in a transitive construction, with the two participants encoded as subject and direct object respectively. Similarly, when use in its non-commercial sense, the verb also occurs in a transitive construction involving an Agent and a Patient encoded as subject and direct object respectively, as the occurrence of the accusatives SAG.DU-*an* ‘head’ and MU^{HL.A}-*us* ‘years’ in (476) and (477) shows.

The base verb *usniye/a-^{zi}* inflects only in the active voice (see Kloekhorst 2008 *s.v.* and HEG *s.v.* for occurrences). Conversely, derived *-ske/a-* forms occur both in the active and in the middle voice. The interpretation of these forms is doubtful. According to Neu (1968b: 55), active and middle forms likewise mean ‘put up for sale’ and display the same syntax and semantics. However, as pointed out by Melchert (2015: 413-414), active *-ske/a-* forms in (476) and (477) can hardly refer to a commercial transaction, and rather have the meaning ‘pledge, balance’. If this interpretation is correct, then active and middle derived forms differ in meaning. Melchert (2017b: 478) argues that this difference in meaning is due to the middle inflection of *usneskatta*. Following Melchert, one can assume that with this predicate, the middle voice acts as a marker of indirect reflexivity (or indirect middle, cf. Kemmer 1993), events of selling notoriously being performed to the subject’s benefit. If this interpretation is correct, this is the only assured example of the middle voice used in isolation with this function, which is otherwise normally encoded by the particle =*za* (cf. Luraghi 2012). Note however that middle forms of *usneske/a-* in the meaning ‘put up for sale’ constitute a case of lexicalization of the middle voice at best, as they semantically differ in an unpredictable way from active forms, thus bearing no evidence for the indirect reflexive function being synchronically associated with the Hittite middle (cf. Melchert *forthc.b*: 5).

***wars-^{ta(ri)}* ‘lift up (intr.), be lifted, be(come) appeased’, *warsiye/a-^{zi}* ‘relieve (one’s spirit), be(come) appeased’**

Semantics and aspectual construal:

The verb *wars-^{ta(ri)}*, and its related stem *warsiye/a-^{zi}*, occurs both in the active and in the middle voice and shows a basic spatial meaning ‘lift up’, from which a related abstract meaning ‘refresh’ can be easily derived. This polysemy is based on the widespread conceptual metaphor GOOD/HAPPY IS UP (Lakoff & Johnson 2003: 15-16). The basic meaning ‘lift up’ is shown in example (478), which comes from a text that arguably describes the functioning of some levers (Kloekhorst 2008 *s.v.*). The meaning ‘refresh, appease’ is shown in example (479):

- (478) IM-*as=kan* ***warasta***
 clay.NOM=PTC lift.PRS.3SG.MID
 “(Dip the lower lever), and the clay will be lifted.” (KUB 33.62 ii 4, OH/MS)
- (479) *n[u]* ANA ^dIM ^{URU}*Hatti* EN=YA [*Ú* AN]A DINGIR^{MEŠ}
 CONN to Stormgod H. lord=1SG.POSS and to god(PL)

BELU^{MEŠ}=YA ZI-anza UL=pat *warsiyattari*
 lord(PL)=1SG.NOM soul.NOM NEG=FOC appease.PRS.3SG.MID

“And the soul of the Stormgod of Hatti, my lord, and of all the gods, my lords, it is not appeased.” (KUB 14.8 rev. 33-34, NH/NS)

Concerning the aspectual construal of the verb, with the basic meaning ‘lift up’ the event is possibly construed as dynamic, as the context in which (478) occurs suggests. Turning to the second meaning, as Neu (1968a: 191) remarks, it is difficult to decide whether the verb *wars-^{ta(ri)}* refers to a stative event ‘be satisfied’ or to a change-of-state event ‘refresh’, as both readings fit most of the contexts in which the verb occurs. As a result, it is hard to establish the default construal of this predicate. Consider example (479), in which *warsiyattari* is translated as stative by Singer (2002: 60), but in which a dynamic reading ‘does become appeased’ also fits the context.

A change-of-state construal is however possible in some occurrences, as in (480), in which the context suggests that the lord undergoes some sort of emotional change-of-state (note that even in this case, Singer’s 2002: 60 translations of the predicate as stative is partly unwarranted.)

(480) *nu ANA EN=ŠU ZI-anza warsiyazz[i]*
 CONN to lord=3SG.POSS soul.NOM appease.PRS.3SG

“(But since the servant has confessed his sin before his lord), his lord’s soul becomes appeased.” (KUB 14.8 rev. 28, NH/NS)

Similarly, when the predicate is used in a transitive construction, it clearly indicates a change-of-state event undergone by the object participant, as in (481).

(481) DINGIR^{LUM} *apezza ZI-an warsiasi*
 god DEM.ABL soul.ACC appease.PRS.2SG

“O God, you appease your spirit for that reason.” (KUB 22.57 obv. 17, NH/NS)

Finally, an inchoative construal is clearly at play when the verb occurs in the imperative, as in (482), but this is not particularly revealing of the default construal of the predicate, as the imperative mood notoriously coerces a dynamic inceptive reading of stative predicates.

(482) *nu ANA ^dIM ^{URU}Hatti EN=YA Û ANA DINGIR^{MEŠ}*
 CONN to Stormgod H. lord=1SG.POSS and to god(PL)

BELU^{MEŠ}=YA ZI-*anza* *namma warsiyaddu*

lord(PL)=1SG.NOM soul.NOM again appease.IMP.3SG

“And the soul of the Stormgod of Hatti, my lord, and of all the gods, my lords, shall become appeased again.” (KUB 14.8 rev. 16, NH/NS)

Summing up, the verb *wars*-^{tt(ri)} possibly shows two different aspectual construals, a stative and a dynamic one. Notably, in the case of the latter there is no compelling evidence from temporal adverbs to decide whether the verb profiles the internal temporal unfolding of the event, that is, whether the verb is construed as an achievement or as an accomplishment.

Etymology:

As Kloekhorst (2008 *s.v.*) discusses, the etymology of this verb largely depends on its semantic interpretation, which is unfortunately still unclear. Kloekhorst establish a base meaning ‘lift (oneself)’ and on this base, suggests a connection with the PIE root **wers-*, which appears in e.g. Skt. *várṣman-* ‘height’.

Interestingly, if the 3SG.PRES.MID *warasta* (OH/MS) belongs to this verb, this suggest that we are dealing with an original opposition between *wars*-^{tt(ri)} and active *warsiye/a*-^{zi}, similarly to what discussed for *hatt*-^{a(ri)} vs. *hazziye/a*-^{zi}, with the stem *wars-* transferred to the active and *warsiye/a-* to the middle in NS times.

Argument structure and relationship with voice:

The relationship of *wars*-^{tt(ri)} with voice is particularly difficult to describe, partly because most occurrences come from NS texts and most of them are from later copies of earlier texts.

In its concrete meaning ‘lift up (intr.)’, the verb *wars*-^{tt(ri)} indicates a one-participant event involving a moving Patient participant. When referring to human beings, it indicates an emotional event ‘be appeased’ involving an Experiencer (and a Stimulus).

In the first case, as exemplified in (478), the verb is used in an intransitive construction. By contrast, when referring to the Experiencer predicate ‘be appeased, refresh oneself’ the verb is used in various constructions, as it is typical of emotional predicates (cf. Luraghi 2010b). In the first place, the verb can be used intransitively. When this is the case, the subject of the verb can either be the noun *istananza-* (ZI) ‘soul’ as in (479), or a it can be a human Experiencer, in which case the Stimulus can be encoded in the dative, as in (483). There is no evidence for the use of clitic subjects with this predicate.

(483) *nu=wa=ssan katta kēdas UDU.ŠIR^{HL.A} warsiyahhut*
 CONN=QUOT=PTC down DEM.DAT.PL ram(PL) appease.IMP.2SG.MID
 “Be happy with these rams.” (KUB 9.32 obv. 22, NS)

Moreover, the verb can also be used in transitive constructions, with the noun *istananzan* as internal direct object, as in (481), in which case the subject is the human Experiencer, and the construction profiles a more active involvement of the subject in the event. In addition, the causative verb *warsiyanu-^{zi}* can be used transitively with a subject encoding a volitional Agent and the object encoding the Experiencer, as in (484).

(484) *EN=YA ZI-an UL warsianuwan harkun*
 lord=1SG.POSS soul.ACC NEG appease.PTCP.N/A.N have.PST.1SG
 “I have not lifted the spirit of my master.” (KUB 19.23 obv.7, NH/NS)

To sum up, the verb occurs in the following constructions:

- A. [N_{1(NOM)} *wars-^{ta(ri)}*] = [SEM_{1(PAT)} lifts up]
- B. [N_{1(NOM)} *warsiye/a-^{ta(ri)/-zi}*] = [SEM_{1(EXP)} is appeased]
- C. [N_{1(NOM)} N_{2(DAT)} *warsiye/a-^{ta(ri)}*] = [SEM_{1(EXP)} rejoices SEM_{2(STIM)}]
- D. [N_{1(NOM)} *istananzan- warsiye/a-^{ta(ri)}*] = [SEM_{1(EXP)} appeases (his own) soul]

The different meanings to which the verb is associated and the different constructions in which it synchronically occurs when inflecting in the active and in the middle voice reflect a specific diachronic change. The middle form *warasta* in (478) is used intransitively, and this possibly reflects the older situation. In principle, this form can be attributed either an anticausative ‘lifts up (intr.)’ or a passive ‘is lifted’ reading. Clearly, the possibility of interpreting this form as passive depends on the occurrence of an oppositional transitive active counterpart, for the existence of which there is little evidence (active forms of the stem *wars-* occur only once in the imperative *warsaddu* KUB 14.14 ii 14, which date to NH/NS, whereas middle forms are older, OH/MS). It is thus tempting to regard the verb as originally indicating a spontaneous motion event, i.e. as a *medium tantum* with anticausative meaning.

Later on, the stem *warsiye/a-* was created. One finds both active and middle forms of this stem coexisting alongside in NH texts and their relationship is more complex to describe. Active forms can be used transitively, as shown in e.g. (481). In this case, the verb indicates an induced event ‘lift

up (tr.)’, used in the metaphorical sense ‘relieve (one’s spirit)’. Active transitive occurrences stand in a functional opposition with middle intransitive forms such as (479). This alternation can either be interpreted as anticausative or passive. A passive reading is possibly supported by the agent ablative *memyanaz* ‘by (these) words’ occurring in (485).

(485) *mān=ma ANA DINGIR^{MEŠ} [ZI-anza] memyanaz warsiattari*
 if=PTC to god(PL) soul.NOM word.ABL appease.PRS.3SG.MID
 “But if the spirit of the gods is lifted by these words.” (KUB 16.77 ii 36, NS)

Whichever the interpretation, given that the stem *wars-* possibly indicated a spontaneous event, even if one interprets middle forms of *warsiye/a-* as passive, this function clearly arose out of the anticausative one once oppositional pairs were established when the active *-ye/a-* stem was created. In any case, voice opposition is partially blurred by the fact that active forms could also be used intransitively with the same meaning of middle forms, even within the same text, as comparison between (479) and (480) shows (cf. Neu 1968b: 81). In this respect, active forms of the verb show signs of labile use, as the pair (480) and (481) shows. The diachrony of the verb *wars-^{ta(ri)}* can be summarized as follows:

Stage I

wars-^{ta(ri)} spontaneous ‘lift up (intr.)’

Stage II

Anticausative alternation: *warsiye/a-^{ta(ri)}* ‘lift up (intr.)’ >> *warsiye/a-^{zi}* ‘lift up (tr.)’

Stage III

Passive alternation: *warsiye/a-^{zi}* ‘lift up (tr.)’ vs. *warsiye/a-^{ta(ri)}* ‘be lifted’

Lability: *warsiye/a-^{zi}* ‘lift up (tr.)’ vs. *warsiye/a-^{zi}* ‘lift up (intr.)’

wemiye/a-^{zi} ‘find’, *wemiye/a-^{ta(ri)}* ‘be found’

Semantics and aspectual construal:

The verb *wemiye/a^{-zi}*, of unclear etymology (Kloekhorst 2008 s.v.), occurs both in the active and in the middle voice and means ‘find, discover’ (see *HEG* for occurrences), as in examples (486) and (487):

(486) *takku* UDU.A.LAM *kuiski* ***wemiezzi***

if ram INDF.NOM find.PRS.3SG

“If someone finds a ram.” (KBo 6.2 ii 38, OH/OS)

(487) *n=at* ***wemiya[at]taru***

CONN=3SG.ACC.N find.PRS.3SG.MID

“(And the reason for which people die,) it should be found out!” (KUB 14.10 iv 19, NH/NS)

Even though there is no compelling evidence from the use of temporal adverbs, it is likely that the event denoted by *wemiye/a^{-zi}* is construed as punctual change-of-state event.

Argument structure and relationship with voice:

The verb *wemiye/a^{-zi}* encodes a two-participant change-of-state event involving an Agent, the discoverer, and a Patient, the entity discovered. Active forms of the verb are used in a transitive construction with the two participants encoded as subject and direct object respectively, as shown in (486), whereas middle forms are intransitive and display unaccusative syntax, as the occurrence of the subject pronoun =*at* in (487) demonstrates.

As comparison between (486) and (487) shows, middle forms of *wemiye/a^{-zi}* most likely indicate the passive counterpart of active transitive forms (Neu 1968b: 73). Even in absence of an overt agent phrase, the context in which (487) occurs strongly favors a passive interpretation, other non-passive intransitive meanings being incompatible with this passage.

***weriye/a^{-zi}* ‘call, name, summon’, *weriye/a^{-ttari}* ‘join’**

Semantics and aspectual construal:

The verb *weriye/a^{-zi}* occurs both in the active and in the middle voice. Active forms of the verb mostly mean ‘call, summon, name’ (see *HEG* W/Z: 496ff. for discussion), as in (488). In this case, the event denoted by *weriye/a^{-zi}* is likely construed as a cyclic achievement, similarly to what discussed for *halzai⁻ⁱ*. Evidence for this construal comes from (488), in which the verb refers to an action performed

during a ritual, so that the event is construed as brought to completion before other events in the performance of the ritual can take place.

- (488) *mahhan=ma=kan* ^{LÚ}NAR *ŠUMMI LUGAL* *weriyazi*
 when=PTC=PTC singer name king call.PRS.3SG
 “When the singer calls the name of the king.” (KUB 1.17 iv 17, OH/NS)

A similar construal is possibly at play with middle occurrences of the verb, which show the meaning ‘join’, as in (489):

- (489) *n=as* ANA É.GAL.KUR *anda weriyattat*
 CONN=3SG.NOM to in join.PST.3SG.MID
 “And he joined up with E.GAL.KUR.” (KUB 6.41+ 51, NH/NS)

Etymology:

The verb has been connected by Oettinger (1979: 344) with Gr. *eirō* ‘speak’. Finite forms of the verb clearly point towards a *-ie/o- present from a root *uerh₁-ie/o-, whereas the participial from *werant-* points towards a root formation. It is thus possible that in PAnat. a root aorist *uérh₁-t coexisted alongside a derived present *uerh₁-ie/o-, as in the case of *karp(iye/a)^{-zi}* (cf. Melchert 1997).

Argument structure and relationship with voice:

Active and middle forms of *weriye/a^{-zi}* show different syntax and semantics. Active forms of the verb with the meaning ‘summon’ indicate a two-participant event involving an Agent and a Theme, and consistently display transitive syntax, as in (488), with the two participants encoded as subject and direct object respectively.

By contrast, middle forms, systematically used with the preverb *anda*, always show the meaning ‘join’. Semantically, the event of joining can be classified as a spatial reciprocal event involving two Reciprocants, as discussed e.g. for *happ^{-zi}*. Middle forms of *weriye/a^{-zi}* are consistently used in a discontinuous reciprocal construction: one of the reciprocants is encoded as the intransitive subject, as evidenced by the use of the clitic subject in (489), whereas the second one is encoded as a dative adjunct, as shown in (490).

- (490) [*nu apē*]dani *antuhsi* *anda lē* *weriattati*
 CONN DEM.DAT man.DAT in NEG join.PRS.2SG.MID

“And do not make common cause with that person.” (KUB 6.41+ iii 61, NH/NS)

Based on comparison between (488) and (489), it seems that the difference between active and middle forms of the verb is partly lexicalized, as the meaning of middle forms cannot be synchronically derived from active forms.

Historically, a likely scenario to explain this situation is that middle forms originally were reflexive in meaning ‘call oneself, declare oneself’, and when used with a dative NP would mean ‘declare oneself to someone’, therefore ‘join up with someone’. Clearly, in this case the event is asymmetric, and reciprocal semantics is not associated with middle voice, but rather is ensued from common world knowledge once the predicate is specialized with the meaning ‘join someone’.

It should be observed that some active forms of the verb are difficult to interpret. A case in point is the form *wariyazi* in example (491), which is treated differently by González Salazar (1994: 167) and Kitchen & Lawrence (2012: 1053).

(491) LÚ.MEŠ SIPAD.GUD LÚ.MEŠ SIPAD.UDU LÚ.MEŠ.GIŠ ENGAR ANA LÚ^{MEŠ} URU Gasga
herdsman(PL) shepherd(PL) laborer(PL) to man(PL) G.
anda lē weriyanzi kuis=ma=smas anda weriyattari
in NEG join.PRS.3PL REL.NOM=PTC=3PL.DAT in join.PRS.3SG.MID
“The herdsmen, the shepherds, and field-laborers should not join the Gasga people.
Whoever joins them (they will seize him at the time of the offense).” (KUB 21.29 iii 44-
48, NH/NS, transl. González Salazar 1994: 167)

Kitchen & Lawrence (2012: 1053) translate *weriyattari* in the second sentence as transitive ‘anyone who recruits (herdsmen) for them’, which is however problematic. Clearly, their translation of *weriyattari* as transitive makes little sense. Not only the middle verb is never used transitively elsewhere, but also, if indeed the verb were transitive, one has to assume omission of the direct object in this case, which is highly unlikely given the well-known tendency of Hittite to avoid null direct objects (Luraghi 1990). It is therefore more reasonable to follow González Salazar (1994: 167) and translate the *anda weriyattari* as intransitive ‘who joins up with them’, consistently with other middle forms of the verb. Concerning *wariyanzi* in the first sentence, Kitchen & Lawrence (2012: 1053) treat it as transitive and translate it as ‘the herdsmen, the shepherds, and field-laborers one should not recruit for the Gasga people’, whereas González Salazar (1994: 167) interprets it as intransitive as well. Both interpretations are syntactically possible, and the ambiguity lies in the fact that the nouns are written with Sumerograms without phonetic complementation, so that they can be in principle

interpreted as underlying nominative or accusative case forms. On the one hand, treating the form as transitive is problematic, since transitive syntax of active *anda weriya-^{zi}* with the meaning ‘make join up’ is unattested elsewhere. On the other hand, if one treats the form as intransitive, which indeed fits the overall context better, this shows that middle forms with the meaning ‘join’, were partly transferred to active inflection, attesting to a spread of lability for active *weriye/a-^{zi}* ‘join (tr./intr.)’.

wess-^{ta} ‘wear’, wassiye/a-^{zi/ta(ri)} ‘dress (tr.), dress up (with =za)’

Semantics and aspectual construal:

The middle verb *wess-^{ta}* means ‘wear’ (see Eichner 1969 for a full semantic treatment, also *HEG* s.v.). The verb occurs in different constructions that lend themselves to different aspectual interpretations. The only readable OS attestation of the verb shown in (492):

- (492) *wēsanda=ma* *isharwantus* TÚG^{HI.A}-*us*
 wear.PRS.3PL.MID=PTC red.ACC.PL cloth.ACC.PL
putaliy[(a)]ntess=a
 be.lightly.dressed.PTCP.NOM.PL=CONJ
 “But they wear red clothes and are lightly dressed.” (KBo 17.1+i 24, OH/OS)

In example (492), the verb can be translated as ‘wear’ and is construed as a state (or perhaps better, as an *inactive action*), hence atelic. The atelic and durative reading of this verb is supported by the fact that it is coordinated with the participle *putaliy[(a)]ntes* (cf. Eichner 1969: 14), which is possibly based on the transitive telic verb *putaliye/a-^{zi}* ‘dress lightly, gird’ and has a stative meaning ‘be dressed lightly, be girded’ (Hoffner & Melchert 2008: 339, Frotscher 2013).

