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# The Tense-Aspect System of Proto-West Semitic

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# 1 Introduction

## 1.1 Aim of the Thesis

It is generally accepted that the Proto-Semitic language first split up into an eastern and a western branch. Proto-East Semitic is the direct ancestor of Akkadian (and Eblaite, see e.g. Huehnergard 2006: 3); all other Semitic languages are considered to be descendants of Proto-West Semitic. The key isogloss separating West Semitic from East Semitic is a shared innovation in the verbal system. I will briefly outline this innovation in the following paragraphs.

Akkadian exhibits a stative-resultative construction which is formed by adding a special set of enclitic subject pronouns to an intransitive participle (Huehnergard 1987: 222). The same set of pronominal suffixes may also be added to a noun if it is used predicatively. Since this inflectional paradigm<sup>1</sup> is the only one in Akkadian which is inflected exclusively by means of suffixes, it is also referred to as the ‘suffix conjugation’. In traditional terminology, the resultative construction is called *Permansive* or (henceforth:) *Stative*.<sup>2</sup> The following table (T1) gives an overview of inflectional forms of the *Stative* from the Akkadian verb *parāsum* ‘to cut’:

- 
- 1 What I (in lack of a better term) call ‘inflectional paradigm’ here is traditionally called a ‘tense’. However, ‘tense’ is an ambiguous term, since it also denotes a semantic concept (e.g. ‘present’) irrespective of any morphological instantiation in a particular language. ‘Tense’ will be used only in the latter sense in this study in order to avoid ambiguity. On the other hand, an ‘inflectional paradigm’ (just as a ‘tense’ in traditional terminology) is a morphological stem formation of the verb which expresses a tense, an aspect, a mood or an evidential, or a combination thereof, and to which affixes for person, number and gender may be added (e.g. the English Simple Present, the Pluperfect etc.). Mood and evidentiality are not the topic of the present thesis and are excluded from discussion wherever possible for the sake of simplicity.
  - 2 Following Comrie (1976: 10), any traditional term established in the description of a specific language is spelled with an initial capital letter (i.e. as a proper name) throughout this thesis. The non-capitalized form, on the other hand, is meant strictly as a technical term as defined in the course of the present study. This is important to avoid terminological confusion. While any technical term refers to a clear language-unspecific concept, there is no reason to assume from the name that, e.g., the Perfect in Arabic and the Perfect in Akkadian are in any way, morphologically or semantically, related to each other.

## T1 The Akkadian Stative

	sg.		pl.
1 <sup>st</sup>	<i>paars-āku</i>	1 <sup>st</sup>	<i>paars-ānu</i>
2 <sup>nd</sup> m.	<i>paars-āta</i>	2 <sup>nd</sup> m.	<i>paars-ātuna</i>
2 <sup>nd</sup> f.	<i>paars-āti</i>	2 <sup>nd</sup> f.	<i>paars-ātina</i>
3 <sup>rd</sup> m.	<i>paars</i>	3 <sup>rd</sup> m.	<i>paars-ū</i>
3 <sup>rd</sup> f.	<i>paars-at</i>	3 <sup>rd</sup> f.	<i>paars-ā</i>

The Akkadian Stative has no functional equivalent in any of the other Semitic languages. However, classical West Semitic languages exhibit a suffix conjugation which is morphologically very similar to the Stative in Akkadian. Yet, while the Akkadian Stative is a (predominantly intransitive) stative-resultative construction and is only built from verbs which allow for a resultative reading<sup>3</sup>, the suffix conjugation of all other classical Semitic languages is one of the central inflectional paradigms and can be built from any verb. It is often associated with perfective aspect and past tense<sup>4</sup>, and with an active reading for transitive verbs as a default. This inflectional paradigm (e.g. Hebrew *qat̄al*, Arabic *faʿala*) is traditionally called Perfect in Semitist literature. It is purely verbal; nouns cannot be combined with the same inflectional suffixes. The following table (T2) gives the inflectional forms of the Perfect in Arabic, using the sample verb *faʿala* ‘to do’. Similar inflectional paradigms are found in all other classical West Semitic languages.