MH/MS occurrences of the verb pattern with the OS construal, as comparison between example (492) and (493) shows:

- (493) TÚG.NÍG.LÁM.^{HI.A}=*ma=smas* KÚŠ^E.SIR SIG₅-*TI hilammili*
 uniform(PL)=PTC=3PL.DAT shoe good belonging.to.the.courtyard
uēsanta
 wear.PRS.3PL.MID
 “They wear their good uniforms and shoes like gate-men.” (IBoT 1.36 ii 58, MH/MS)

Note that participle of this verb is basically stative and subject-oriented, meaning ‘dressed’, though an object-oriented reading is possible in a few cases (cf. Frotscher 2013: 246 ff.).

The verb also occurs in active forms based on the stems *wasse-* and *wassiye/a^{-zi}*. Active forms of the verb rather refer to a change-of-state event ‘dress someone’, as in example (494):

(494) *nu ANA 1 DUMU.NITA KUŠ MÁŠ.GAL wassiyanzi*
 CONN to 1 boy skin goat dress.PRS.3PL
 “And they put goat skin on the boy.” (KUB 9.31 ii 11, MH/NS)

Etymology:

The Hittite middle verb reflects PIE **wés-to* (Eichner 1969, Kloekhorst 2008 *s.v.*), which is reflected in CLuw. *wass-* ‘wear’, Skt. *váste* ‘be clothed’, GAv. *vastē* ‘be clothed’, Gr. *eítai* ‘wear’, Goth. *wasjan* ‘clothe’, and Lat. *vestis* ‘garment’ (see also Clackson 2007: 150). The verb also shows a stem *wassiye/a^{-zi}*, which predominantly inflects in the active voice, with sporadic middle occurrences. Connection of the latter with a PIE causative formation **wos-éye-* have been proposed (cf. Eichner 1969: 5-6), but most of them are difficult to explain in some respect (Kloekhorst 2008 for discussion). Therefore, Kloekhorst (2008) suggests treating the pair *wess^{-tta}* vs. *wassiye/a^{-zi}* as attesting to pattern similar to *hatt^{-a(ri)}* vs. *hazziye/a^{-zi}*, that can be explained according to inner-Hittite morphophonological rules.

Argument structure and relationship with voice:

The middle verb *wess^{-tta}* refers to a two-participant event involving an animate (mostly human, but animals are attested as well) Agent and an inanimate Theme that denotes pieces of clothing. The event is subject to different construals and can be involved in different constructions, as discussed at length by Eichner (1969; also Neu 1968a: 192-193).

In the first place, the verb can be used transitively, with the Agent and the Theme encoded as subject and direct object respectively, as in (492).⁶⁴ Alternatively, the verb can be used intransitively when it occurs without a definite referential direct object (cf. Neu 1968a: 192), as in example (495), in which the verb occurs with the particle *=za* and indicates a change of state:

⁶⁴ There is no reason to assume that the Theme participant encoded in the accusative case in (492) does not syntactically behave as a direct object. Therefore, the description in the *HEG s.v.* of these forms as displaying intransitive syntax is unwarranted.

(495) *nu=wa=za* [D]INGIR^{MEŠ}-*as* *wassiyahhahat*
 CONN=QUOT=REFL god.DAT.PL dress.PST.1SG.MID
 “And I dressed up for the gods.” (KUB 24.5+ rev. 15, NS)

Active forms of the verb refer to a three-participant event, whereby an Agent dresses a human Patient with clothes. This event can be variously construed. For instance, as shown in (494), the clothes can be encoded as an accusative direct object and the human participant as a dative oblique, in a construction meaning ‘put something on someone’. Alternatively, the animate participant can be encoded as the direct object, and the clothes as an oblique in the instrumental ‘dress someone with something’, as in (496):

(496) *n=us* TÚG-*it* *wassa[nzi]*
 CONN=3PL.ACC cloth.INST dress.PRS.3PL
 “They cover them (*sc.* the horses) with covers.” (KUB 29.40 ii 14. MH/MS)

Finally, active forms of the verb accompanied by the particle =*za* can be interpreted as reflexive counterparts of transitive forms such as (494) (see Boley 1993: 159-165). In this case, the Agent and the Patient human participants are coreferent and encoded as subject, whereas the clothing is encoded as an accusative direct object, as in example (497):

(497) *ta=za* TÚG *sipahan* *wassiyazzi*
 CONN=REFL cape.ACC wear.PRS.3SG
 “(The prince) puts on a cape.” (KUB 20.80 iii 13, OH/NS)

The argument structure constructions in which the two verbs occur can be sketched as follows. Notably, in the construction D, the accusative encoding the clothes can also be left out, as in (495).

- A. [N_{1(NOM)} N_{2(ACC)} *wess*-^{*ta(ri)*}] = [SEM₁ wears SEM_{2.CLOTH}]
- B. [N_{1(NOM)} N_{2(ACC)} N_{3(DAT)} *wessiye/a*-^{*zi*}] = [SEM₁ puts SEM_{2.CLOTH} on SEM₃]
- C. [N_{1(NOM)} N_{2(INST)} N_{3(ACC)} *wessiye/a*-^{*zi*}] = [SEM₁ dresses SEM₂ with SEM_{3.CLOTH}]
- D. [=za N_{1(NOM)} N_{2(ACC)} *wessiye/a*-^{*zi/ta(ri)*}] = [SEM₁ puts SEM_{2.CLOTH} on himself]

The relationship of the verb *wess*-^{*ta*} with voice is not easy to disentangle. As comparison between examples (492) and (495) shows, active and middle forms show different syntax and semantics.

Middle forms of the verb based on the stem *wess-^{ta}* refer to a two-participant event ‘wear something’ and consistently display a transitory state default aspectual construal. By contrast, active forms of the verb based on the stem *wessiye/a-^{zi}* mostly refer to a change-of-state event, and refer to a causative three-participant event ‘dress someone with something, put something on somebody’. Synchronically, one is tempted to describe the alternation between (492) and (495) as instantiating anticausative alternation, with middle forms encoding the (stative) plain event and active forms the causative change-of-state counterpart. In addition, when the verb occurs with the particle =*za* it acquires a change-of-state reflexive interpretation ‘put something on oneself, dress up’. As comparison between (495) and (497) illustrate, active and middle forms of the stem *wessiye/a-^{zi}* freely alternate in this context. The two patterns can be synchronically described as follows:

- A. *wess-^{ta(ri)}* ‘wear’ vs. *wessiye/a-^{zi}* ‘dress someone with something, put something on somebody’
- B. *wessiye/a-^{zi}* ‘dress someone with something’ vs. =*za wessiye/a-^{zi/ta(ri)}* ‘put something on oneself’

However, if one takes a closer look at the diachrony of this verb, the picture becomes more complicated. OH predominantly attests to middle inflection, with only one possible active forms *wa-as-se-e[z-zi]* (KBo 20.18 + rev. 5). Active and middle forms coexist alongside in post-OH. According to Boley (1984: 60-62), middle inflection is not attested in NH for this verb (the only putative occurrence is *westa* in Alalah 454 iv 10 can be differently explained). Middles with stative meaning ‘wear’ are increasingly substituted by the stative construction of *hark-* with the participle *wesant-*, which in turn tend to disappear in favor of *-ske/a-* forms in LLH (similarly Melchert forthc.b).

Morphologically, stative middle forms are based the stem *wess-*, whereas the active paradigm shows a variety of stems, including *wasse/a-*, that is quantitative rather marginal, and *wassiye/a-* (Kloekhorst 2008 s.v.). Note that one also finds middle forms based on the stem *wassiye/a-*, but these only occur in NS and are confined to the reflexive construction ‘put something on oneself’ with the particle =*za*. Since the active paradigm is derived from the middle one, it is inaccurate to describe this verb as synchronically instantiating voice alternation. Rather, it is most likely that deponent middle *wess-^{ta}* with stative meaning and transitive syntax was inherited as such from PIE (Grestenberger 2016: 132-134), as also supported by the occurrence of cognates of the verb in the middle voice in other ancient IE languages (Clackson 2007: 150), and that active inflection reflects an inner-Hittite development, with the creation of a morphologically more complex causative counterpart. The development of new causatives of the PIE *medium tantum* **wés-to* is also attested

elsewhere in the IE family. A case in point is Ancient Greek, in which out of the inherited middle intransitive stative verb *eítai* ‘wear’ a new causative active counterpart *hénnumi*, *hénnuō* ‘put something on somebody’ was created (cf. Eichner 1969: 11, Beekes 2010 s. *hénnumi*).

***zahh-*^{i/ta(ri)} ‘hit’, *zahh-*^{ta(ri)} ‘be hit, hit each other’**

Semantics and aspectual construal:

The active verb *zahh-i* means ‘hit’, as in example (498):

- (498) *nu ZAG sekkantet ZI-it anda lē kuiski zāhi*
 CONN border know.PTCP.INST mind.INST in NEG INDF.NOM hit.PRS.3SG
 “No one shall knowingly violate (lit. hit) the border.” (KUB 26.12 ii 16, NH/NS, trans. Miller 2013: 286)

Similarly to other verbs of exerting physical strength such as *pars(i)-^{a(ri)}*, the event encoded by *zahh-i* is most likely construed as a cyclic achievement.

Middle forms of the verb partly attest to a different aspectual construal. Compare example (499).

- (499) [*takku LÚ^{MEŠ} zahhand]a t[a 1-as aki]*
 if man(PL) hit.PRS.3PL.MID CONN one.NOM die.PRS.3SG
 “If two men fight each other and one dies.” (KUB 29.32+ iii 27, OH/OS)

In (499), the from middle [*zahhand]a* encodes an event in which two entities hit each other, and the event is construed as an alternating sequence of ‘hitting’ events, i.e. as an undirected activity. This alternative construal is based on the cognitive operation of structural schematization (cf. Croft 2012: 94).

Etymology:

The verb most likely reflects a PIE from **tióh₂-ei*, which is also attested in a number of Greek nouns, such as *sóma* ‘corpse’, *séma* ‘sign’, and *sítos* ‘grain’.

Argument structure and relationship with voice:

The verb *zahh-ⁱ* occurs both in the active and in the middle voice. The event frame associated with this verb includes a volitional Agent that physically affects a Patient. Active forms of the verb are used in a transitive construction, with the two participants encoded as subject and direct object respectively, as in (498). Note that the verb shows active forms belonging to both the *mi-* and the *hi-* inflection, but Kloekhorst (2008 *s.v.*) convincingly argues that *hi-* inflection should be considered original. With this verb, the middle voice operates as a valency decreasing device. Middle forms display intransitive syntax and have at least two different readings. On the one hand, as exemplified in (499), middle forms can have a reciprocal interpretation. In this case, the two participants involved are both the Agent and the Patient of the hitting event, and are encoded as a plural subject. On the other hand, middle forms can have a passive interpretation, as in (500). In this case, the Patient participant is encoded as subject, and the agent participant can either be left unexpressed or it can be encoded as an oblique, as the occurrence of the prepositional phrase TA ^dU ‘by the Stormgod’ in (500) shows.⁶⁵

(500) KARAS^{HI.A}=*kan* TA ^dU UL *zahtari*
 troop(PL)=PTC by Stormgod NEG hit.PRS.3SG.MID
 “The troops are not hit by the Stormgod.” (KUB 5.1 iv 72, NH/NS)

Notably, middle intransitive forms of *zahh-ⁱ* display unaccusative syntax, as the occurrence of the clitic subject pronoun =*as* in (501) shows:

(501) [*n*]=*as*=*kan* TA ^dU UL *zahtari*
 CONN=3SG.NOM=PTC by Stormgod NEG hit.PRS.3SG.MID
 “He is not hit by the Stormgod.” (KUB 50.79 rev. 4, NS)

The reciprocal function of the middle voice is attested since OH/OS (to the from *zahhanda* in (499) one can also possibly add the from *za-ah-hi-is-ka-an-ta* in a fragmentary context in KBo 17.36 ii 16, OH/OS), whereas evidence for passive usage comes from NH/NS texts only. However, given the overall extreme scarcity of attestations of middle forms of this verb, this distribution cannot be used as a basis for establishing the relative chronology of the two functions. In diachronic terms, the two functions are evidently not related, and they represent different possible functions of the middle voice. Unsurprisingly, that middle forms of *zahh-ⁱ* with passive function come from NH texts complies with

⁶⁵ On the use of the Sumerogram TA as an abbreviation of Akkadian *IS^TU* see Neu (1968a: 203 fn. 4).

a broader tendency of the passive function to be increasingly expressed by the middle voice in NH (Melchert forthc.b).

***zaluknu*^{-zi} ‘postpone, delay (tr.)’, *zaluknu*^{-tari} ‘be delayed, be(come) late’**

Semantics and aspectual construal:

The active verb *zaluknu*^{-zi} means ‘postpone, delay’, as in example (502). Semantically, the verb contrasts with its antonymous *nu(n)tarnu*^{-zi} ‘hurry, hasten’ (CHD s. *nu(n)tarnu*^{-zi}).

- (502) [ANA ^dUTU-SI=*kan* LUG]AL-*iznani asatar kuit zalukanumen*
to my.majesty=PTC kingship.DAT sit.VN because delay.PST.1PL
“Because we have postponed the accession to kingship for His majesty.” (KUB 18.36 12, NH/NS)

The aspectual construal of this verb is particularly tricky to capture. The active verb refers to a causative change-of-state event, i.e. ‘make long’ > ‘postpone’, and can be thought of as profiling an irreversible achievement, as in (502).

When the verb inflects in the middle voice, it is treated by most scholars as profiling the resulting state only, as in (503). Clearly, this interpretation partly depends on the function that one assigns to the middle forms of this verb, as I discuss below.

- (503) *māhhann=a* GU₄^{HL.A} *zalaknuntar[i]*
when=CONJ bull(PL) delay.PRS.3PL.MID
“‘And when the cattle are late.’” (KUB 13.1+ iv 37-39, MH/MS)

Etymology:

Based on comparison with *daluknu*- ‘lengthen’, Kloekhorst (2008 s.v.), following Oettinger (1979: 249), suggest that *zaluknu*- is a causative formation reflecting the zero grade of the root **dleugh^h*-, related to Lat. *longus*, Gr. *dolikhós* etc. (cf. Kloekhorst 2008 s. **taluki*-).

Argument structure and relationship with voice:

The verb *zaluknu*^{-zi} occurs both in the active and in the middle voice. The active verb indicates a change-of-state two participant event that involves an Agent and a Patient. Active forms of the verb occur in a transitive construction with the two participants encoded as subject and direct object respectively, as in (502).. By contrast, middle forms of the verb are used intransitively, as in (503).

There is no evidence for the use with clitic subject. The interpretation of the semantic roles associated with the subject of intransitive middle forms depends on one's understanding of the meaning of these forms. In principle, middle forms of this verb can be interpreted as either encoding a spontaneous event 'be(come) late', e.g. as anticausative, or as passive 'be delayed' counterparts to the active forms, both interpretations fitting equally well the passage in (503).

Comparison with other forms based on the same root can contribute to shedding light on the function of middle forms of *zaluknu*^{-zi}. The verb is based on the adjective **zaluk-*, and is paired by the fientive intransitive change-of-state verb *zalukēss*^{-zi} 'be(come) late', in a bipartite causative/fientive system common to many adjectival roots (see Luraghi 2012: 7). With reference to the latter, it is worth observing that middle forms of *zaluknu*^{-zi} are extremely close in meaning to active forms of *zalukēss*^{-zi}. Compare (503) and (504), with very similar translations.

(504) [ANA ^dUTU-S]I=*kan kuit* LUGAL-*uiznani a[sātar duwān] parā*
to my.majesty because kingship.DAT sit.VN until.now
zalukista

be(come).late.PST.3SG

“As for the fact that for his Majesty the accession to kingship became delayed until now.”

(KUB 6.9+ ii 13, NS)

The difference between the two might lie in the presence of an external agent into the semantic valency of the event. Tentatively, whereas *zalukēss*^{-zi} refers to a spontaneous one-participant change-of-state event, middle forms of *zaluknu*^{-zi} are possibly passive, i.e. they preserve the Causer in the valency frame, which is however demoted and not overtly expressed. Therefore, example (503) could be better translated, following Laroche (1950), 'the bulls are delayed (by someone)'. Unfortunately, oblique agents do not occur with this verb, so that this interpretation remains speculative. Another possible difference might lie in the aspectual construal of the two verbal forms. Whereas forms of *zalukēss*^{-zi} refer to a telic change-of-state event, middle forms of *zaluknu*^{-zi}, being passive, can also be easily interpreted as stative.

zinni-/zinn^{-zi} 'stop (tr.), destroy', *zinna*^{-ta(ri)} 'finish (intr.)'

Semantics and aspectual construal:

The active verb *zinni-^{zi}* occurs both in the active and in the middle voice and shows a basic meaning ‘stop, destroy’. Its default aspectual construal is difficult to capture, owing to the fact that it occurs in different constructions.

Middle forms of the verb profile an incremental accomplishment. In particular, these indicate either the depletion of a given quantity of countable entities - be it either food supplies, as in (505), or petitioners at the king’s palace, as in (506) - or the natural termination of an event unfolding over time, as in (507).

(505) *kāsa=mu=kan ANA DUMU^{MEŠ} tūmati[s] zinnattat*
 here=1SG.DAT=PTC to son(PL) t.NOM finish.PST.3SG.MID
 “Look, my *tumati-* for the princes is just run out.” (HKM 80 obv. 8, MH/MS)

(506) *mān sarkantes=ma zinnantari*
 when petitioner.NOM.PL=PTC finish.PRS.3PL.MID
 “When the petitioners are finished (i.e. when there are no more petitioners).” (IBoT 1.36 iii 51, MH/MS)

(507) [*kui*]tman=ma gimmanza nāwi zinnat[tat]
 until=PTC winter.NOM not.yet finish.PRS.3SG.MID
 “And before winter is over.” (KBo 2.5 iv 11, NH/NS)

The active verb can be used with the meaning ‘bring something to the end’, as in example (508).

(508) *maniyahinn=a tuk zinnit*
 administration.ACC=CONJ 2SG.DAT finish.PST.3SG
 “He brought the administration to completion for you.” (KBo 3-21 ii 1, OH/NS)

In (508), the verb is likely to profile an incremental accomplishment, with the Patient entity incrementally brought to its final state. Notably, the verb is not associated with physical consumption but rather to completion of events, and occurrences with accusative direct objects are quite limited (cf. *HEG* for data).

The active verb is more commonly used with an infinitive that can optionally take an accusative direct object of its own to indicate (Hoffner & Melchert 2008: 335), as in (509):

(509) *mahhan=ma TÚG-an sārawanzi zinnanzi*
 when=PTC dress.ACC weave.INF finish.PRS.3PL

“(The *katri*-women weave a dress), when they finish to weave the dress (they weave red wool on it.)” (KBo 5.1 iii 55, MH/NS)

(510) *mahhan=ma=za ad[anna] zinnanzi*

when=PTC=REFL eat.INF finish.PRS.3PL

“When they finish eating, (they ask for drinks).” (KUB 27.66 ii 16, NH)

In this case, similarly to what Croft (2012: 108) discusses for the Eng. *finish VERB-ing* construction, the construction [V_{INF} *zinni-^{zi}*] profiles the completion phase of the event denoted by the infinitive, as in (509), in which the infinitive *sārawanzi* profiles an incremental accomplishment. Moreover, in case of atelic base verbs, as in (510) where the verb *ed-^{zi}* ‘eat’ without direct object is likely to refer to an undirected activity (cf. Luraghi 1990: 37-38), the construction adds a termination phase to the event (for similar remarks see Cotticelli-Kurras 2015: 56, 59, where she defines the construction with *zinni-^{zi}* plus infinitive as expressing an ‘egression phase’, adopting the terminology of Engerer 2014).

In addition, the active verb can also be used intransitively, with the meaning ‘be done with something, have finished’, as in (511).

(511) *mān zinniz[i=ma]*

when finish.PRS.3SG=PTC

“(The priest of the Stormgod kneels before the King and conducts the ritual). When he finishes (he kneels before the King).” (KBo 20.10 + i 5, OH/OS)

In this case the verb still profiles an incremental accomplishment, but it only profiles the end of the involvement of the agent in a certain event, without the involvement of a Patient undergoing an incremental change of state.

Etymology:

According to Kloekhorst (2008 *s.v.*), who rejects Oettinger’s (1979: 152) etymology as **sineh₁-* both on formal and semantic grounds, the verb should be tracked back to a root **tineh₁-*. In his view, the root **tineh₁-* is a nasal-infixed present **ti-ne-h₁-*, from the verb **tieh₁-*, reflected in *zē-* ‘cook’ (see further under *zē-*). See *HEG* for a complete discussion of alternative views.

Argument structure and relationship with voice:

The verb *zinni-^{zi}* occurs both in the active and in the middle voice. Active forms of *zinni-^{zi}* refer to a two-participant change-of-state event in which a causing Agent causes the depletion or the

completion of a Patient. Syntactically, the active verb can either be used transitively with the two roles encoded as subject and direct object respectively, as in (508), or intransitively, in which case it displays unergative syntax (Garrett 1996: 96), as lack of a clitic subject pronoun in (511) shows. In addition, active forms also occur in a construction with the infinitive, as in (509).

By contrast, middle forms always occur in an intransitive construction with the Patient as subject, as in (505) to (507). These forms always occur with nominal subjects (cf. *HEG s.v.*), so that there is no evidence for their behavior with clitic subject pronouns.

Synchronically, the alternation between active transitive *zinn-^{zi}* ‘bring to an end’ and middle intransitive *zinna-^{ttari}* ‘end’ offers a nice example of anticausative alternation, with the active verb encoding the induced event and the middle verb the plain counterpart (Luraghi 2012: 17). That middle forms refer to a spontaneous event is particularly clear from occurrences such as (507), in which the context rules out a passive interpretation, as there cannot possibly be an external causer of the event.

The diachronic development of this verb is also of interest. As Kloekhorst (2008 *s.v.*) discusses, the verb originated as a causative nasal-infixed present from an intransitive root **tieh₁-* ‘end’ > **ti-ne-h₁-* ‘cause to end’. Therefore, it is likely that active inflection for *zinn-* is older, as its occurrence in OS shows, and at the onset, valency alternation with this verb was based on causative infixation (Luraghi 2012). However, once the plain verb **tieh₁-* developed the specific meaning ‘be cooked, cook’, the pattern of valency alternation became opaque, and middle forms of the verb were introduced to supply for a more transparent intransitive plain counterpart of active *zinn-^{zi}*, on the model of other verbs involving voice alternation as an anticausative marker. The fact that middle forms are attested from MS times onwards may be taken as evidence for this chronology, but occurrences are admittedly quite scanty to make this argument compelling. This diachronic process can be summarized as follows.

Stage I

Plain **tieh₁-* ‘end (intr.)’ > Induced **ti-ne-h₁-* ‘cause to end (tr.)’

Stage II

zē-^{ari} ‘cook (intr.)’ vs. *zinn-^{zi}* ‘finish (tr.)’

Stage III

zē-^{ari} ‘cook (intr.)’ vs. induced *zinn-^{zi}* ‘finish (tr.)’ > plain *zinna-^{ttari}* ‘finish (intr.)’

5.1.4. Addenda: unclear verbs

tiskattari, daliskantari

The NH/NS manuscript KBo 4.14 (cf. F. Fuscagni (ed.), hethiter.net/: CTH 123) attests to two middle forms of difficult interpretation: *da-lis-kan-ta-ri* (KBo 4.14 i 58) and *ti-is-kat-ta-ri* (KBo 4.14 i 59). Both forms occur in this text only, and they appear in a too much fragmentary context to provide any reliable interpretation of their meaning and their syntax (Neu 1968a: 163, 174 fn. 1). The former is a *-ske/a-* derivative from the *activum tantum* verb *dāla-ⁱ* ‘let, leave’. Note that for this verb active *-ske/a-* derivatives are attested, as e.g. *da-li-is-kán-zi* (KUB 31.101 obv. 12). The latter is also a *-ske/a-* derivative from, and can in principle belong to either *dai-ⁱ* ‘put’ or *tiye/a-^{zi}* ‘step’.

dudduskattari

The third person singular from [*du-u*]d-*du-us-kat-ta-ri* occurs only once in a NH/NS manuscript (KUB 15.29 i 12, de Roos 2007: 196). This form is most likely a *-ske/a-* derivative of the verb *du(wa)ddu-^{mi}* ‘be merciful, treat with mercy’, in turn derived from the noun *duddu-* ‘mercy’ (cf. Imparati 1977: 96-101, Oettinger 1979: 230-233). The basic verb *du(wa)ddu-^{mi}* and its *-ske/a-* derivative occur both in the active and in the middle voice (see *HEG s.v.* for semantics and attestations). Middle forms of the base verb all occur in too much fragmentary contexts to allow a reliable interpretation (cf. Neu 1968a: 182). Similarly, the only *-ske/a-* middle form is preserved in a fragmentary manuscript in which only the verb can be safely read. Clearly, de Roos’ (2007: 197) translation of *dudduskattari* as ‘guided favorably’ must be taken as purely tentative, in absence of a wider context.

mazzallassaduvari

The middle form *ma-az-za-al-la-sa-du-wa-ri* occurs once in a NH/NS manuscript (KUB 21.29 iv 13). Even though the verb is attested in a Hittite manuscript, the ending clearly points to a Luwian origin of the form (Neu 1968a: 115). The syntax and semantics of this *hapax* is difficult to assess, and Neu’s translation as ‘tolerate’ should be regarded as tentative.

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Appendix: Occurrences of middle verbs in Hittite original texts

This appendix features the exhaustive list of middle forms attested in original texts on which the analysis carried out in this work is based. Forms are given in narrow transliteration. I also indicate whether individual forms co-occur with sentence particles, local adverbs, and/or the particle =za. For consistency's sake, lemmas are quoted as they appear in Chap. 5, and they are arranged alphabetically. For verbs that have both active and middle forms, only the latter are counted and listed.

āk-/akk-ⁱ, akkiske/a-^{ta(ri)/zi} ‘die’

Token frequency: 1 (MS), 19 (NS)

MS

PRS.3PL

[ak-ka-]an-da-ri (HKM 80 l. ed. 3-4)

NS

PRS.3SG

ak-ki-is-ke-et-ta-ri (KUB 14.12 obv.5), ak-ki-is-ke-et-ta-ri (6); =kan a[k-k]i-is-ke-et-ta-ri (KUB 14.8 obv. 30), [a]k-ki-is-ke-et-ta-r[i] (46), ak-ki-is-ke-et-ta-ri (rev. 38), ak-ki-is-ke-et-t[a]-r[i] (41); [ak-ki-i]s-ke-et-ta-ri (KUB 14.11 i 23); ak-ki-is-ke-et-ta-ri (KUB 14.10+ i 12), ak-ki-is-ke-et-ta-ri (13), ak-ki-is-ke-et-ta-ri (iv 17); [ak-k]i-is-ke-et-ta-ri (KUB 26.86 iii 1); a[k]-kis-ke-et-ta-ri (KUB 14.13+ i 50), ak-kis-ke-et-ta-ri (iv 19), ak-ki-is-ke-et-ta-a-ri (50)

PST.3SG

ak-ke-es-ki-it-ta-at (KBo 16.15 8); [ak-ki-is-ke-et-ta-at] (KUB 14.12 obv. 3); a[k-ki-is-ke-et-ta-at] (KUB 14.8 obv. 11-12); ak-ki-is-ke-ta-at (KUB 14.14 i 9)

PST.3PL

ak-ki-i[s-ka-an-ta-at] (KUB 14.12 obv. 4); ak-ki-i[s-ka-ant-ta-at] (KUB 14.8 obv. 6-7)

***ar-^{ta(ri)}* ‘stand’**

Token frequency: 12 (OS), 38 (MS), 64 (NS)

OS

PRS.1SG

ar-ha-ri (KBo 17.1+ i 7)

PRS.3SG

ar-ta-ri (KBo 17.3+ iii 35); [*ar-ta*] (KBo 17.15 rev. 13), *ar-ta* (14), *ar-ta* (15), *ar-ta* (24); *ar-ta* (KBo 25.69 rev. 4); *ar-ta* (KBo 3.34 ii 36)

PRS.3PL

[*a-r*]*a-an-*[*-r*]*i* (KBo 3.34 ii 21); [*a*]-*ra-an-da-ri* (KBo 17.6 ii 15); *a-ra-an-da* (KBo 17.11+ i 6); *a-ra-an-da* (KBo 20.23 rev. 4)

MS

PRS.3SG

ar-ta (IBoT 1.36 i 18), *ar-ta* (19), *ar-ta-ri* (35), *kat-ta-an ar-ta* (76), [*ar-ta*] (ii 10), *ar-ta* (iii 12), *ar-ta* (31), *ar-ta* (iv 19), *ar-ta* (21), *sa-ra-a ar-ta-ri* (KBo 16.97 + KBo 40.48 rev. 3); *ar-ta-ri* (KUB 31.100 i 7)

PRS.1PL

EGIR-*an ar-wa-as-ta* (KUB 17.21 iv 5); [*a*]*r-wa-as-ta* (KBo 16.27 ii 3)

PRS.3PL

a-ra-an-ta-ri (HKM 36 obv. 4); *a-ra-an-ta-ri* (IBoT 1.36 i 12), *an-da a-ra-an-ta* (16), *a-ra-an-ta* (75), *a-ra-an-[ta]* (ii 2), *a-ra-an-ta* (3), *a-ra-[an-ta]* (9), *a-ra-an-ta* (iii 8), *a-ra-an-ta* (13), *a-ra-an-ta* (15), *a-ra-an-ta-ri* (32); *a-ra-an-ta* (KBo 15.10 ii 75); [*a-r*]*a-an-*

ta-ri (KUB 29.49 iv 2), *a-ra-an-da-ri* (44), *a-ra-an-ta-ri* (48); [*a-ra-an-da-ri*] (KUB 29.50 i 39), *a-r[a-an-da-ri]* (iv 37); *a-ra-an-da-[ri]* (KUB 29.51 iv 6)

IMP.2SG

ar-hu-ut (KUB 31.105 8)

IMP.2PL

[*a*]*r-du-ma-at* (KBo 17.21 ii 3); [*a*]*r-du-ma-at* (KBo 8.35 i 27); *ar-du-ma-at* (KUB 17.21 ii 9); *ar-du-ma-at* (KUB 29.44+ i 11)

PST.3SG

kat-ta-an ar-ta-at (IBoT 1.36 ii 20)

PST.3PL

a-ra-an-ta-at (KBo 50.4 obv. 7)

NS

PRS.1SG

[(E)]*GIR-an ar-ha-ha-ri* (KBo 4.8 iii 7); [*an*]-*da ar-ha-ha-r[i]* (KUB 31.68 rev. 50); *ar-ha-ha-ri* (KBo 16.98 ii 16)

PRS.2SG

[*ar-t*]*a-ti* (KUB 6.44+ iv 27); *ar-ta-ti* (KUB 57.8 rev. 18); *ar-ta-ti* (KUB 15.19 obv. 6); *ar-ta-ti* (KBo 19.43+ ii 10-11); *ar-ta-ti* (KBo 5.13 ii 7)

PRS.3SG

[*ar-t*]*a-ri* (KUB 15.17 i 16); *a-ra-ah-za ar-ta* (KUB 25.23 iv 47); *ar-ta-ri* (KUB 31.73+ iii 7), *ar-ta-r[(i)]* (14), *ar-ta-r[(i)]* (20); *ar-ta-r[i]* (KBo 11.1 obv. 8), *ar-ta-ri* (KUB 15.6 i 18); *ar-ta-ri* (KUB 31.77 iii 5); *ar-ta-ri* (KUB 14.4 ii 13), *ar-ta-ri* (18), *ar-ta-ri* (iii 18); *ar-ta-ri* (KUB 21.29 ii 10); *ar-ta-ri* (KUB 25.23 i 13); *ar-ta-ri* (KUB 60.97 i 11); *ar-ta-ri* (KBo 4.4 ii 45); *ar-ta-ri* (KUB 60.97 i 9); *ar-ta-ri* (KUB 21.42 iii 26); *ar-ta-ri* (KUB 25.23 l.ed. 1); *ar-ta-ri* (KUB 42.100 i 9), *GUB-ri* (iv 21); *GUB-ri* (KUB 48.118 14); *ar-ta-ri* (KUB 7.24+ i 3); *pe-ra-an ar-ta-ri* (KUB 26.45 rev. 27); *sa-ra-a ar-ta-ri* (KBo 4.8

ii 13); *se-er ar-ta-ri* (KBo 11.1 obv. 6); *ar-ta-ri* (KUB 26.43 obv. 27); *ar-ta-ri* (Bo 86/299 iii 12), *ar-ta-ri* (22), *ar-ta-ri* (23), *ar-ta-ri* (30)

PRS.3PL

a-ra-an-ta-ri (KUB 26.89 12); *a-ra-an-ta-ri* (KUB 5.6 iii 21)

PST.1SG

ar-ha-ha-at (KUB 26.1 iii 30), [(*a-ar-ha-h*)]*a-at* (KBo 4.2 iv 38-39)

PST.3SG

an-da ar-ta-at (KUB 1.1 iii 7); *ar-ta-a[t]* (KUB 19.11 i 13); *ar-ta-at* (KUB 15.5 + ii 39); *ar-ta-at* (KUB 21.1 iii 25); *ar-ta-at* (KUB 42.100 iv 14); *kat-ta-an ar-ta-at* (KUB 21.17+ i 12); *se-er ar-ta-at* (KBo 11.1 obv. 7); *se-ir ar-[ta-at]* (KUB 14.16 i 15)

PST.3PL

a-ra-an-[ta-at] (KBo 5.8 i 43), *a-ra-an-ta-at* (iii 14); *a-ra-an-a-at* (KUB 21.38 rev. 8); *a-ra-an-ta-at* (KBo 47.239 iv 13)

IMP.1SG

ar-ha ar-ha-ha-ru (KBo 4.14 iii 6)

IMP.2SG

[(*ar-hu-ut*)] (FHL 57+ iii 25); [*a*]*r-hu-u[t]* (KBo 5.4 i 11), [*ar-hu-ut*] (i 19), *ar-hu-ut* (i 20); *a-ar-h[u-ut]* (KUB 6.44+ iv 27); *a-ar-hu-ut* (KBo 5.9 ii 18); *a-ar-hu-ut* (KBo 5.13 ii 8); *ar-hu-ut* (KUB 21.29 iii 10); *ar-hu-ut* (KUB 54.1 ii 1); *ar-hu-ut* (KBo 19.43+ i 32); *ar-hu-ut* (KUB 21.1 ii 67); *ar-hu-ut* (KBo 5.13 iii 10)

IMP.3SG

ar-ta-ru (KUB 14.3 iii 14)

IMP.3PL

[(*a-ra-a*)]*n-da-ru* (KBo 22.39 iii 6); *a-ar-an-ta-ru* (KBo 4.12 rev. 2); *a-ra-an-da-ru* (KUB 26.43+ rev. 21)

***ariyeske/a-^{zi}* ‘determine by oracle’, *ariyeske/a-^{ta(ri)}* ‘be determined by oracle’**

Token frequency: 3 (NS)

NS

PRS.3SG

a-ri-es-kat-ta-ri (KUB 5.6 ii 37), *a-re-es-kat-ta-ri* (67)

PRS.3PL

a-re-es-kan-ta-ri (KUB 5.6 ii 44)

***ark-^{a(ri)i}* ‘mount’**

Token frequency: 2 (OS)

OS

PRS.3SG

ar-kat-ta (KBo 22.2 obv. 9), [*ar-k*]at-ta (10)

***aruwae-^{zi}* ‘bow down, prostrate oneself’**

Token frequency: 1 (MS)

MS

PST.1SG

=*as-ta a-ar-wa-ah-ha-at* (HKM 73 rev. 29)

asās-/ases-ⁱ, aseske/a-^{zi} ‘settle (tr.)’, aseske/a-^{tta(ri)} ‘be settled’

Token frequency: 1 (NS)

NS

PST.3SG

=za a-se-es-kat-ta-at (KBo 14.19 ii 25)

asiwantēsske/a-^{tta(ri)} ‘become poor’

Token frequency: 1 (NS)

NS

IPFV.PRS.3PL

a-si-wa-an-te-es-kan-ta-ri (KBo 4.14 ii 52)

āss-^{zi} ‘remain’

Token frequency: 2 (NS)

NS

PRS.3SG

a-sa-at-ta (KUB 15.6 ii 8; fragmentary context, the interpretation is not certain, see Neu 1968a: 19)

PST.3SG

=*kan a-as-ta-at* (KUB 22.70 obv. 18)

***as(sa)nu-^{zi}* ‘take care of, be done with, deliver’, *as(sa)nu-^{ttu(ri)}* ‘be taken care of’**

Token frequency: 8 (MS), 1 (NS)

MS

PRS.3SG

=*kan [as-nu-ut-t]a-ri* (KUB 29.44+ iii 25) , [=kan *as-nu-ta-ri*] (34)

PRS.3PL

=*kan [as-nu-wa-an-ta-ri]* (KUB 29.44+ ii 1), =*kan as-nu-[wa]-an-ta-[ri]* (19), [=kan *as-nu-wa-an-ta-ri*] (31), [=kan *as-nu-wa-an-ta-ri*] (45), =*kan as-nu-wa-an-ta-ri* (iii 15); =*kan as-nu-wa-an-ta-ri* (KUB 29.40 ii 7)

NS

PRS.3SG

as-sa-nu-ut-ta-ri (KBo 9.96 ii 3)

***au-ⁱ/u-*, *uske/a-^{zi}* ‘see’, *u-^{ttu(ri)}* ‘be seen’, *uske/a-^{ttu(ri)}* ‘be seen, watch out (with =za)’**

Token frequency: 9 (NS)

NS

PRS.1SG

a[-us-ha-ha-at] (KUB 31.121a ii 20)

PRS.3SG

u-wa-it-ta-ri (KUB 31.68 rev. 45)

PST.3SG

=*kan u-wa-it-ta-at* (KUB 23.103 i 24)

IMP.3PL

=*kan u-wa-an-da-ru* (KUB 21.19 iv 28)

IPFV.IMP.2SG

=*za us-ga-ah-hu-ut* (KBo 19.43+ iii 49), =*za us-ga-ah-hu-ut* (49), =*za us-[ga]-ah-hu-ut* (52), =*za us-ga-ah-h[u-u]t* (58)

IPFV.PST.3PL

us-kan-[t]a-at (KBo 47.239 iii 11)

***epp-/app-^{zi}* ‘take’, *epp-/app-^{ta(ri)}* ‘be taken, take each other’**

Token frequency: 2 (NS)

NS

PST.3SG

ar-ha ap-pa-at-ta-at (KBo 2.2 ii 42)

PST.3PL

ar-ha ap-pa-an-ta-at (KBo 2.2 i 22)

***irmaliye/a-^{ta(ri)}*, *armaniye/a-*, *ermaniye/a-* ‘be(come) ill’**

Token frequency: 1 (OS), 7 (NS)

OS

PRS.3SG

ar-ma-ni-ya-at-ta KUB 4.72 rev. 3 (but MS for *HPM*)

NS

PST.2SG

ir-ma-al-li-ya-at-ta-at (KBo 5.9 i 15)

PST.3SG

GIG-at (KBo 4.12 obv. 6), [*G*]IG-*at* (KUB 15.9 iii 6); *ir-ma-li-ya-at-ta-at* (KBo 3.4+ i 6), *ir-ma-li-at-ta-at* (13), *ir-ma-li-ya-at-ta-at* (ii 20), *ir-ma-li-ya-at-ta-at* (21)

es-^{a(ri)} ‘sit down’

Token frequency: 20 (OS), 12 (MS), 49 (NS)

OS

PRS.3SG

e-sa (KBo 17.11+ iv 26); *e-sa* (KBo 17.15 rev. 20); *e-sa* (KBo 25.31ii 18); *e-sa* (KBo 20.14+ i 5); *e-sa* (KBo 25.35 iii 6); *e-sa* (Bo 6594 i 3); *e-sa* (KBo 20.10+ i 3); *e-sa* (KBo 20.10+ i 7); *e-sa* (KBo 20.10+ i 7); *e-sa* (KBo 20.10+ ii 3); *e-sa* (KBo 20.10+ ii 4); =*sa-an e-[sa?]* (KBo 20.18+ rev. 7); *e-[sa]* (KBo 20.39 rev. 9); *e-sa-ri* (KBo 3.22 rev. 79)

PRS.1PL

e-su-wa-as-ta (KUB 31.143 ii 36)

PRS.3PL

e-sa-an-ta (KBo 17.36+ iii 10); *e-sa-an-[ta]* (KBo 17.33+ i 9); *e-sa-an-ta* (KBo 25.58 ii 5); *e-sa-an-da* (KBo 20.10+ i 12), *e-sa-an-da* (ii 9)

IPFV.PRS.3PL

e-es-kan-ta (KBo 3.34 iii 15)