## T2 The Arabic Perfect

	sg.		pl.
1 <sup>st</sup>	<i>faʿal-tu</i>	1 <sup>st</sup>	<i>faʿal-nā</i>
2 <sup>nd</sup> m.	<i>faʿal-ta</i>	2 <sup>nd</sup> m.	<i>faʿal-tum</i>
2 <sup>nd</sup> f.	<i>faʿal-ti</i>	2 <sup>nd</sup> f.	<i>faʿal-tunna</i>
3 <sup>rd</sup> m.	<i>faʿal-a</i>	3 <sup>rd</sup> m.	<i>faʿal-ū</i>
3 <sup>rd</sup> f.	<i>faʿal-at</i>	3 <sup>rd</sup> f.	<i>faʿal-na</i>

The Akkadian Stative and the West Semitic Perfect clearly have a common origin (see Kouwenberg 2010: 181).<sup>5</sup> Of the two forms, the Akkadian Stative is less

<sup>3</sup> See chapter 2 for a definition of the resultative.

<sup>4</sup> See chapter 2 for a definition of past tense and perfective aspect.

<sup>5</sup> Voigt (2003) is one of the few opponents to this assumption. In light of Egyptian evidence, he argues that Proto-Semitic had two suffix conjugations, corresponding to the East Semitic Stative and the West Semitic Perfect. East and West Semitic would have each retained one of the two while having lost the other (with some remnants of the Stative in Hebrew). This is not compelling to me. First, the Egyptian evidence is itself doubtful and partly based on the assumption that there

grammaticalized<sup>6</sup> than its West Semitic counterpart in that the morphosyntactic construction (viz. participle + subject pronouns) is still apparent. This indicates that the Akkadian Stative reflects a more archaic state of the suffix conjugation in terms of its morphology. The semantic values of the Akkadian Stative (resultative) and the West Semitic Perfect (perfective) confirm this picture. The development from resultative to perfective is a semantic path well-established in diachronic typology (see Bybee et al. 1994: 68f.), and it has also been repeatedly proposed as the diachronic path of the Semitic suffix conjugation by Semitists such as Hetzron (1976: 103f.) and Huehnergard (2002: 125).

Hence, a single suffix conjugation with stative-resultative semantics can safely be reconstructed for Proto-Semitic. In turn, the West Semitic Perfect is an innovated form of the original suffix conjugation. Since the innovated form is found in all classical Semitic languages except Akkadian (and, again, Eblaite), these languages are characterized by an important exclusively shared innovation<sup>7</sup>. This is a clear indication for a common origin of all West Semitic languages and thus justifies the assumption of a basic split into East and West Semitic<sup>8</sup>.

The innovated suffix conjugation is not the only difference between the verbal systems of East and West Semitic. For instance, while Akkadian *iprus* (Preterite) is most often associated with past tense, its morphological counterpart in Arabic (*yaf'al-*, Imperfect etc.) is most often associated with present tense or modality. Presumably, the re-interpretation of the suffix conjugation in Proto-West Semitic caused a chain reaction altering the semantics of other elements of the tense-aspect system. This diachronic process resulted in the attested tense-aspect systems of classical Semitic languages such as Ge'ez, Biblical Hebrew, and Classical Arabic.

However, the classical West Semitic languages exhibit rather diverse tense-aspect systems, and it has not yet been described in a satisfactory way how the attested tense-aspect systems have evolved (see Huehnergard 2002: 126).

All West Semitic languages are, by definition, descendants of Proto-West Semitic. Hence, their diverse tense-aspect systems are to be understood as having evolved out of the Proto-West Semitic tense-aspect system. It is thus worth asking how the Proto-West Semitic tense-aspect system looked, i.e. what inflectional paradigms it exhibited, and what functional and semantic contrasts were expressed by

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are two suffix conjugations in Semitic which is somewhat circular. Secondly, it is highly unlikely that two closely related constructions coexist for millennia (since the time of the proto-language of both Semitic and Egyptian) and then, one of each is given up in favor of the other without any obvious motivation such as semantic or morphological change. Voigt's account will not be discussed further here.