MS

PRS.3SG

=*sa-an e-sa* (IBoT 1.36 ii 17); *e-sa-ri* (KBo 16.42 obv. 19); =*za e-sa-r[i]* (KUB 13.27 rev. 86), =*za=kan [e-sa-ri]* (rev. 87); =*za e-sa-r[i]* (KUB 26.19 ii 13), =*za e-sa-ri* (14); =*[za] [e-es]-ta-ri* (KUB 14.1 + KBo 19.38 obv. 20), =*za e-es-ta-[ri]* (44), =*za e-[es-ta-ri]* (rev. 19)

PRS.1PL

=*as-ta e-su-as-ta* (KBo 16.25 i 82)

PST.3SG

=*za [e-es]-ta-at* (KUB 14.1 + KBo 19.38 rev. 34)

IMP.2G

=*za e-es-hu-ut* (KUB 14.1 + KBo 19.38 obv. 17)

IPFV.PRS.3SG

=*za e-es-ki-i[t-t]a-ri* (HKM 10 obv. 5)

NS

PRS.1SG

=*za=kan e-[e]s-ha-ha-ri* (KBo 16.98 ii 12)

PRS.3SG

[=*z*]a=*kan e-sa-ri* (KUB 6.9+ i 15); [=za=*kan*] [*e-sa-ri*] (KUB 16.20 i 2); [*e-s*]a-ri (KUB 18.36+ ii 3); =*za e-sa-ri* (KUB 26.5+ iii 14); =z[*a=kan*] *e-sa-ri* (KUB 50.77+ obv. 7); =za=*kan e-sa-ri* (KUB 18.6 i 11); =za=*kan e-sa-r[i]* (KUB 18.36 11), =za=*kan e-sa-ri*

(14); =za *e-sa-ri* (KBo 5.13 i 36); =za *e-sa-ri* (KUB 19.37 ii 19); =za=*kan e-sa-ri* (KBo 2.2 i 32)

PST.1SG

[=za=*kan*] *e-es-ha-ha-at* (KUB 21.1 i 44); =za=*kan* [*e-es-ha-ha-at*] (KBo 19.70 i 20); =za=*kan* [*e-es-ha-ha-at*] (KUB 21.49 obv. 9); =za=*kan e-es-ha-at* (KBo 3.4+ i 3), =za=*kan e-es-ha-at* (19), =za=*kan e-es-ha-at* (28); [=za=*kan*] [*e-es-h*]a-at (KUB 14.16 i 9), [=za=*kan*] *e-es-ha-at* (12); =za=*kan e-es-ha-ha-at* (KBo 4.7 i 11); [=za=*kan*] *e-es-ha-at* (KBo 4.4 iv 66); =za=*kan* [*e-es-h*]a-at (KBo 5.8 ii 35), =za=*kan e-es-ha-at* (40); =za *is-ha-ha-at* (KUB 31.71 ii 2)

PST.3SG

=za=*kan e-sa-at* (KBo 3.4+ i 5), =za=*kan e-sa-at* (12), =za=*kan e-sa-at* (14), =za *e-sa-at* (iii 61); =za=*kan* [*e-sa-at*] (KUB 14.16 ii 13); =za=*kan e-sa-at* (KUB 1.1 i 23); *e-sa-at* (KBo 4.12 obv. 14); [=za] *e-sa-[at]* (KUB 14.13+ i 36); =za=*kan e-sa-at* (KUB 23.103 rev. 12); *e-sa-at* (KUB 26.43 obv. 13); *e-sa-at* (KBo 6.29 i 23); =za *e-sa-at* (KBo 2.5 i 1); =za=*kan e-sa-at* (KBo 5.8 iii 5); *e-es-ta-at* (KBo 5.8 ii 15); =za *e-sa-[at]* (KUB 19.37 iii 13), =za *e-sa-at* (28); *e-sa-at* (KUB 19.15+ ii 2)

PST.3PL

e-sa-an-da-at (KUB 19.37 iii 5); =za *e-sa-an-ta-at* (KBo 5.8 ii 13), =za *e-sa-an-ta-at* (18), *e-sa-an-ta-at* (ii 25); *e-sa-an-ta-at* (KUB 26.50 rev. 2)

IMP.3SG

e-sa-ru (KUB 14.3 ii 72), *e-sa-ru* (76)

***haliye/a-^{zi}* ‘kneel down’**

Token frequency: 6 (NS)

NS

PST.2SG

[h]a-li-at-ta-at (KUB 19.49 i 39)

PST.3SG

kat-ta-an ha-li-ya-at-[ta-at] (KBo 5.8 ii 1)

PST.3PL

ha-a-li-ya-an-da-at (KBo 4.4 iii 47); kat-ta-an ha-li-ya-an-da-at (KUB 14.16 iii 47), kat-ta-an ha-a-li-ya-[(an-da-at)] (iii 49);

IPFV.PST.3SG

ha-a-li-is-ka-at-ta-ri (KUB 5.6 ii 51)

halzai-ⁱ ‘shout, call’, halzi-^{a(ri)} ‘be called’

Token frequency: 7 (OS), 1 (MS), 3 (NS)

OS

PRS.3SG

[hal-(zi-ya)] (KBo 17.11+ iv 17), [(hal-zi-ya)] (26), [(hal-z)]i-ya (29); hal-zi-ya (KBo 17.19+ ii 13); h[al]-zi-ya (KBo 20.10+ i 6), h[al]-zi-ya (ii 2); hal-zi-ya (KBo 25.92 rev. 7)

MS

PRS.3SG

hal-zi-ya-ri (KUB 45.47 + iv 8)

NS

PRS.2SG

=za *hal-zi-ya-at-ta-ri* (KUB 26.12 iii 18)

PRS.3SG

ha-zi-ya-ri (KUB 59.34 iii 3); *hal-zi-ya-ri* (KUB 25.22 iii 12)

***hanna-i* ‘sue, judge, contest’**

Token frequency: 1 (MS), 2 (NS)

MS

PRS.3SG

ha-an-na-ri (KBo 16.25 ii 23)

NS

PRS.3SG

ha-an-na-ri (Bo 86/299 iv 25); *ha-an-na-ri* (KBo 4.10 ii 23)

***hantae-zi* ‘align (tr.), determine, fix’, *handai-tta(ri)* ‘align (intr.), be determined’**

Token frequency: 10 (OS), 11 (MS), 180 (NS)

OS

PRS.3SG

[*ha-an-d*]a-a-it-ta (KBo 17.9+ obv. 8); =as-ta *ha-an-d[a]-a-e-et-ta* (KBo 25.31 ii 11); [*ha*]-an-da-a-it-ta (KBo 20.9 obv. 9); =as-ta [*ha-a*]n-da-a-it-ta (KBo 20.14+ i 9), =as-ta *ha-an-d[a-a-it]-ta* (13); =as-ta *ha-an-[da-a-it-ta]* (KBo 20.26+ i 18), [=as-ta] *ha-an-da-a-it-ta* (22); [*h*]a-an-da-a-it-ta (KBo 25.35 iii 1); [*ha-a*]n-da-a-i[t-ta] (KBo 25.37 iv 4); [*ha-an-da*]-a-it-ta (KBo 25.147 obv. 14)

MS

PRS.3SG

ha-an-da-it-ta-ri (IBoT 1.36 i 40), =*kan ha-an-da-a-[it]-t[a-r]i* (iii 44), [*ha-an-da-it-t*]a-ri (47), *ha-an-da-a-it-ta* (iv 20), *ha-a[n]-da-it-ta-ri* (22); [*ha-an-d*]a-a-it-ta-ri (HKM 85 rev. 7); *ha-an-da-a-it-ta-ri* (KBo 16.97 + KBo 40.48 rev. 39), *ha-an-da-a-it-ta-ri* (42)

PST.3SG

ha-an-da-it-ta-at (KUB 14.1 + KBo 19.38 obv. 56), =*za ha-an-da-it-ta-at* (rev. 90); *ha-an-da-i-it-ta-at* (HKM 47 16)

IMP.3SG

[*ha-an*]-*da-it-ta-ru* (KBo 22.26 3)

NS

PRS.3SG

SIxSÁ-[*ta*]-ri (KBo 2.2 ii 32-34); *ha-an-da-it-ta-a-ri* (KBo 4.4 ii 29), *ha-an-da-it-ta-a-ri* (32); SIxSÁ-ri (KUB 15.19 obv. 8); *ha-an-ta-it-ta-ri* (KUB 15.28 ii 3); SIxSÁ-ri (KUB 16.31+ i 45); SIxSÁ-ri (KUB 16.32 obv. 13); SIxSÁ-ri (KUB 16.58 iii 2); SIxSÁ-ri (KUB 18.6 i 8), SIxSÁ-ri (8); SIxSÁ-*ta-ri* (KUB 22.70 obv. 50), SIxSÁ-ri (rev. 46); SIxSÁ-ri (KUB 40.77 obv. 20); SIxSÁ-ri (KUB 48.119 obv. 7); SIxSÁ-ri (KUB 5.1 i 61), SIxSÁ-ri (81) SIxSÁ-ri (iii 20); SIxSÁ-ri (KUB 5.6 iv 8); SIxSÁ-ri (KUB 50.6 iii 54); SIxSÁ-ri (55)

PST.3SG

SIxSÁ-*at* (KBo 14.21 i 7), SIxSÁ-*at* (28), SIxSÁ-*at* (55), SIxSÁ-*at* (66), SIxSÁ-*at* (79), [SIxSÁ-*at*] (ii 3), SIxSÁ-*at* (12), SIxSÁ-*at* (26), SIxSÁ-*at* (44), SIxSÁ-*at* (63), SIxSÁ-*at* (iii 55); SIxSÁ-*at* (KBo 16.98 i 10), SIxSÁ-*at* (18); SIxSÁ-*at* (KBo 2.2 i 5), SIxSÁ-*at* (30), SIxSÁ-*at* (ii 20), SIxSÁ-*at* (22), SIxSÁ-*at* (23), SIxSÁ-*at* (30), SIxSÁ-*at* (52), SIxSÁ-*at* (iii 11), SIxSÁ-*at* (31), SIxSÁ-*at* (iv 24); SIxSÁ-*at* (KBo 2.6 i 31), SIxSÁ-*at* (iii 42), SIxSÁ-*at* (iv 23); SIxSÁ-*at* (KBo 33.126 rev. 5); SIxSÁ-*at* (KBo 4.2 iii 44),

SIxSÁ-at (50), SIxSÁ-at (53), SIxSÁ-at (iv 34); *ha-an-da-it-ta-at* (KBo 4.4 ii 51), *ha-an-da-it-ta-at* (55); SIxSÁ-at (KBo 4.8 ii 11), SIxSÁ-at (7), SIxSÁ-at (8); [SIxS]Á-at (KBo 9.151 3), SIxSÁ-at (4); *ha-an-da-a-et-ta-at* (KUB 14.8 obv. 40); SIxSÁ-at (KUB 15.1 i 14), SIxSÁ-at (ii 14); SIxSÁ-at (KUB 15.28 iii 9); SIxSÁ-at (KUB 15.3 i 4); SIxSÁ-at (KUB 16.31+ i 43), SIxSÁ-at (44), SIxSÁ-at (71), SIxSÁ-at (79), SIxSÁ-at (ii 31), SIxSÁ-at (51), SIxSÁ-at (iii 6), SIxSÁ-a[t] (6); SIxSÁ-at (KUB 16.32 obv. 18), SIxSÁ-at (19), [SIx(SÁ-at)] (23), [SI]xSÁ-at (27); SIxSÁ-at (KUB 16.46 i 9), SIxSÁ-at (10), SIxSÁ-at (18), SIxSÁ-at (iii 1), SIxSÁ-at (iv 12), SIxSÁ-at (13); SIxSÁ-at (KUB 16.58 ii 9); SIxSÁ-at (KUB 19.23 rev. 7); SIxSÁ-at (KUB 19.5+KBo 19.79 obv. 13); SIxSÁ-at (KUB 22.13 2), SIx[SÁ-at] (8), SIxS[Á-at] (9); SIxSÁ-at (KUB 22.35 ii 8), [SIxSÁ]-at (12), SIxSÁ-at (12), SIxSÁ-at (iii 19); [SI]xSÁ-at (KUB 22.70 obv. 4), SIxSÁ-at (7), [SIxSÁ-at] (45), SIxSÁ-at (76), SIxSÁ-at (77), SIxSÁ-at (rev. 19), SIxSÁ-at (21), SIxSÁ-at (29), SIxSÁ-at (30), SIxSÁ-at (33), [SIxSÁ-at] (33), SIxSÁ-at (34), SIx[SÁ-at] (43), SIxSÁ-at (43), SIxSÁ-at (43), SIxSÁ-at (45), SIxSÁ-at (45), SIxSÁ-at (63); *h[a-an-da-et-ta-at]* (KUB 26.86 iii 9), *ha-an-da-a-e[t-ta-at]* (12), [*ha-an-da-e*]t-ta-at (19); SIxSÁ-at (KUB 31.66 i 11), SIxSÁ-at (23); SIxSÁ-at (KUB 48.119 obv. 14); SIxSÁ-at (KUB 48.123 i 22); *ha-an-da-it-ta-at* (KUB 5.11 i 25), [SIxSÁ]-at (26), [SIxSÁ]-at (iv 49); SIxSÁ-at (KUB 5.6 i 6), SIxSÁ-at (6), SIxSÁ-at (7), SIxSÁ-at (26), SIxSÁ-at (31), SIxSÁ-at (31), SIxSÁ-at (38), SIxSÁ-at (ii 6), SIxSÁ-at (12), SIxSÁ-at (13), SIxSÁ-at (15), SIxSÁ-at (16), SIxSÁ-at (16), SIxSÁ-at (36), SIxSÁ-at (42), SIxSÁ-at (43), SIxSÁ-at (45), SIxSÁ-at (49), SIxSÁ-at (71), [SIxSÁ-at] (71), [S]IxSÁ-at (iii 4), SIxSÁ-at (60), SIxSÁ-at (60), SIxSÁ-at (60), SIxSÁ-at (61), SIxSÁ-at (67), SIxSÁ-at (74), [SIxSÁ-at] (iv 1), SIxSÁ-at (iv 1), SIxSÁ-at (3), SIxSÁ-at (8), SIxSÁ-at (13), SIxSÁ-at (17), SIxSÁ-at (19), [SIxSÁ-at] (20), SIxSÁ-at (20), SIxSÁ-at (left. ed. 7), SIxSÁ-at (7); SIxSÁ-at (KUB 50.6 ii 31), [SIxSÁ-a]t (33), SIxSÁ-at (35), SIxSÁ-at (48), SIxSÁ-at (49), SIxSÁ-at (50), SIxSÁ-at (51), S[IxSÁ-at] (55), SIxSÁ-at (57), SIxSÁ-at (iii 7), SIxSÁ-at (16), SIxSÁ-at (24), SIxSÁ-at (28), SIxSÁ-at (31), SIxSÁ-at (32), SIxSÁ-at (33), SIxSÁ-at (35), SIxSÁ-at (37), SIxSÁ-at (39), SIxSÁ-at (47); SIxSÁ-at (KUB 50.87 obv. 8), SIxSÁ-at (rev. 7), SIxSÁ-at (12), SIxSÁ-at (13); SIxSÁ-at (KUB 52.44 obv. 6), SIxSÁ-at (16)

SIxSÁ-*an-da-at* (KBo 4.2 iv 10); SIxSÁ-*an-ta-at* (KUB 5.6 ii 41), SIxSÁ-*an-ta-at* (58),
SIxSÁ-*an-ta-at* (iv 10); SIxSÁ-*an-ta-at* (KUB 54.1 i 45)

IMP.3SG

[SIxSÁ-*a*]t-[t]a-*ru* (KBo 55.25 i 24)

IPFV.PRS.3SG

SIxSÁ-*kit-ta-ri* (KUB 22.13 3)

***happ*^{-zi} ‘join (tr.)’, *happ*^{-(t)a(ri)} ‘join (intr.), work out’**

Token frequency: 1 (OS), 4 (MS), 2 (NS)

OS

IMP.3SG

ha-ap-pa-ru (KBo 25.123 8)

MS

PST.3SG

=*kan ha-ap-da-at* (KBo 18.54 rev. 15)

PRS.3SG

=*kan ha-ap-da-ri* (KBo 18.54 rev. 19), =*kan ha-ap-da-ri* (21), =*kan ha-ap-da-ri* (left ed.
1)

NS

PST.3SG

=*kan ha-ap-ta-at* (KUB 1.1 ii 76); *ha-ap-ta-at* (KUB 21.27 i 12)

harra-ⁱ ‘grind, splinter up (wood), crush (bread), destroy’, ***harra-^{ta(ri)}*** ‘be destroyed, go to waste’

Token frequency: 1 (MS)

MS

PRS.3SG

har-ra-at-t-a-ri (KUB 23.77 obv. 38)

harp-^{ta(ri)} ‘separate and re-associate oneself, join (intr.)’, ***harp-^{zi}*** ‘join, pile up (tr.)’

Token frequency: 2 (OS), 2 (NS)

OS

PRS.3G

har-ap-ta (KBo 6.2 + iii 48), *har-ap-ta* (49)

NS

IMP.2SG

=*kan ha[r]-p[i-y]a-ah-hu-ut* (KUB 21.27 iv 43); =*kan har-pi-ya-ah-hu-hut* (KUB 6.45 iii 72)

****hassuezziye/a-^{ta(ri)/zi}*** ‘be(come) king’

Token frequency: 7 (NS)

NS

PRS.1SG

LUGAL-iz-zi-ah-ha-ri (Bo 86/299 ii 52)

PST.1SG

LUGAL-iz-zi-ah-ha-at (Bo 86/299 i 99), LUGAL-i-zi-ah-ha-at (ii 31), LUGAL-iz-zi-ah-ha-at (57); LUGAL-ez-zi-ah-ha-at (KUB 23.112 i 1); LUGAL-iz-zi-ah-ha-at (Kbo 4.12 obv. 31); LUGAL-iz-zi-ya-ah-ha-ha-at (KUB 23.99 obv. 3)

hatt-^{a(ri)}, hazziye/a-^{zi} ‘hit, pierce’

Token frequency: 2 (OS)

OS

PRS.3SG

ha-at-ta-ri (KBo 25.29 ii 4)

PRS.3PL

ha-at-ta-an-ta (KBo 25.29 ii 6)

hai(n)k-^{tt(a(ri))}, hink-^{a(ri)} ‘bow (intr.)’, hai(n)k-^{zi} ‘offer’

Token frequency: 8 (OS), 2 (MS), 1 (NS)

OS

PRS.3SG

hi-in-ga (Bo 6594 i 13); h[e-e]k-ta (KBo 20.10+ i 4), he-ek-ta (5), he-ek-ta (6); hi-in-ga (KBo 20.11 ii 5), hi-in-ga (iii 4)

PRS.3PL

hi-in-kan-ta (KBo 13.175 rev. 4), *hi-in-kan-[ta]* (KUB 34.115 iii 11)

MS

PRS.3PL

hi-in-kan-ta (IBoT 1.36 ii 17), *hi-in-kan-ta* (24)

NS

PRS.3SG

hi-[in]-ga (KBo 5.9 iii 16)

***hiswai*-^{ta(ri)?} ‘(be) open’**

Token frequency: 1 (MS)

MS

PRS.3PL

hi-is-wa-an-da-ri (ABoT 1.60 obv. 17)

***hulāliye/a*-^{zi} ‘entwine, encircle’, *hulāliye/a*-^{ta(ri)} ‘be encircled’**

Token frequency: 1 (MS)

MS

PST.3SG

hu-u-la-li-it-ta-at (IBoT 1.36 iii 54)

huett(i)-^{a(ri)}, huettiye/a-^{zi/i} ‘draw, pull’

Token frequency: 4 (OS), 1 (NS)

OS

PRS.3SG

hu-it-ti-ya-ti (KBo 3.22 rev. 54)

PRS.3PL

[*hu-e-et-ti-an-ta*] (KUB 29.30 + iii 6), *hu-e-et-ti-an-ta* (6); *hu-u-it-ti-ya-an-ta* (KUB 29.35 iv 15)

NS

PRS.3SG

[*h*]u-it-ti-at-[*ta-ri*] (KUB 21.19 ii 18)

PST.3SG

[*hu-it-ti-*]ya-at-ta-at (KUB 1.1 iii 15)

ARAD-(n)ahh-ⁱ ‘enslave, subjugate’, ARAD-(n)ahh-^{ta(ri)} ‘become slave’

Token frequency: 6 (NS)

NS

PRS.3SG

=*as-ta* ARAD-ah-ta-ri (Bo 86/299 ii 31)

PST.1SG

[ARAD-*a*]h-ha-ha-at (KUB 1.1 iii 6)

PST.3PL

[ARAD-*na-ah-ha-a*]n-da-at (KBo 14.19 iii 16); ARAD-*ah-ha-an-da-at* (KUB 26.43 rev. 2)

PST.3SG

ARAD-*ah-ta-at* (KBo 50.28 i 3)

IMP.2SG

ARAD-*ah-hu-ut* (KUB 1.1 iii 5)

***huwai-i* ‘run’**

Token frequency: 2 (MS), 1 (NS)

MS

PRS.2PL

pa-ra-a hu-ya-ad-du-ma (KUB 23.72 rev. 19)

IMP.3PL

pa-ra-a [hi-ya-an-ta-ru] (KUB 23.72 rev. 20)

NS

PRS.3SG

hu-u-i-ya-at-ta (KUB 21.1 iii 65)

***ye/a-^{ta(ri)}* ‘go, march’**

Token frequency: 2 (OS), 32 (MS), 61 (NS)

OS

PRS.3SG

i-e-et-ta (KBo 17.43 i 10)

PRS.3PL

i-e-en-ta (KBo 21 i 14)

MS

PRS.3SG

i-ya-at-ta (IBoT 1.36 ii 11), *i-ya-at-ta* (33), *i-ya-a-ta* (62); *i-a[t-ta-ri]* (HKM 25 obv. 8); *[i-ya-at-ta-ri]* (HKM 37 obv. 2); *i-at-ta-r[i]* (HKM 8 u. ed. 14); *kat-ta-an i-ya-at-ta-ri* (KUB 13.27 obv. 45); *i-ya-at-ta* (KUB 26.17 ii 11); *ya-at-ta* (KUB 36.106 i 2)

PRS.3PL

i-ya-an-ta (IBoT 1.36 ii 32), *i-ya-an-ta* (35), *i-ya-an-ta* (38), *i-ya-an-ta* (45), *i-ya-an-ta-ri* (47), *i-ya-an-ta* (50), *kat-ta i-ya-an-ta* (51), *i-ya-an-ta* (54), *i-ya-an-ta* (56), *i-ya-an-ta* (58), *i-ya-an-ta* (iii 19), [EGIR-*an i-ya-a*]n-ta (iii 46), EGIR-*an [i-ya-a]*n-ta (iv 2); *i-ya-an-da-ri* (HKM 10 obv.19), *i-ya-an-da-ri* (21); *i-ya-an-da-r[i]* (HKM 27 l. ed. 2); [*kat-ta-an*] *i-ya-an-ta-ri* (KBo 16.47 obv. 6); *i-ya-an-ta-ri* (KUB 13.27 obv. 26)

PST.3PL

=*kan an-da i-ya-[an-ta-at]* (KUB 14.1 + KBo 19.38 rev. 35); =*kan i-ya-an-ta-at* (KUB 17.21 ii 12)

IMP.3SG

an-da i-ya-at-ta-ru (KUB 23.72 rev. 19)

IMP.2PL

i-ya-ad-du-ma (KUB 23.72 rev. 55)

IMP.3PL

[kat-t]a-an i-ya-an-ta-ru (KBo 8.22 obv. 9)

NS

PRS.1SG

i-ya-ah-ri (KUB 14.11 iii 16)

PRS.3SG

i-ya-at-ta-[ri] (KBo 4.4 iii 69); [*i*]s-tar-na ar-ha *i-ya-at-ta-ri* (KBo 5.4 ii 37); *i-[ya-at-ta-ri]* (KBo 6.28 rev. 25); [(*pi-r*)]a-an EGIR-pa *i-ya-at-ta-ri* (KUB 15.17 i 5); *i-ya-at-ta-ri* (KUB 15.3 i 3); =kan se-er ar-[ha] *i-ya-ad-da-ri* (KUB 19.23 rev. 8); [*p*]i-ra-an EGIR-pa *i-ya-at-ta-ri* (KUB 22.70 rev. 28); =kan EGIR-pa GIN-ri (KUB 5.1 i 6), =kan GIN-ri (61), GIN-ri (iv 89); [*i-ya-a*]t-ta-ri (KUB 5.6 ii 8), *i-ya-at-ta-ri* (9); =kan sa-ra-a *i-ya-ad-da-ri* (KBo 5.9 ii 32), *i-ya-at-ta-ri* (iii 14); sa-ra-a *i-y[a-a]t-ta-[ti]* (KBo 19.43+ iii 61); =kan is-tar-na ar-ha *i-ya-ta-ri* (KUB 21.1 iii 53)

PRS.1PL

i-ya-u-wa-as-ta (KBo 17.48 ii 6)

PRS.3PL

pe-ra-an EGIR-pa *i-ya-an-ta-ri* (KUB 6.45 iii 7), *pe-ra-an* EGIR-pa *i-ya-an-ta-ri* (8); sa-ra-a *i-ya-an-ta-ri* (KUB 21.29 ii 8); *i-ya-an-[ta]-ri* (KUB 14.3 iii 38); *i-ya-an-ta-ri* (KUB 26.32 ii 4)

PST.1SG

i-ya-ah-ha-at (KBo 3.4 ii 15); pa-ra-a *i-ya-ah-ha-ha-at* (KUB 1.1 i 49), *i-ya-ah-ha-ha-at* (ii 80), *i-ya-ah-ha-ha-at* (81); [*i-ya-ah-ha-at*] (KBo 14.19 iii 25), *i-ya-ah-ha-at* (25); =kan ar-ha *i-ya-ah-ha-at* (KBo 4.4 ii 68), *i-ya-ah-ha-at* (iii 33), pa-ra-a *i-ya-ah-ha-at* (43); *i-ya-ah-ha-at* (KUB 14.16 ii 14); *i-ya-ha-at* (KUB 14.19 11); *i-ya-ha-ah-at* (KUB 14.4 iv 24); an-da-an *i-ya-ah-ha-at* (KUB 15.12 iv 5); *i-ya-ah-ha-at* (KUB 19.37 iii 12); *i-ya-ah-ha-at* (KUB 23.103 rev. 5); [*i-ya-ah-ha-at*] (KUB 23.36+ i 7); p[e-r]a-an [EGI]R-pa *i-ya-ah-ha-at* (KUB 14.10+ i 21); *i-ya-ah-ha-at* (KBo 5.8 i 25), =kan is-tar-na ar-ha

i-ya-ah-ha-at (32), *i-ya-ah-ha-at* (iii 21), *i-ya-ah-ha-at* (iv 11); *i-ya-ah-ha-at* (KBo 19.76 i 29)

PST.3SG

i-ya-at-t[a-a]t (KBo 16.36+ ii 4); =*kan ša-ra-a i-ya-at-ta-at* (KBo 4.2 iii 44); *i-y[a-at-ta-at]* (KUB 19.11+ i 2), *i-ya-at-ta-at* (5), [*i-ya-at-ta-at*] (iv 20), *i-ya-a[t-ta-at]* (22); *i-ya-a[t-ta-at]* (KUB 19.13+ ii 2); *pi-ra-an EGIR-pa i-ya-at-ta-at* (KUB 22.70 obv. 9), *sa-ra-a i-ya-at-ta-at* (obv. 77), [*pi-ra-an*] *EGIR-pa i-ya-at-ta-at* (obv. 79), *sa-ra-a i-ya-at-ta-at* (rev. 36); *i-ya-at-ta-at* (KBo 19.43+ iii 54); *i-ya-at-ta-at* (KBo 10.17 iv 4)

PST.3PL

kat-ta-an [i]-ya-an-ta-at (KBo 5.8 iv 8); *i-ya-an-ta-at* (KUB 14.19 6)

IMP.2SG

=*kan EGIR-an i-ya-ah-hu-ut* (KUB 22.70 obv. 37)

IMP.3SG

i-ya-at-ta-ru (Bo 86/299 iii 36); *i-ya-at-ta-ru* (KBo 4.10 i 44); *i-ya-at-ta-ru* (KUB 21.29 ii 14)

***isiyahh-i* ‘announce, reveal’, *isiyahh-ta(ri)* ‘be revealed, appear’**

Token frequency: 1 (NS)

NS

PST.3SG

=*kan i-si-ya-ah-ta-at* (KUB 16.31+ iii 24)

***istamass-zi* ‘hear’, *istamass-ta(ri)* ‘be heard’**

Token frequency: 1 (NS)

NS

PRS.3SG

is-dam-ma-as-ta-ri (KUB 21.29 iii 30-32)

istar(k)-^{zi}, istar(ak)kiye/a-^{zi} ‘be(come) ill’

Token frequency: 1 (NS)

NS

PST.3SG

is-tar-ki-ya-at-[ta-at] (KUB 14.16 iii 41)

istu-^{ā(ri)} ‘get out, become known’

Token frequency: 1 (MS)

MS

PST.3SG

=(as)ta ar-ha is-du-w[a-t]i (KUB 23.11 iii 7)

ishuwai-ⁱ ‘throw, scatter, pour’

Token frequency: 1 (MS)

MS

PRS.2SG

is-hu-wa-a-it-ta (HKM 5 obv. 5)¹⁶⁰

ispānt-ⁱ / ispant- ‘libate’

Token frequency: 1 (MS)

MS

PST.3PL

=*as-ta si-pa-an-da-an-da-at* (KBo 12.62 rev. 13)

istāp-/istapp-ⁱ ‘plug up, block, shut’, ***istapp-^{ta(ri)}*** ‘be(come) closed’

Token frequency: 1 (MS)

MS

PRS.3PL

=*kan is-tap-pa-an-da-ri* (ABoT 1.60 obv. 18)

istarni(n)k-^{zi} ‘afflict’, ***istarni(n)k-^{ta(ri)}*** ‘become ill’

Token frequency: 1 (OS)

¹⁶⁰ The verb is also attested twice in a MS manuscript ([*is-hu-]wa-it-ta-a[t]* KBo 8.96 obv. 1, [*i]s-hu-wa-it-t[a-at]* 2), but the context is too fragmentary to allow an interpretation of the syntax and semantics of these forms (cf. Neu 1968a: 75).

OS

PST.3SG

is-tar-ni-ik-ta-at (KBo 3.34 ii 39, OH/NS)

idalawēss-^{zi} ‘become bad, evil’

MS

IPFV.PRS.3SG

i-da-a-la-u-es-ke-et-ta (KuT 49 4)

kallaress-^{zi} ‘be inauspicious’

Token frequency: 1 (NS)

NS

IPFV.PRS.3SG

kal-la-re-es-kat-ta-ri (KUB 5.6 iii 18)

kariye/a-^{(tt)a(ri)} ‘be(come) gracious towards’

Token frequency: 1 (NS)

NS

PST.1SG

ka-[ri-ya]-ah-ha-ha-at (KUB 19.49 i 47)

karp(iye/a)-^{zi} ‘pluck, raise, finish (tr.)’, ***karp(iye/a)-^{ta(ri)}*** ‘be taken, raise, finish (intr.)’

Token frequency: 2 (NS)

NS

PRS.3SG

=*kan kar-ap-ta-ri* (KUB 6.45 iv 48); =*kan kar-ap-ta-ri* (KUB 22.40 iii 28)

kars(iye/a)-^{zi} ‘cut off, separate’, ***kars(iye/a)-^{ta(ri)}*** ‘be cut, stop (intr.), fail’

Token frequency: 1 (MS), 2 (NS)

MS

PRS.3PL

[*(kar-sa-an-da-ri)*] (KUB 24.4 i 6)

NS

PRS.3SG

kar-as-ta-ri (KUB 14.12 rev. 10)

PST.3PL

ar-ha [*k*]*ar-sa-an-ta-at* (KBo 47.239 iv 14)

kardimiye/a-^{ta(ri)} ‘be(come) angry’

Token frequency: 1 (MS)

MS

PRS.3SG

ka[r-di-mi-]ya-it-ta (IBoT 1.36 i 49)

***karūss(iye/a)-^{zi}* ‘be(come) silent’**

*Token frequency: 2 (NS)*¹⁶¹

NS

PRS.2SG

=*za=kan ka-ru-us-si-ya-ri* (KUB 61.4+ iii 60)

PST.3SG

=*za=kan ka-ru-us-si-ya-at-ta-at* (KUB 61.4+ iii 50)

***ki-^{ta(ri)}* ‘lie, be laid’**

Token frequency: 31 (OS), 18 (MS), 134 (NS)

OS

PRS.3SG

ki-it-ta (KBo 17.1+ i 8), *ki-it-ta* (8), *an-da-an ki-it-ta* (9), *ki-it-ta* (31), =*sa-an ki-it-ta* (ii 20), *ki-it-ta* (iv 23), *ki-it-ta* (28), [(*ki-i*)]*t-[ta]* (29), *ki-it-ta* (29); *ki-it-ta* (KBo 17.7+ iv 4); *ki-it-ta* (KBo 17.11+ i 37), [(*ki-it-ta*)] (38); =*sa-an k[i-it-ta]* (KBo 20.8 iv 5), *ki-it-t[a]* (11); *ki-it-ta* (KBo 17.15 rev. 17), =*sa-an [(ki-it-ta)]* (17); [*k*]*i-it-ta* (KBo 25.98 11); *ki-it-*

¹⁶¹ The ending of *ka-ru-us-si-* [xxx] in KUB 19.15+ i. 25 is damaged, so that Miller’s integration of the active preterite ending, *ka-ru-us-si-[ya-at]*, must be taken as tentative, as one could also reconstruct a middle form in this passage.

ta (KBo 8.74+ iii 8); *ki-it-ta* (KBo 3.34 iii 18), *ki-it-ta* (18), *ki-it-ta* (19), [*ki-it-t*]a (21), *ki-it-ta* (21), *k[i-i]t-ta* (22), [*ki-it-t*]a (24), *ki-it-ta* (24), [*ki-it*]-*ta* (25); *ki-it-ta* (KUB 36.104 iv 5), [*ki-it-ta*] (5)

PRS.3PL

ki-an-ta (KBo 20.8 i 15); *ki-an-da* (KBo 25.37 i 2); *ki-ya-an-ta* (Bo 3752 ii 15; MS for *HPM*)

MS

PRS.3SG

ki-it-t[a] (HKM 24 left ed. 2); =*s-an* [*ki-i*]t-ta-ri (KUB 45.47 + iv 5); =*sa-an* EGIR-an *ki-it-ta-ri* (ABoT 1.65 rev. 10), *ki-it-ta-r[i]* (14); =*as-ta* *ki-it-ta-ri* (KBo 16.97 + KBo 40.48 rev. 10), =*sa-an* *ki-it-ta-ri* (left ed. 4a)

PRS.3PL

kat-ta-an ki-an-ta-ri (KUB 31.101 rev. 29)

PST.3SG

ki-it-ta-at (KUB 14.1 + KBo 19.38 obv. 2), [*ki-it-ta-at*] (rev. 63)

IMP.3SG

ki-it-t[a-ru] (KBo 16.27 ii 18); *ki-it-ta-[r]u* (KUB 26.20 i 9); *ki-it-ta-ru* (KBo 16.25 i 20); *ki-it-ta-r[u]* (KUB 13.1 A iii 8), *ki-it-ta-ru* (33); *ki-ta-ru* (KBo 18.51 16); *k[i-it-ta-ru]* (KBo 16.50 obv. 3), *ki-it-ta-ru* (21), *kat-ta-an ar-ha ki-it-ta-ru* (KBo 16.97 + KBo 40.48 obv. 11)

NS

PRS.3SG

=*kan* GAR-[*r*]i (KUB 16.31+ i 50), =*kan* G[AR-*r*]i (59), G[AR-*r*]i (iv 19), GAR-ri (25), GAR-ri (31); *ki-it-ta-ri* (KBo 4.4 iv 5); *ki-it-ta-ri* (KUB 26.43 obv. 6); *ki-it-ta-ri* (KBo 19.70+ 14), *ki-it-ta-ri* (21); *ki-it-ta-ri* (KBo 22.34+ 4); GAR-ta-ri (Bo 86/299 i 90), GAR-

ri (iv 50); GAR-*ri* (KUB 23.1+ left ed. 2); GAR-*ri* (KUB 26.1+ iv 50); GAR-*ri* (KUB 5.1 i 10), GAR-*ri* (69), GAR-*ri* (77), GAR-*ri* (83), GAR-*ri* (84), GAR-*ri* (94), GAR-*ri* (ii 16), GAR-*ri* (27), GAR-*ri* (31), GAR-*ri* (50), GAR-*ri* (63), GAR-*ri* (70), GAR-*ri* (iii 18), GAR-*ri* (32), GAR-*ri* (36), GAR-*ri* (69); GAR-*ri* (KUB 5.11 iv 52); *ki-it-ta-ri* (KBo 19.43+ ii 72); *ki-it-ta-ri* (KUB 21.1. iv 5); *ki-i[t-ta-ri]* (KUB 22.35+ iii 16); GAR-*ri* (KUB 22.70 obv. 18), GAR-*ri* (19), *ki-it-ta-ri* (38), GAR-*ri* (46); *ki-it-ta-ri* (KUB 25.23 i 12); GAR-*ri* (KUB 26.8 iv 35); *ki-it-ta-ri* (KUB 31.68 rev. 19); GAR-*ri* (KUB 48.118 5), GAR-*ri* (5), GAR-*ri* (6), GAR-*ri* (11); GAR-*ri* (KBo 14.21 i 27)

PRS.3PL

ki-an-da (KUB 23.36+ ii 18); *ki-an-ta-ri* (Bo 86/299 ii 60); [*ki-y*]*a-an-ta-ri* (KUB 31.67 iv 11), *ki-ya-an-ta-ri* (12); *ki-ya-an-ta-ri* (KBo 14.21 i 47)

PST.3SG

ki-it-ta-at (KUB 22.70 obv. 20), =*kan an-da ki-it-ta-at* (21), =*kan EGIR-pa ki-it-ta-at* (34); =*kan ki-it-ta-at* (KUB 6.44+ 15), *ki-it-ta-at* (KUB 6.41 iv 29)

PST.3PL

[*(ki)*]-*ya-an-ta-at* (KUB 23.36+ ii 22)

IMP.3SG

ki-it-ta-ru (KUB 26.1 i 62), *ki-it-ta-r[u]* (ii 64), GAR-*ru* (20), [GAR]-*ru* (42), [GAR-*r*]*u* (53), *ki-i[t-ta-r]u* (58), GAR-*ru* (iii 31), GAR-*ru* (36), GAR-*ru* (52), GAR-*ru* (57), [GAR-*ru*] (66), GAR-*ru* (iv 2), *ki-it-ta-ru* (6), [GAR-*ru*] (10), GAR-*ru* (28), [GAR-*ru*] (37), GAR-*ru* (41), GAR-*ru* (45), GAR-*ru* (48); GAR-*ru* (KUB 21.42 i 10), GAR-*ru* (18), GAR-*ru* (21), GAR-*ru* (26), GAR-*ru* (32), GAR-*ru* (35), GAR-*ru* (35), GAR-*ru* (40), GAR-*ru* (ii 36), [GAR-*ru*] (iii 2), GAR-*ru* (6), GAR-*ru* (12), GAR-*ru* (20), GAR-*ru* (23), GAR-*ru* (28), GAR-*ru* (31), GAR-*ru* (35), GAR-*ru* (iv 2), [(GAR-*ru*)] (42), [GAR-*ru*] (50), G[AR-*ru*] (left ed. 5); *ki-it-ta-ru* (KBo 19.70 i 4), *ki-it-ta-ru* (21), *ki-it-ta-ru* (62); *ki-it-ta-ru* (KBo 19.43+ iii 43); *ki-i[t-ta-ru]* (KUB 22.35+ iii 18), GAR-*ru* (18); GAR-*ru* (KBo 4.14 ii 16), GAR-*ru* (51), GAR-*ru* (72), GAR-*ru* (77), GAR-*ru* (iii 7), GAR-*ru*

(41); *ki-it-ta-ru* (KUB 23.1 ii 7), *GAM-ru* (37), *GAR-ru* (iii 5), [*GAR-ru*] (18), [*GAM-ru*] (iv 22), [*GAM-ru*] (46), [*GAM-ru*] (left ed. 2); *ki-it-ta-ru* (FHL 57+ iii 56), *ki-it-ta-ru* (59); *kat-ta-an ar-ha ki-it-ta-ru* (KBo 4.3 iv 19); [*kat-ta-an ar-ha ki-it-ta-ru*] (KUB 19.54 21); *ki-it-ta-ru* (KUB 21.1 iii 72); *GAR-ru* (KUB 48.118 5), *GAR-ru* (5), *GAR-ru* (6), =*kan GAR-ru* (11); =*kan ki-it-ta-ru* (KBo 4.4 iv 5); =*kan GAR-ta-ru* (Bo 86/299 i 90), *GAR-ru* (iv 50); [*GAR-ru*] (KUB 26.8 i 37), *GAR-ru* (ii 2), *GAR-ru* (8), =*kan GAR-ru* (iv 35), *GAR-ru* (40); *GAR-ru* (KUB 5.1 i 10), *GAR-ru* (45), *GAR-ru* (69), *GAR-ru* (77), =*kan GAR-ru* (83), =*kan GAR-ru* (84), *GAR-ru* (94), *GAR-ru* (ii 16), *GAR-ru* (27), *GAR-ru* (31), *GAR-ru* (50), *GAR-ru* (52), *GAR-ru* (63), *GAR-ru* (70), =*kan GAR-ru* (iii 18), *GAR-ru* (32), =*kan GAR-ru* (36), =*kan GAR-ru* (69), =*kan GAR-ru* (iv 69); *GAR-ru* (KBo 4.10 i 38), *kat-ta-an ar-ha GAR-ru* (ii 16), *kat-ta-an ar-ha GAR-ru* (17); *GAR-ru* (KUB 5.11 iv 52); *kat-ta-an ar-ha ki-it-ta-ru* (KUB 6.41 ii 18); =*kan [ki-it-ta-ru]* (KUB 19.55+ obv. 35); *ki-it-ta-ru* (KBo 5.4 i 35), *ki-it-ta-ru* (ii 15), *ki-it-ta-r[u]* (32); *kat-ta ki-it-ta-ru* (KUB 25.23 i 12); *GAR-ru* (KUB 22.70 obv. 18), *GAR-ru* (19), =*kan EGIR-pa ki-it-ta-ru* (38), [*ar-h*]a *GAR-ru* (46), *ar-ha GAR-ru* (48), GA[*R-ru*] (rev. 33); =*kan ki-it-ta-ru* (KUB 26.43 rev. 6), *ki-id-da-ru* (35); [*GAR-ru*] (ABoT 1.56 iii 15), *GAR-[ru]* (iv 9), [*GAR-ru*] (15); *ki-it-ta-ru* (KBo 19.43+ ii 72); *ki-it-ta-ru* (KUB 21.29 iii 16); *ar-ha ki-it-ta-ru* (KUB 31.68 rev. 19); *k[i-it-t]a-ru* (KUB 26.32 iii 5); *GAR-ru* (KUB 16.31+ iv 25), *GAR-ru* (31)

IMP.3PL

ki-an-ta-ru (Bo 86/299 ii 60); [*ki-y*]a-*an-ta-ru* (KUB 31.67 iv 11), *ki-ya-an-ta-ru* (KUB 31.67 iv 12)

***kīs-^{a(ri)}*, *kikkis-^{ta(ri)}* ‘become, happen’**

Token frequency: 13 (OS), 16 (MS), 135 (NS), *kikkis-^{ta(ri)}* 6 (NS)

OS

PRS.1SG

ki-is-ha (KBo 22.2 rev. 15)

PRS.3SG

ki-i-sa (KBo 25.139+ rev. 7); *ki-sa-[xxx]* (KBo 17.22 ii 2); *ki-i-sa-ri* (KBo 17.1+ iv 9); *ki-i-s[a]* (KBo 6.2 ii 22), *k[i-sa-ri]* (iii 63); *ki-i-sa-ri* (KBo 3.22 obv. 22), *ki-i-sa-r[i]* (rev. 51)

PST.2SG

ki-is-ta-at (KBo 6.2 ii 12)

PST.3SG

ki-i-[sa-at] (KBo 6.2 iii 1)

PST.3PL

ki-i-sa-an-ta-ti (KBo 6.2 ii 56)

MS

PRS.3SG

ki-sa-ri (HKM 84 obv. 18); *ki-sa-ri* (HKM 43 rev. 2); *ki-s[a-r]i* (KUB 1.11+ i 1); *=za ki-i-ša* (KUB 36.127 obv. 4); *ki-sa-ri* (KBo 8.35 ii 3); *ki-sa-ri* (IBoT 1.36 iii 70); *ki-sa-ri* (KBo 18.57a+57 obv. 14), *ki-sa-ri* (21); *ki-sa-ri* (KBo 16.97 + KBo 40.48 obv. 11), *ki-sa-ri* (14); *ki-sa-ri* (KuT 50 29); *ki-sa-ri* (KBo 8.55 21)

PST.1SG

=za ki-is-ha-at (KBo 12.62 10)

PST.3SG

ki-sa-at (KBo 9.137 ii 23); *ki-sa-at* (HHCTO 1 11); *ki-sa-at* (ABoT 1.65 rev. 4), *ki-sa-at* (left ed. 1)

PST.3PL

=za ki-i-sa-an-ta-at (KBo 16.47 obv. 3); *ki-sa-an-da-ti* (KuT 49 6)

IMP.3PL

ki-sa-an-ta-ru (KUB 23.72+ rev. 10)

PRS.3SG

ki-ik-ki-is-ta (KBo 50.1 iii 10)

NS

PRS.1SG

[*kis-ha-ha-r*]*i* (KUB 21.42 iv 50); *kis-ha-ha-ri* (KUB 26.12 ii 9)

PRS.2SG

[*ki-is-ta-ti*] (KUB 19.54 19); [=z]*a ki-is-ta-ti* (KBo 22.39 ii 8); =za=*kan ki-is-ta-ti* (KBo 5.13 ii 6); [*k*]*i-is-ta-t[i]* (KBo 5.4 i 8); =za [*ki*]-*is-ta-ti* (KUB 19.50 iii 13); =za *ki-is-ta-ti* (KBo 19.43+ ii 42); =za *ki-is-ta-ti* (KUB 14.3 i 21)

PRS.3SG

=za [(*ki-sa-r*)*i*] (KUB 26.1 i 17), =za *ki-sa-ri* (iii 16); *ki-sa-ri* (Bo 86/299 i 97), *ki-sa-ri* (ii 2); *ki-sa-ri* (KBo 5.9 ii 19); =za *DÙ-ri* (KBo 4.14 ii 12), *DÙ-ri* (27), =za *DÙ-ri* (iii 30), *DÙ-ri* (iv 43); *ki-sa-ri* (KBo 14.21 i 30); *ki-sa-ri* (KBo 5.6 iii 13); *ki-sa-ri* (KBo 3.3+ iii 11); [*DÙ-ri*] (KUB 25.23 i 1); =za *ki-sa-ri* (KUB 21.42 iii 5), =za *ki-sa-ri* (5); *ki-sa-r[i]* (KUB 15.15 iv 6); *ki-sa-ri* (KUB 22.70 rev. 21), *ki-sa-ri* (23); *DÙ-ri* (KUB 48.118 4); *ki-sa-ri* (KBo 47.239 iv 18); *DÙ-ri* (KUB 25.23 i 8, *DÙ-ri* (iv 51); [*ki-sa-ri*] (KUB 26.1 54); *ki-sa-ri* (KUB 14.8 rev. 33); =*kan DÙ-ri* (KUB 14.16 iii 41); =za *ki-sa-ri* (KUB 31.66 i 34); *ki-i-sa* (KUB 8.27 left ed. b 4); *DÙ-ri* (KBo 16.98 i 6); =za *ki-sa-ri* (KUB 21.38 rev. 14); =*kan DÙ-ri* (KUB 5.1 i 47); *DÙ-ri* (KUB 13.32 obv. 7); *DÙ-ri* (KUB 7.24+ i 6); *ki-sa-r[i]* (KBo 12.39 obv. 4); =za *ki-sa-ri* (KUB 16.31+ iii 10), *ki-[sa-r]i* (14)

PRS.3PL

ki-i-sa-an-ta (KUB 8.27 left ed. a 1)

PST.1SG

ki-is-ha-at (KUB 14.12 obv. 4); *ki-is-ha-at* (KBo 4.4 i 37); *=za ki-is-ha-ha-at* (KUB 1.1 i 24), *[=z]a ki-is-ha-ha-at* (iii 12), *=za ki-is-ha-ha-at* (iv 42), *=za ki-is-ha-ha-at* (41), *[(=za)] ki-is-ha-h[(a-a)]t* (43), *=za ki-is-ha-ha-at* (48); *=az ki-is-ha-at* (KUB 14.10+ i 11)

PST.3SG

[(ki-sa-at)] (KUB 26.1 ii 5); *=za ki-sa-at* (Bo 86/299 ii 53); *[=za] ki-sa-at* (KUB 14.4 i 5), *=za ki-sa-at* (8), *za ki-sa-at* (iii 14), *=za ki-sa-at* (17), ; *ki-sa-at* (KBo 14.20+ i 7), *ki-sa-at* (ii 15); *ki-sa-at* (KBo 2.2 iii 18); *ki-sa-at* (KUB 23.36+ i 1); *ki-sa-at* (KUB 21.49 obv. 9); *=kan ki-s[a-a]t* (KUB 14.8 obv. 28), *ki-is-at* (37); *=za ki-sa-at* (KBo 4.14 iii 36), *[ki-]sa-at* (iv 39); *ki-sa-at* (KUB 21.19 i 21), *[ki-sa-a]t* (32), *=za ki-sa-at* (ii 13); *ki-sa-a[t]* (KBo 22.10 iii 11); *=za [ki-sa-at]* (KBo 19.70+ i 19), *kan [ki-sa-at]* (37); *=za [ki-sa-at]* (FHL 57+ i 43); *ki-sa-at* (KUB 26.33 ii 23); *[ki-]sa-at* (KBo 7.17 3); *=za ki-sa-at* (KBo 4.7 i 11); *=za ki-sa-at* (KBo 3.4+ i 4), *=za ki-sa-at* (8), *=za ki-sa-at* (11), *=za ki-sa-at* (13), *=za ki-sa-at* (iii 62); *=za ki-s[a-at]* (KUB 21.17+ ii 15); *ki-sa-at* (KUB 14.7 i 17), *=kan [(ki-sa-at)]* (KUB 14.16 iii 43); *ki-is-at* (KUB 56.14 iv 3); *=za ki-is-ta-at* (KUB 23.102 i 5); *ki-sa-at* (KBo 47.239 ii 9); *[ki-sa-at]* (KUB 14.16 iii 38); *[ki-s]a-at* (KUB 22.70 obv. 4), *ki-sa-at* (32); *ki-sa-at* (KBo 4.4 iii 57), *ki-sa-at* (42), *ki-sa-at* (56), *[=za] ki-sa-at* (65); *ki-sa-at* (KUB 19.37 ii 46), *[ki-]sa-at* (iv 18); *ki-sa-at* (KUB 19.37 ii 11); *[=za] ki-sa-at* (KUB 23.103 obv. 7), *=za ki-sa-at* (18), *=za k[i]-s[a-at]* (27); *ki-s[a-at]* (KUB 54.1 iii 20); *ki-sa-at* (KBo 16.35 5); *=za ki-sa-at* (KUB 1.1 i 22), *=za ki-is-ta-at* (iii 13), *[(ki-sa-at)]* (36), *=za ki-s[a]-at* (iv 17); *ki-sa-at* (KUB 6.47 6); *ki-sa-at* (KBo 2.5 ii 2), *ki-sa-at* (20), *ki-sa-at* (iii 38), *ki-sa-at* (56), *ki-sa-[at]* (iv 2); *ki-sa-at* (KBo 6.28 rev. 19); *=za ki-sa-at* (KUB 23.92 obv. 4), *=za [ki-sa-at]* (rev. 7); *[ki-sa-at]* (KUB 14.3 i 34); *=kan ki-sa-at* (KBo 5.6 i 10); *=za ki-sa-at* (KUB 23.1 i 41), *=za ki-sa-at* (ii 20); *ki-sa-at* (KUB 54.1 i 25), *ki-sa-at* (iii 15); *ki-sa-at* (KBo 14.9 iii 8); *[ki-sa-at]* (KUB 14.3 i 32); *ki-sa-at* (KUB 14.16 iii 12); *=za ki-sa-at* (KUB 21.27 i 39); *=za DÙ-at* (KUB 4.12 obv. 13), *=za DÙ-at* (obv. 20)

PST.2PL

kis-du-ma-at (KUB 23.103 rev. 4)

PST.3PL

=za *ki-sa-an-ta-at* (KBo 4.3 iv 14), *ki-sa-an-ta-at* (KUB 1.1 iv 51), *ki-sa-an-da-at* (KUB 26.43 obv. 54), =za *ki-sa-an-ta-at* (KBo 4.7 iii 12)

IMP.2SG

ki-is-hu-ut (KBo 4.14 i 40)

IMP.3SG

[*ki-sa-ru*] (KUB 26.33 ii 21); *ki-is-sa-ru* (KUB 6.41 iii 47; *ki-is-sa-[ru]* (KBo 5.4 i 13), *ki-is-sa-ru* (17); =kan *ki-sa-ru* (KBo 11.1 obv. 31); DÙ-*ru* (KBo 19.43+ iii 24); *ki-sa-ru* (KUB 21.5 iii 6)

IMP.2PL

[=za] *ki-is-du-ma-at* (KUB 14.16 iii 29)

PRS.3SG

[*ki-i*]k-*ki-is-ta-ri* (KUB 22.70 rev. 25), [*ki-i*]k-*ki-is-ta-at* (KBo 18.23 obv. 9), *ki-ik-ki-is-ta-ri* (KUB 14.11 iii 25), *ki-ik-ki-i[s-t]a-a-[ri]* (KUB 14.8 rev. 12), =za *ki-kis-ta-ri* (KUB 5.1 iii 49), =za [*ki-ik*]-*ki-is-ta-ri* (KBo 4.14 ii 4)

***kist-^{ā(ri)}* ‘perish’**

Token frequency: 1 (OS)

OS

PRS.3SG

gi-is-ta-ri (KUB 8.41 iii 2)¹⁶²

MS

¹⁶² Note that the reading of this occurrence is admittedly problematic, as the last sign in *gi-is-ta-ri* is partly damaged and can be read as either HU or RI (cf. Neu 1980: 184 fn. 612).

ki-is-ta-a[t] (KBo 50.1 ii 25)

***kistanziye/a-^{ttā(ri)}* ‘be(come) hungry’**

Token frequency: 1 (OS), 1 (MS)

OS

PST.3SG

ki-is-ta-an-zi-at-ta-at (KBo 3.22 rev. 46)

MS

ki-is-ta-at (KBo 50.1 ii 25)

***lā-ⁱ* ‘release, remove’, *lā-^{i/ta(ri)}* ‘be released, be removed’**

Token frequency: 8 (NS)

NS

PRS.3SG

la-it-ta-ri (KBo 2.2 iv 37); *DUH-ta-ri* (KBo 2.6+ i 38), *la-it-ta-ri* (iii 48), *la-it-ta-ri* (65);

la-it-ta-ri (KUB 16.58 iii 5); *DUH-ri* (KUB 50.6+ ii 43), *DUH-ri* (iii 59)

IMP.3SG

la-a-at-ta-ru (KBo 11.1 rev. 18)

***lāk-ⁱ* ‘knock out, turn’, *lag-^{ā(ri)}* ‘fall’**

Token frequency: 2 (NS)

NS

PRS.3SG

=*kan la-ga-a-ri* (KUB 19.23 rev. 18), =*kan la-ga-a-ri* (19)

***lazziye/a-^{ta(ri)}* ‘be(come) good, be favorable’, *lazziye/a-^{zi}* ‘set straight’**

Token frequency: 2 (OS), 3 (MS), 215 (NS)

OS

PRS.3SG

la-a-az-zi-at-ta (KBo 6.2 i 18), *la-az-at-ta* (18)

MS

PRS.3SG

SIG₅-at-ta (IBoT 1.36 iv 37)

PRS.3PL

SIG₅-an-ta (KBo 16.97 + rev. 2)

IMP.3SG

SIG₅-ta-ru (KBo 8.55 18)

NS

PRS.3SG

SIG₅-ri (KUB 15.11 i 7); *SIG₅-ri* (KUB 15.3 i 18); *SIG₅-ri* (KUB 5.6 i 33), *SIG₅-ri* (KUB 5.6 i 48)

PST.3SG

SIG₅-*ya-at-ta-at* (KBo 4.8 ii 25), SIG₅-*ta-ti* (KUB 23.103 obv. 4), SIG₅-*at* (KUB 5.6 i 20), SIG₅-*at* (iv 26)

IMP.3SG

SIG₅-*ya-at-ta-[ru]* (KUB 14.11 iii 23), SIG₅-*[ru]* (KBo 14.21 i 6), SIG₅-*ru* (11), SIG₅-*ru* (16), [S]IG₅-*ru* (27), SIG₅-*ru* (35), SIG₅-*ru* (38), SIG₅-*ru* (45), SIG₅-*ru* (53), SIG₅-*ru* (58), SIG₅-*ru* (64), SIG₅-*ru* (70), SIG₅-*ru* (83), SIG₅-*r[u]* (KBo 14.21 ii 8)SIG₅-*ru* (16), SIG₅-*ru* (25), SIG₅-*ru* (34), SIG₅-*ru* (42), SIG₅-*ru* (51), SIG₅-*ru* (71), [SIG₅-*ru*] (KBo 14.21 iii 46), SIG₅-*ru* (54), SIG₅-*ru* (63); SIG₅-*ru* (KBo 16.98 i 7), SIG₅-*[ru]* (ii 6), SIG₅-*ru* (KBo 2.2 i 3), SIG₅-*ru* (4),SIG₅-*ru* (15), SIG₅-*ru* (19), SIG₅-*ru* (56), SIG₅-*ru* (ii 2), SIG₅-*ru* (8), SIG₅-*ru* (14), SIG₅-*ru* (16), SIG₅-*ru* (41), SIG₅-*ru* (49), SIG₅-*ru* (iii 1), SIG₅-*ru* (12), SIG₅-*ru* (16), SIG₅-*ru* (28), SIG₅-*ru* (38), SIG₅-*ru* (iv 5), SIG₅-*ru* (15), SIG₅-*ru* (29), SIG₅-*ru* (38); SIG₅-*ru* (KBo 2.6 i 2), SIG₅-*ru* (4), SIG₅-*ru* (16), SIG₅-*ru* (20), SIG₅-*ru* (40), SIG₅-*ru* (44), SIG₅-*ru* (ii 15), SIG₅-*ru* (30), SIG₅-*ru* (45), SIG₅-*ru* (54), SIG₅-*ru* (iii 9), SIG₅-*ru* (11), SIG₅-*ru* (23), SIG₅-*ru* (24), SIG₅-*ru* (34), SIG₅-*ru* (36), SIG₅-*ru* (50), SIG₅-*ru* (52), SIG₅-*ru* (iv 1), SIG₅-*ru* (3), SIG₅-*ru* (5); SIG₅-*ru* (KUB 16.16 obv. 6), SIG₅-*ru* (12), SIG₅-*ru* (22), SIG₅-*ru* (rev. 10), SIG₅-*ru* (17), SIG₅-*ru* (22), SIG₅-*ru* (left ed. 3); SIG₅-*r[u]* (KUB 16.20 i 2); [SIG₅-*ru*] (26), SIG₅-*ru* (35), SIG₅-*ru* (40), SIG₅-*ru* (48), SIG₅-*ru* (53), SIG₅-*ru* (58), SIG₅-*ru* (61), SIG₅-*ru* (64), SIG₅-*ru* (ii 20), SIG₅-*[ru]* (23), SIG₅-*ru* (iii 31), [SIG₅-*ru*] (iv 10), SIG₅-*ru* (17), SIG₅-*ru* (23), SIG₅-*ru* (29), SIG₅-*ru* (35); [SIG₅-*ru*] (KUB 16.58 ii 11), SIG₅-*ru* (iii 8); SIG₅-*ru* (KUB 22.70 obv. 11), SIG₅-*ru* (28), SIG₅-*ru* (39), SIG₅-*ru* (48), SIG₅-*ru* (50), SIG₅-*ru* (52), SIG₅-*ru* (53), SIG₅-*ru* (54), SIG₅-*ru* (55), SIG₅-*ru* (56), SIG₅-*ru* (57), SIG₅-*ru* (58), SIG₅-*ru* (59), SIG₅-*ru* (60), SIG₅-*ru* (65), [SIG₅-*ru*] (rev. 1), SIG₅-*ru* (5), SIG₅-*ru* (7), SIG₅-*ru* (8), SIG₅-*ru* (9), SIG₅-*ru* (17), SIG₅-*ru* (18), SIG₅-*ru* (23), SIG₅-*ru* (29), SIG₅-*ru* (32), SIG₅-*ru* (37), SIG₅-*ru* (39), SIG₅-*ru* (41), SIG₅-*ru* (43), SIG₅-*ru* (47), SIG₅-*ru* (49), SIG₅-*ru* (53), SIG₅-*ru* (59), SIG₅-*ru* (62), SIG₅-*ru* (67); SIG₅-*ru* (KUB 5.1 i 2), SIG₅-*ru* (6), SIG₅-*ru* (9), SIG₅-*ru* (12), SIG₅-*ru* (16), SIG₅-*ru* (21), SIG₅-*ru* (25), SIG₅-*ru* (27), SIG₅-*ru* (29), SIG₅-*ru* (33), SIG₅-*ru* (34), SIG₅-*ru* (40), SIG₅-*ru* (44), SIG₅-*ru* (50), SIG₅-*ru* (56), SIG₅-*ru* (62), SIG₅-*ru* (65), SIG₅-*ru* (75), SIG₅-*ru* (89), SIG₅-*ru* (93), SIG₅-*ru* (96), SIG₅-*ru* (100), SIG₅-*ru* (101), SIG₅-*ru* (105), SIG₅-*ru* (ii 7), SIG₅-*ru* (11), SIG₅-*ru* (15), SIG₅-*ru* (18), SIG₅-*ru* (30), SIG₅-*ru* (37), SIG₅-*ru* (42), SIG₅-*ru* (49), SIG₅-*ru* (62), SIG₅-*ru* (69), SIG₅-*ru* (86), SIG₅-*ru* (iii 20), SIG₅-*ru* (24), SIG₅-*ru* (5), SIG₅-*ru* (24), SIG₅-*ru* (30), SIG₅-*ru* (47),

SIG₅-ru (48), SIG₅-ru (57), SIG₅-ru (62), SIG₅-ru (67), SIG₅-ru (80), SIG₅-ru (85), SIG₅-ru (88), SIG₅-ru (91), SIG₅-ru (iv 12), SIG₅-ru (44), SIG₅-ru (51), SIG₅-ru (52), SIG₅-ru (54), SIG₅-ru (59), SIG₅-ru (60), SIG₅-ru (62), SIG₅-ru (66), SIG₅-ru (72), SIG₅-ru (74), SIG₅-ru (78), SIG₅-ru (79), SIG₅-ru (85); SIG₅-ru (KUB 5.11 i 31), SIG₅-ru (iv 50); SIG₅-ru (KUB 5.6 i 14), SIG₅-ru (ii 55), SIG₅-ru (64), SIG₅-ru (iii 10), SIG₅-ru (15), SIG₅-ru (28), SIG₅-ru (43), [SIG₅-ru] (46); SIG₅-r[u] (KUB 50.77+ obv. 9); SIG₅-ru (KUB 6.9+ i 5), SIG₅-ru (18), SIG₅-ru (iii 11); SIG₅-ru (KUB 14.13 iv 20); SIG₅-ru (KUB 14.8 obv. 4)

IPFV.PRS.3SG

SIG₅-is-qa-ta-ri (KBo 6.29 i 11)

***lēlaniye/a-^{ta(ri)}* ‘be(come) furious’**

Token frequency: 1 (OS)

OS

PRS.3SG

le-e-[la]-ni-at-ta (KBo 6.2 ii 14)

***lukk-^{ta}* ‘get light, dawn’**

Token frequency: 8 (OS), 8 (MS), 2 (NS)

OH

PRS.3SG

lu-uk-kat-ta (KBo 17.1+ ii 30), lu-uk-kat-ta (iv 7), lu[-uk-k]at-ta (24); lu-ug-ga-at-ta (KBo 17.3+ iv 21); [(lu-uk-kat-t)]a (KBo 17.11+ i 31); lu-uk-ta ta (KBo 17.13+ rev. 9)

PST.3SG

lu-uk-ta-at (KUB 36.104 i 19)

MS

PRS.3SG

lu-uk-kat-ta (KUB 1.11+ ii 1), *lu-uk-kat-ta* (iii 49); *lu-uk-kat-ta* (KUB 13.1 i 29); *lu-uk-kat-ta* (KUB 29.40 ii 2), [*lu-uk-kat-t*]a (20), *lu-uk-kat-ta* (iv 4), *lu-uk-kat-t[a]* (34); *lu-uk-kat-ta* (KUB 29.44+ i 1)

NS

PRS.3SG

lu-uk-ta (KBo 5.8 i 26)

PST.3SG

=*kan lu-uk-ta-at* (KBo 5.8 iii 22)

mai-/mi-ⁱ ‘grow’

Token frequency: 1 (OS)

OS

PRS.3SG

mi-ya-ti (KBo 17.22 ii 4)

markiye/a-^{zi} ‘reject, refuse’, ***markiye/a-^{ta(ri)}*** ‘be refused’

Token frequency: 1 (OS)

OS

IMP.3SG

mar-ki-ya-ru (KBo 3.34 ii 41)

***marra-^{ta(ri)}*, *mariye/a-^{ta(ri)}* ‘melt (intr.), stew’, *mariye/a-^{zi}* ‘melt (tr./intr.?)’**

Token frequency: 1 (OS), 1 (NS)

OS

PRS.3SG

mar-ri-it-t[a] (KBo 17.43 i 6)

NS

PRS.3SG

mar-ri-ya-at-ta-ri (KBo 4.14 i 48)

***mau/mu-ⁱ*, *mauss-^{zi}* ‘fall’**

Token frequency: 1 (NS)

NS

PST.1SG

ma-us-ha-ha-at (KUB 1.1 iii 24)

***mēma-ⁱ* ‘speak, tell’**

Token frequency: 1 (NS)

NS

PST.1SG

me-mi-ya-ah-ha-at (KBo 4.12 obv. 27)

***mer-^{zi}* ‘disappear, vanish’**

Token frequency: 1 (NS)

NS

PST.3SG

me-ir-ta-at (KUB 31.56 6)

***mehuwandahh-/mياهوwantahh-ⁱ* ‘make old’, *mehuwandahh-/mياهوwantahh-^{ta(ri)}*
‘age’**

Token frequency: 3 (NS)

NS

IMP.2SG

=*kan me-hu-un-ta-ah-hu-ut* (Bo 86/299 iv 15); =*kan mi-hu-un-ta-ah-hu-ut* (KBo 4.10 ii 11); =*kan mi-ya[(hu-wa-an)-ta-a]h-hu-ut* (FHL 57+ iv 46)

***mummiye/a-^{zi}* ‘keep falling, crumble (?)’**

Token frequency: 1 (MS)

MS

PRS.3SG

=*kan mu-um-mi-i-e-et-ta* (KBo 50.280+ ii 18-19)

***nahsariye/a^{-zi}* ‘be(come) afraid’**

Token frequency: 6 (NS)

NS

PRS.3PL

na-ah-sar-ri-ya-an-da-ri (KBo 5.6 ii 6); *na-ah-sa-ri-ya-an-da-ti* (KBo 4.4 iv 31)

PST.3SG

[*(na-ah-sar-ri-)-ya-a*]*t-ta-at* (KBo 3.4 ii 68); =*za na-ah-sa-r[i-ya-at-ta-at]* (KUB 19.13+ iv 10)

PST.3PL

na-ah-sar-ri-ya-an-ta-at (KUB 19.13+ i 49); *na-ah-sar-ri-ya-an-ta-at* (KBo 4.7 i 57)

***nai⁻ⁱ* ‘turn, send’, *nē^{-a(ri)}* ‘turn (intr.), be sent’**

Token frequency: 2 (OS), 11 (MS), 25 (NS)

OS

PRS.3SG

=*as-ta ne-e-a* (KBo 17.43 i 12)

PRS.3PL

ne-e-an-da (KBo 17.9+ ii 29)

MS

PRS.3SG

ne-e-a-ri (ABoT 1.65 rev. 11), =*za* [*ne-e-a-ri*] (15); *ne-e-a-[ri]* (IBoT 1.36 i 21), *ne-e-a-ri* (iii 63); *ne-e-ia* (KUB 8.81 ii 7); *ne-ya-r[i]* (KUB 13.27 rev. 102);

PST.3SG

ne-e-a-[a]t (KUB 31.79 i 8); *ne-ya-at-ta-[at]* (KUB 23.50+ 17); *ne-e-a-at* (KUB 14.1 + KBo 19.38 obv. 65)

IMP.2PL

= *kan na-is-du-ma-at* (KBo 16.25 i 74)

IPFV.PRS.3SG

=*as-ta na-is-ki-it-ta-ri* (HKM 27 obv. 9)

NS

PRS.1SG

ne-ya-ah-ha-ri (KUB 5.1 iii 55)

PRS.2SG

=*za=kan ne-ya-at-ta-ti* (KBo 50.28 i 33), =*ka*[*n ne-ya-at-ta-[ri]*] (KBo 16.98 iii 15)

PRS.3SG

=*kan ni-ya* (KBo 4.14 ii 14), =*kan* [*ni*]-*ya-ri* (26), =*kan ni-ya-ri* (54), =*kan ni-ya-ri* (62), =*kan ni-ya-ri* (73), =*kan ni-ya-ri* (79), =*kan ni-ya-ri* (iii 14), =*kan ni-ya-ri* (iii 28); =*kan ne-ya-ri* (KUB 5.1 iii 37); =*kan ne-ya-ri* (KUB 21.29 iv 14); =*za=kan ne-ya-ri* (KUB 1.1 iv 11); =*kan ne-ya-ri* (KBo 11.1 obv. 25)

PRS.3PL

=*kan ni-ya-an-ta-ri* (KBo 4.14 ii 56); *ne-an-ta-ri* (KUB 5.1 iii 80)

PST.1SG

=*za=kan ne-ya-ah-ha-at* (KBo 5.8 iii 19)

PST.3SG

ni-ya-at-ta[(-at)] (KBo 4.14 ii 2); =*kan ne-ya-ad-da-at* (KUB 16.16 obv. 22), =*kan ne-ya-ad-da-at* (rev. 10), =*kan ne-ya-ad-da-at* (KBo 16.6 left ed. 3); =*kan ne-ya-at-ta-at* (KUB 31.71 iii 6)

PST.3PL

ne-an-ta-at (KUB 19.9 i 5)

IMP.3SG

=*[kan] ni-ya-ru* (KBo 4.14 ii 15)

IPFV.PRS.3SG

=*san na-a-es-ket-ta-ri* (KBo 11.1 obv. 27)

***nakkēss-^{zi}* ‘become important, become troublesome to’**

Token frequency: 3 (NS)

NS

PST.3SG

na-ak-ke-e-e-s-ta-at (KUB 14.4 iii 25)

IPFV.PRS.3SG

na-ak-ke-es-kat-ta-ri (KBo 4.14 ii 27)

IPFV.PST.3PL

na-ak-ki-is-kan-ta-at (KBo 18.15 8)

***neku-^{zi}* ‘become evening’**

Token frequency: 1 (MS), 1 (NS)

MS

PST.3SG

ne-ku-ut-t[a-at] (KUB 29.54 iv 9)

NS

PST.3SG

ne-ku-ut-ta-at (KBo 5.8 iii 19)

***nini(n)k-^{zi}* ‘set in motion (tr.)’, *nini(n)k-^{ta(ri)}* ‘mobilize (intr.)**

Token frequency: 2 (MS), 7 (NS)

MS

PRS.3PL

ni-ni-i[n-kan-ta] (KUB 23.72 rev. 19)¹⁶³

IMP.2PL

ni-ni-ik-du-ma-at (KBo 16.25 i 18)

¹⁶³ I follow the established reading *nini[nkanta]* (*CHD*, Reichmuth 2011: 116), which is admittedly tentative, as one could also restore the form alternatively as e.g. *nini[nkanzi]* (cf. *CHD s.v.*).

NS

PRS.3SG

ni-ni-ik-ta-ri (KUB 21.1 iii 46); *ni-ni-ik-ta-ri* (KBo 5.4 ii 43); *ni-ni-[ik-ta-ti/ri]* (KBo 22.39 ii 15)

PST.3SG

[*ni-ni*]-*ik-ta-at* (KBo 2.5 ii 44); *ni-ni-ik-ta-at* (KBo 5.8 i 33), *ni-ni-ik-ta-at* (ii 11); [*ni-ni-ik-ta-ti*] (KBo 5.9 ii 3)

***pahs-ⁱ* ‘protect’**

Token frequency: 37 (MS), 39 (NS)

MS

PRS.1SG

pa-ah-ha-as-ha (KUB 26.20 i 19)

PRS.3SG

=*za pa-ah-ša* (KUB 36.127 obv. 8); *pa-ah-sa-r[i]* (KBo 16.27 ii 16); *pa-ah-sa-ri* (KBo 16.25 i 60)

PRS.1PL

pa-ah-su-wa-as-ta (KBo 16.27 iii 16); *pa-ah-ha-as-su-wa-as-t[a]* (KBo 50.64 + i 62)

IMP.3SG

[*pa-ah-s*]*a-ru* (KBo 16.25 i 59-60)

IMP.2PL

pa-ah-ha-as-du-ma-at (KBo 16.25 i 80); [*pa-ah-ha-as-du-ma-a*]*t* (KBo 16.25 i 63); *pa-ah-ha-as-du-ma-[at]* (KBo 8.35 ii 13); *pa-ah-ha-as-du-ma-a[t]* (KUB 36.114 i 13)

IMP.3PL

[p]a-ah-s[a]-a[n-da-ru] (HKM 75 obv. 4); pa-ah-sa-an-[d]a-ru (HKM 80 obv. 4); [pa]-ah-sa-an-da-ru (HKM 17 rev. 40); pa-ah-s[a-an-da-ru] (HKM 29 rev. 14); [pa-ah-s]a-an-da-ru (HKM 95 rev. 11); [pa-ah-sa-an-da-r]u (HKM 84 obv. 5); [pa-ah-sa-an-da-ru] (HKM 17 r. ed. 2); pa-a[h-s]a-an-da-ru (HKM 84 rev. 11); [pa-ah-sa-an-d]a-ru (HKM 33 rev. 39); pa-ah-sa-an-da-[r]u (HKM 81 rev. 28); pa-ah-sa-an-ta-ru (HKM 36 rev. 41); pa-ah-[s]a-an-da-ru (HKM 81 obv. 8); pa-ah-sa-an-da-ru (HKM 53 rev. 15); pa[-ah-sa-an-da-ru] (HKM 28 obv. 8); pa-a[h-s]a-[a]n-da-ru (HKM 89 obv. 6); pa-ah-sa-an-da-ru (HKM 10 rev. 46); pa-ah-sa-an-da-[r]u (HKM 31 rev. 24); pa-ah-sa-an-da-ru (HKM 36 l. ed. 1); pa-ah-sa-an-da-ru (HKM 2 rev. 19); pa-ah-sa-an-da-ru (HKM 3 rev. 20); pa-[a]h-sa-an-da-ru (HKM 21 rev. 19); pa-[ah-sa-an-da-ru] (HKM 67 obv. 6); pa-ah-sa-an-da-ru (HKM 27 rev. 22); pa-ah-sa-an-da-ru (HKM 73 rev. 23); pa-ah-sa-an-da-ru (ABoT 1.65 obv. 4); pa-ah-sa-an-da-ru (KBo 8.35 ii 15)

NS

PRS.3SG

pa-ah-sa-ri (Bo 86/299 ii 69); pa-ah-sa-ri (KBo 19.43+ i 34), pa-ah-sa-ri (KBo 19.43+ i 37); PAP-ri (KUB 23.103 obv. 5); pa-ah-sa-ri (KBo 50.59a iv 2)

PRS.3PL

[pa-ah-ha-as]-sa-an-ta-ri (FHL 57+ i 75), [pa-ah-ha-as-]sa-an-ta-ri (KUB 21.1 i 75)

PST.1SG

pa-ah-ha-as-ha-ha-at (FHL 57+ i 72); pa-ah-ha-as-ha-ha-at (KUB 21.1 i 72); PAB-as-ha-at (KUB 26.32 i 10), PAB-ha-ha-at (12), P[AB]-ah-ha-at (17); [pa-ah-h]a-as-ha-at (KUB 6.47 4)

PST.3SG

pa-ah-ha-as-ta-at (KUB 21.49 obv. 6), pa-ah-ha-as-ta-at (KUB 3.119 i 7); pa-a[h-ha-as-ta-at] (KBo 16.14 1), pa-ah-ha-as-[ta-at] (5); PAB-ah-ha-as-ha-at (KUB 26.33 ii 6);

[*pa-ah-ha-as-ha-at*] (KUB 6.47 5); [*pa-ah-ha-as-t*]*a-at* (KUB 19.37 ii 7), [(*pa-ah-ha-as-t*)]*a-at* (KUB 23.1 i 20)

IMP.3SG

pa-ah-sa-ru (Bo 86/299 ii 34), *pa-ah-sa-ru* (47), *pa-ah-sa-ru* (70); *pa-ah-sa-[(ru)]* (FHL 57+ iii 40), *pa-ah-sa-ru* (FHL 57+ iii 44)

IMP.2SG

PAB-*as-hu-ut* (KBo 42.60 rev. 7)

IMP.2PL

pa-ah-ha-as-du-ma-at (KBo 4.12 rev. 3)

IMP.3PL

pa-ah-sa-an-da-r[u] (KBo 18.2 4); *pa-ah-sa-an-t[a-ru]* (KBo 19.44+ i 14), *pa-ah-sa-an-[da]-ru* (KBo 19.43+ ii 12); [(*pa-ah*)]*sa-an-ta-ru* (FHL 57+ iv 44), [(*pa-ah-sa-*)]-*an-ta-ru* (FHL 57+ ii 12), *pa-ah-sa-an-ta-ru* (KBo 19.74+ ii 12); [*pa-ah*]-*sa-an-da-ru* (KBo 19.71 45), *pa-ah-sa-an-ta-ru* (KBo 4.10 ii 10); *pa-ah-sa-an-ta-ru* (Bo 86/299 iv 14); *pa-ah-ha-sa-an-ta-ru* (CTH 385.8 13)

paiske/a-^{ta(ri)/zi} ‘go’

Token frequency: 2 (OS), 6 (MS)

OS

PST.1SG

pa-is-ga-ha-at (KBo 17.1+ iv 13)

IMP.3SG

[*pa-is-k*]*at-ta-ru* (KBo 25.107 3)

MS

IPFV.PRS.3SG

=*kan pa-is-ke-et-ta* (IBoT 1.36 i 63); *pa-is-ke-ta* (KUB 31.100 iv 2)

IPFV.PRS.3PL

=*kan pa-is-kan-da* (IBoT 1.36 i 60), =*kan ta pa-is-[kan-d]a* (61), =*kan pa-is-kan-ta* (63);
pa-is-kan-ta (KUB 13.27 rev. 83)

***parh*^{-zi} ‘chase, hunt’**

Token frequency: 5 (MS)

MS

PRS.3SG

par-ha-at-ta-ri (KUB 14.1+ rev. 92)

IMP.3PL

[*par-h*]a-an-da-ru (KUB 34.41 5), *par-ha-an-da-ru* (10); *par-ha-[an-da-ru]* (KUB 36.109 10); *par-ha-an-ta-ru* (KUB 36.114 8)

***pars(i)*^{-a(ri)/zi} ‘break’**

Token frequency: 46 (OS), 10 (MS), 18 (NS)

OS

PRS.1SG

par-as-ha (KBo 17.1+ iii 14), *par-a[s-ha]* (iv 5), *pa[r-a]s-ha-ri* (10)

PRS.3SG

par-si-ya (KBo 20.19+ i 3); [*par-si-ya*] (KBo 17.11+ i 23), [(*p*)]*ar-si-ya* (26), *par-si-ya* (52); *par-si-ya* (KBo 20.14+ i 21); *par-si-ya* (KBo 25.35 ii 6); *par-si-ya* (KBo 20.10+ ii 17), *par-si-ya* (iv 6); [*par-s*]*i-ya* (KBo 20.35 ii 10); *par-si-ya* (KBo 25.61 rev. 11), *par-si-ya* (18), [*par-si-ya*] (25); [*p*]*ar-si-ya* (KBo 17.30 iii 5); *par-si-ya* (KBo 20.23 obv. 3); *par-si-ya* (KBo 25.82 rev. 13); *par-si-y[a]* (KBo 25.84 i 9); [*par*]-*si-ya* (KBo 25.86 obv. 3); *par-si-y[a-]* (KBo 25.88 8); *par-si-[ya]* (KBo 25.95 i 4); *par[-si-ya]* (KBo 25.98 4); [*par-s*]*i-ya* (KBo 17.35 iii 9), *par-si-ya* (10), *par-si-ya* (14), *par-si-ya* (15); *par-si-ya* (KBo 20.39 4), [*p*]*ar-si-ya* (13); *par-si-ya* (KBo 25.149 i 3); [*pár-si-y*]*a* (KUB 29.35+ iii 2), *pár-si-ya* (3), *pár-si-ya* (5)

PRS.3PL

[(*par-si-*)]*ya-an-da* (KBo 17.11+ i 51); *par-sa-an-da* (KBo 20.8 iv 10); *par-si-an-da*[-] (KBo 25.53 rev. 5); *par-si-an-ta*[-] (KBo 17.36+ ii 21); *par-si-an-da* (KBo 17.16 2), *par-si-an-da* (7); *par-si-ya-an-da* (KBo 25.88 7)

UNCLEAR

par-si[-] (KBo 17.11+ iv 22); *par-si*[-] (HHT 73 rev. 8); *par-si*[-] (KBo 17.36+ ii 7); *par*[-] (KBo 17.33+ iii 6); *pa*[*r-*] (KBo 17.30 iii 7); *par-si*[-] (KBo 25.86 obv. 11)

MS

PRS.3SG

pár-ši-ia (KUB 45.47 + iii 3), *pár-ši-ia* (5), *pár-ši-ia* (7), *pár-ši-ia* (9), *pár-ši-ia* (13), [*pár-ši*]-*ia* (15), *pár-ši-ia* (29), *p*[*ár-ši-ia*] (iv 11), [*pár-ši-ia*] (13), *pár-ši-ia* (20)

NS

PRS.3SG

[*pa*]*r-si-ya* (KUB 6.45 iv 9), [*pa*]*r-si-ya* (13), *par-si-ya* (19), *par-si-ya* (24), [*par-s*]*i-ya* (29), *par-si-ya* (34), *par-si-ya* (34), *par-si-ya* (37), *par-si-ya* (39), *par-si-ya* (42), *pa*[*r-s*]*i-ya* (50), *par-si-ya* (53), *par-si-ya* (55), *par-si-ya* (56), *par-si-y[a]* (61); *par-si-ya* (KUB 6.46 i 40); *par-si-ya* (KUB 25.22 iii 13), *par-si-ya* (15)

punuss-^{zi} ‘ask, question, consult’, ***punuss-^{ta(ri)}*** ‘be asked, investigated’

Token frequency: 1 (MS)

MS

PRS.3SG

pu-nu-us-ta-ri (HKM 29 rev. 10)

salik-^{a(ri)/zi/i} ‘approach’

Token frequency: 4 (OS)

OS

PRS.3SG

sa-li-ga (KBo 17.43 i 15); *sa-li-g[a]* (KUB 29.36+ iv 10); *s[a-l]i-i-g[a]* (KUB 29.36+ iv 10)

PRS.2PL

sa-li-ik-tu-ma-ri (KBo 22.2 obv. 19)

sanna-ⁱ ‘hide, conceal’

Token frequency: 2 (MS)

MS

PRS.3SG

ša-an-na-at-ta (KUB 36.127 rev. 11), *ša-an-na-at-ta* (13)

***sārr-*ⁱ ‘divide (tr.), transgress’, *sarra-*^{ta(ri)} ‘split up (intr.), be split, transgress’**

Token frequency: 13 (MS), 1 (NS)

MS

PRS.2SG

=*kan sar-ra-at-ta* (KBo 16.47 obv. 14); *sar-ra-at-ta* (KUB 34.40 5)

PRS.3SG

sar-ra-at-ta-ri (KBo 50.64 + i 42)

PRS.2PL

sar-ra-ad-du-ma (KBo 16.29 + i 4), =*kan [sa]r-ra-ad-du-ma* (9); =*as-ta sar-ra-ad-du-ma* (KBo 8.35 ii 16), =*kan sar-ra-ad-du-ma* (22)

PST.3SG

=*kan sar-ra-at-ta-at* (KUB 14.1 + rev. 20), [*sar-ra-at-ta-at*] (48); =*as-ta sar-ra-at-ta-at* (KUB 23.72 ii 14)

PST.3PL

=*as-ta sar-ra-an-ta-ti* (KUB 30.12 i 18)

NS

PST.3PL

=*za sar-ra-an-da-at* (KBo 3.4 ii 53)

***sup-*^{(tt)a(ri)/zi} ‘fall asleep, sleep’**

Token frequency: 1 (NS)

NS

PRS.3SG

=za *su-up-ta-ri* (KBo 5.4 ii 38)

***suppiyahh*⁻ⁱ ‘purify’, *suppiyahh*^{-a/ta(ri)} ‘purify oneself (with =za)’**

Token frequency: 2 (OS²)

OS

3SG.PRES

=za *su-up-pi-a-ah-ha-ti* (KBo 25.112 ii 14), =za *su-up-pi-a-a[h-ha-ti]* (21)

***dā*⁻ⁱ ‘take’, *da*^{-ta(ri)} ‘be taken’**

Token frequency: 4 (NS)

NS

PRS.3SG

da-at-ta-ri (Bo 86/299 ii 3), *da-at-ta-ri* (89)

PST.3SG

da-at-ta-at (KBo 4.2+ iv 33), *ta-at-ta-at* (35)

***tamāss*^{-zi} ‘press, oppress’, *tamass*^{-ta(ri)} ‘be oppressed’**

Token frequency: 5 (NS)

NS

PRS.3SG

da-ma-as-ta-ri (KUB 15.29 i 12)

PST.3SG

ta-ma-as-ta-at (KUB 14.12 obv. 2), *ta-m[a-as-ta-at]* (7); *ta-ma-as-ta-at* (KUB 14.10 i 7);
[*ta-ma-as-t*]a-at (KUB 14.8 obv. 5)

***tame(n)k^{-zi}* ‘affix, attach, stick to, join (intr.)’**

Token frequency: 2 (MS), 1 (NS)

MS

PRS.3PL

[(*an-da*)] *ta-mi-in-kan-ta-r[i]* (KBo 17.105 iv 4, cf. Kloekhorst 2008 *s.v.*, *contra* Glocker 1997: 60)

PST.3SG

an-da ta-me-ek-ta-at (KBo 15.35+33 i 4)

NS

PRS.3SG

=*kan an-da dam-me-ik-ta-ri* (KUB 21.29 iv 9)

***damme/ishae^{-zi}* ‘damage’, *damme/ishae^{-tta(ri)}* ‘be damaged’**

Token frequency: 2 (MS), 1 (NS)

MS

PRS.3SG

dam-mi-is-ha-it-ta-ri (HKM 80 obv. 6)

PRS.3PL

dam-mi-is-ha-an-da-ri (HKM 31 obv. 12)

NS

PST.3SG

dam-me-es-ha-a-[e]t-ta-at (KUB 14.13+ i 29)

***tarna*⁻ⁱ ‘let go, allow’, *tarna*^{-ta(ri)} ‘be released, be allowed’**

Token frequency: 2 (MS), 2 (NS)

MS

PRS.3PL

ar-ha tar-na-an-ta (KUB 36.108 obv. 7)

PST.3SG

tar-na-at-ta-at (HKM 17 rev. 41)

NS

PRS.3SG

EGIR-an tar-na-at-ta-ri (KBo 4.10 i 12)

PST.3SG

tar-na-at-ta-at (KBo 5.8 i 22)

***tarra-^{ta(ri)}* ‘be able, can (+ inf.)’**

Token frequency: 3 (NS)

NS

PRS.1SG

tar-ra-ah-ha-ri (KUB 15.1 ii 14)

PST.1SG

tar-ra-ah-ha-at (KBo 16.14 v 14)

PST.3SG

tar-ra-ad-da-at (KUB 6.44 + 10)

***tarupp-^{zi}* ‘gather (tr.)’, *tarupp-^{ta(ri)}* ‘gather (intr.), be gathered, end (intr.)’**

Token frequency: 3 (MS), 5 (NS)

MS

PRS.3PL

ta-ru-up-pa-an-da (HKM 7 22, unclear whether this is a participle)

PST.3SG

ta-ru-up-ta-at (IBoT 1.36 iii 54)

PST.3PL

an-da da-ru-up-pa-an-te-et (HKM 20 7); *an-da ta-ru-up-pa-an-ta-ti* (KUB 23.12 ii 20)

NS

PRS.3SG

=*kan pa-ra-a ta-ru-up-ta-ri* (KUB 50.6 iii 59-60), =*kan ar-ha ta-ru-up-t[a]-ri* (KUB 14.10+ i 15)

PST.3PL

=*kan [an-da ta-ru-up-pa-a]n-da-at* (KUB 21.49 obv. 12)

IMP.3SG

=*kan ar-ha [ta-ru-u]p-da-a-ru* (KUB 14.10+ iv 22), =*kan t[a-ru-up-ta-ru]* (KUB 26.86 iii 7)

***das(sa)nu-^{zi}* ‘strengthen’, *das(sa)nu-^{ta(ri)}* ‘strengthen oneself (with =za)’**

Token frequency: 1 (MS)

MS

IMP.2SG

ta-as-sa-nu-uh-hu-ut-wa-az (KUB 13.27 obv. 46)

***teshaniye/a-^{ta(ri)}* ‘appear in a dream’**

Token frequency: 3 (NS)

NS

PST.3SG

te-es-ha-ni-ya-at (KUB 21.8 ii 15); [*te-es-h*]a-ni-at-ta-at (KUB 21.16 i 2); Û-a[(t)] (KUB 1.1+ i 36), Û-at (iii 4)

IPFV.PRS.3SG

te-es-a-ni-es-ki-ta-ri (KBo 16.98 ii 10)

tith-^a/tetha-ⁱ ‘*thunder*’

Token frequency: 3 (OS)

OS

PRS.3SG

[*ti-it*]-ha (KBo 17.11+ i 25), *ti-it-ha* (25), [(*ti-it-ha*)] (28)

tuhs-^{a(ri)/zi} ‘*cut*’

Token frequency: 4 (OS)

OS

PRS.3SG

tuh-sa (KBo 17.1+ ii 7); *tu-uh-sa* (KBo 25.73 7); *túh-[s]a-ri* (KUB 29.29 ii 4), *túh-sa-ri* (5)

tukk-^{āri} ‘*be visible, be important*’

Token frequency: 2 (MS), 5 (NS)

MS

PRS.3SG

tu-ug-ga-ri (KUB 23.72 rev. 15)

IMP.3SG

tu-uq-qa-a-ru (KBo 9.137 iii 16)

NS

PRS.3SG

du-u[q-qa]-ri (KBo 19.43+ iii 28); [*t*]*u-uq-qa-a-ri* (KUB 15.17 i 9); *tu-uq-qa-a-r[i]* (KUB 19.13+ iv 19)

PST.3SG

tu-uq-qa-a-at (KBo 4.12 obv. 18)

PST.3PL

tu-uk-ka-an-ta-ti (KBo 47.239 ii 2)

***uwaske/a-^{ta(ri)}* ‘come’**

Token frequency: 3 (MS)

MS

IPFV.PRS.3SG

=*kan [u]-i-is-ki-it-ta-ri* (KUB 14.1 + KBo 19.38 rev. 63)

IPFV.PRS.3PL

=*kan pa-ra-a u-is-kan-da-ri* (IBoT 1.36 i 74)

IPFV.IMP.3PL

u-is-kan-ta-ru (KUB 31.103 obv. 10)

usneske/a-^{zi} ‘weight, balance (tr.)’, ***usneske/a-^{tta(ri)}*** ‘put up for sale’

Token frequency: 3 (OS)

OS

IPFV.PRS.3SG

us-ne-es-[kat-ta] (KUB 29.29 ii 8), *us-ne-es-kat-ta* (12), *us-ne-es-k[at-t]a* (15)

wakk-^{āri} ‘be lacking’

Token frequency: 2 (NS)

NS

PRS.3SG

=*kan wa-aq-qa-a-ri* (KBo 4.8 ii 12), =*san wa-ag-ga-ri* (14)

ur-^{āri}, ***war-^{āri}*** ‘burn’

Token frequency: 1 (OS), 1 (NS)

OS¹⁶⁴

PRS.3SG

¹⁶⁴ Kloekhorst (2008 *s.v.*) also adds KBo 8.74+ ii 3, but the context is very fragmentary, and only the sings *ú-ra-a-* can be read.

ú-ra-a-ni (KBo 17.3+ iii 44)

NS

PRS.3SG

ar-ha BIL-*ni* (KUB 15.1 iii 19)

***wars-^{ta(ri)}* ‘lift up (intr.), be lifted, be(come) appeased’, *warsiye/a-^{zi}* ‘relieve (one’s spirit), be(come) appeased’**

Token frequency: 1 (NS)

NS

PRS.3SG

wa-[ar]-si-ya-at-ta-ri (KUB 14.8 rev. 34)

***watku-^{zi}* ‘jump, flee’**

Token frequency: 1 (NS)

NS

IMP.2SG

=*as-ta ar-ha wa-at-qa-ah-hu-ut* (KBo 19.43+ iii 50)

***weh-^{zi}* ‘turn’**

Token frequency: 1 (OS), 2 (MS), 13 (NS)

OS

PRS.3PL

ú-e-ha-an-ta (KUB 60.41+ ii 17)¹⁶⁵

MS

IMP.3PL

=*san ú-e-ha-an-da-ru* (KUB 13.1 i 45), *ú-e-ha-an-da-ru* (ii 25)

NS

PRS.3SG

=*kan ú-e-eh-ta-ri* (KBo 3.3 ii 18); *ú-e-eh-ta-ri* (KUB 31.71 iv 3); =*kan ú-e-eh-ta-r[i]* (KUB 21.38 obv. 31); =*kan ú-e-eh-ta-ri* (KBo 4.12 rev. 11); [*ú-e-*]*ah-at-ta* (KBo 12.112 rev. 4), =*san [ú-e-h]a-at-ta* (12)

PRS.3PL

a-ra-ah-za-an-da ú-e-ha-an-da-[(ri)] (KBo 5.4 ii 11); *a-ra-a[h-za-an-da ú-e-ha-an-da-ri]* (KBo 4.3 iv 24)

PST.3SG

=*kan ú-e-eh-ta-at* (KUB 31.66 ii 12); *ú-e-eh-ta-at* (KUB 26.1 iii 18)

IMP.3SG

ú-e-ḥa-at-ta-ru (KBo 55.21 obv. 2); *ú-e-ha-at-ta-ru* (KBo 12.112 rev. 10), *ú-e-ha-at-ta-ru* (13)

¹⁶⁵ The form occurs in a highly fragmentary context, so that it could also be a neuter plural nominative/accusative participle (cf. StBoT 26: 214 fn. 624).

wemiye/a-^{zi} ‘find’, wemiye/a-^{ta(ri)} ‘be found’

Token frequency: 1 (NS)

NS

IMP.3SG

ú-e-mi-ya-[at]-ta-ru (KUB 14.10 iv 19)

weriye/a-^{zi} ‘call, name, summon’, weriye/a-^{ttari} ‘join’

Token frequency: 7 (NS)

NS

PRS.2SG

an-da ú-e-ri-ya-at-ta-ti (KUB 6.41+ iii 61)

PRS.3SG

an-da ú-e-ri-ya-at-ta-ri (KUB 21.29 iii 47)

PST.1SG

an-da ú-e-ri-ah-ha-ha-[a]t (KUB 26.32+ i 13), *an-da ú-e-ri-ah-h[a-at]* (ii 7)

PST.3SG

an-da ú-e-ri-at-ta-at (KUB 23.1 iii 7), *an-da ú-e-ri-ya-at-ta-at* (KUB 6.41+ iii 51)

IMP.2SG

an-da ú-e-ri-ya-uh-ut (KUB 31.68 rev. 46)

wess-^{ta} ‘wear’, **wassiye/a-^{zi/ta(ri)}** ‘dress (tr.), dress up (with =za)’

Token frequency: 2 (OS), 4 (MS)

OS

PRS.3SG

u-e-es-ta (KBo 20.26+ obv. 12)

PRS.3PL

u-e-es-sa-an-da (KBo 17.1+ i 24)

MS

PRS.3PL

u-e-es-sa-an-ta (IBoT 1.36 i 77), *u-e-es-sa-an-ta* (ii 50), *u-e-es-sa-an-ta* (53), *u-e-es-sa-an-ta* (58)

wesiye/a-^{ta(ri)} ‘graze’

Token frequency: 1 (OS), 3 (MS)

OS

PRS.3SG

ú-si-e-et-ta (KBo 17.23 obv. 4)

MS

PRS.3SG

ú-e-si-ya-at-ta-ri (KUB 26.19 ii 3)

PRS.3PL

ú-e-si-ya-an-[d]a-ri (KUB 26.19 ii 18), [*ú-e-si-ya-an-da-ri*] (22)

***zahn-^{i/ta(ri)}* ‘hit’, *zahn-^{ta(ri)}* ‘be hit, hit each other’**

Token frequency: 2 (OS), 1 (NS)

OS

PRS.3PL

[*za-ah-ha-an-d*]a (KUB 29.32+ iii 27)

IPFV.PRS.3PL

za-ah-hi-is-kan-ta (KBo 17.36+ ii 16)

NS

PRS.3SG

=*kan za-ah-ta-ri* (KUB 5.1 iv 72)

***zahhiye/a-^{ta(ri)/zi}* ‘fight’**

Token frequency: 19 (MS), 1 (NS)

MS

PRS.1SG

za-ah-hi-ya-ah-ha (KUB 23.72 rev. 40); *za-ah-hi-ya-ah-ha-ri* (KUB 14.1 + KBo 19.38 obv. 30), *za-ah-hi-ya-ah-ha-ri* (31)

PRS.3SG

=ka]n *za-ha-hi-ya-a[t-ta-ri]* (KBo 16.27 ii 2); =san [*za-ah-hi-ya-at-ta*]-ri (KUB 14.1 + KBo 19.38 obv. 26), =san *za-ah-hi-ya-at-ta-ri* (rev. 47); *za-ah-hi-ya-at-ta-ri* (KUB 26.19 ii 15)

PRS.1PL

za-ah-hi-ya-u-wa-as-t[(a)] (KUB 31.44 ii 15)

PRS.2PL

[*za-ah-hi-ya-ad-d*]u-ma (KUB 23.72 rev. 64), [*z*]a-ah-i-ya-ad-du-ma (66)

PST.1SG

za-ah-hi-ya-ah-ha-at (KUB 23.12 iii 30)

IMP.2SG

za-ah-h[i-ya-ah-hu-ut] (KUB 14.1 + KBo 19.38 obv. 32), *za-ah-hi-ya-ah-hu-ut* (KBo 16.47 obv. 12)

IMP.2PL

za-ah-hi-ya-at-d[u-ma-at] (KBo 50.171 2); *za-ah-hi-ya-a[d-du-ma-at]* (KBo 16.27 iv 13); *za-ah-hi-ya-ad-[du]-ma-at* (KUB 21.47 rev. 22); *za-ah-hi-ya-ad-du-ma-at* (KUB 26.17 i 5); [*za-ah-hi-ya-ad-du-ma-at*] (KUB 23.72 rev. 41); *za-ah-h[i-y]a-ad-du-ma-at* (KUB 26.20 i 8)

NS

PRS.1PL

za-ah-hi-ya-u-wa-as-ta-ti (KBo 3.4+ ii 13)

zaluknu^{-zi} ‘postpone, delay (tr.)’, *zaluknu*^{-tari} ‘be delayed, be(come) late’

Token frequency: 1 (MS)

MS

PRS.3PL

za-al-ka-nu-an-ta-r[i] (KUB 13.1+ iv 37)

zē^{a(ri)} ‘cook (intr.)’

Token frequency: 1 (OS)

OS

PRS.3SG

ze-e-ya (KBo 17.36+ ii 20)

zinni-/zinn^{zi} ‘stop (tr.), destroy’, zinna^{ta(ri)} ‘finish (intr.)’

Token frequency: 2 (MS), 4 (NS)

MS

PRS.3PL

zi-in-na-an-ta-ri (IBoT 1.36 iii 51)

PST.3SG

zi-in-na-at-ta-at (HKM 80 obv. 8)

NS

PRS.3SG

zi-in-n[a-at-ta-ri] (KUB 22.70 rev. 21), *zi-in-na-at-ta-ri* (22), *zi-in-na-at-ta-ri* (65)

PST.3SG

zi-in-na-at-[ta-at] (KBo 2.5 iv 11)