6 See section 1.2 for a discussion of grammaticalization.

7 See section 1.2 for a discussion of exclusively shared innovations.

8 For additional isoglosses between East and West Semitic, see Huehnergard 2006: 6.

these. A reconstruction of the Proto-West Semitic tense-aspect system allows to describe the diachronic paths which led to the attested West Semitic tense-aspect systems. This may in turn increase our understanding of these systems as the result of specific diachronic processes. Surprisingly, a reconstruction of the Proto-West Semitic tense-aspect system has, to the best of my knowledge, never been conducted. It is the aim of this thesis to fill this gap.

## 1.2 Methods

The reconstruction of tense and aspect in Proto-West Semitic will be based on the established methods of historical linguistics. One of the fundamental tools for linguistic reconstruction is the well-known ‘comparative method’, which has proven to be successful and reliable for various language families (see Weiss 2014 for a short up-to-date introduction). The comparative method is first and foremost concerned with phonological change, yet the underlying presuppositions are also true for other parts of language change. In particular, the comparative method claims that if two or more languages are genealogically related, they are all descendants of a single, more or less uniform common ancestor language. Hence, the variance between them can be described as the result of gradual divergence processes.

If two genealogically related languages differ with regard to a certain element, it is assumed that in one of the two languages the element was retained in the form inherited from the common ancestor language, while in the other, the element was exposed to a further development.<sup>9</sup> The former case is called a retention, the latter an innovation. If two or more languages share a conservative element, this is called a shared retention. Likewise, if two or more languages share the same secondary development, this is called a shared innovation.

A true shared innovation indicates that the respective languages have inherited the innovation from a common ancestor at a later stage than the common ancestor of all related languages including those in which the innovation is absent. In other words, the respective languages are more closely related to each other than they are to other languages of the same language family. Hence, shared innovations are used as the main criterion for positing a sub-branch in genealogical classification of languages (see e.g. Leskien 1876: VIIIf.). An instance which was already mentioned above is Proto-West Semitic, which was identified as a separate branch of Semitic by a shared innovation in section 1.1.

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<sup>9</sup> It might also be that both languages have innovated and none of them has retained the property as it was present in the ancestor language. Note that in the absence of further evidence, this is not detectable by the comparative method. The comparative method does not allow to reconstruct properties completely lost in the daughter languages.

Shared innovations are not the only cause for similarity between related languages. Shared retentions have already been mentioned as another cause. However, there are at least four different causes for a shared feature among two or more languages: shared innovations, shared retentions, parallel innovations and areal diffusions. Note that only shared innovations indicate an especially close genetic relation, i.e. only shared innovations are valid for genealogical classification. The following list gives an overview of the four causes of ‘shared’ features:

- *shared innovation:*  
Two or more languages share an innovative feature which has been developed in a common proto-language.
- *shared retention:*  
Two or more languages share a feature which they have preserved from the proto-language.
- *parallel innovation:*  
Two or more languages have innovated independently, but in a parallel way.
- *areal diffusion:*  
One or more languages have borrowed a certain feature from a neighboring language.

Areal diffusion is somewhat different from the other phenomena in that it involves language contact. If the languages (or dialects) in question are closely related in terms of genealogy — and this is certainly the case for Semitic languages —, areal diffusion leads to partial convergence of the respective languages (or dialects). Hence, areal diffusion may in certain cases obscure some of the divergence processes (i.e. innovations) which have occurred earlier in some of the languages in question.

Returning once again to the main opposition between innovation and retention, the question is how it can be decided which language was innovative and which one conservative in respect to a certain feature or, in other words, which form of the feature has to be reconstructed as the proto-form. Strictly speaking, the comparative method does not include a mechanism which allows for a decision on that matter. Therefore, it is necessary to resort to other methods.

A promising method is to use evidence from linguistic typology. Linguistic changes that have been observed numerous times in various unrelated languages are also likely to have happened in the particular case in question. But more than that, studies in linguistic typology of diachronic change have shown that not only are the same changes found repeatedly all over the world, but crucially, the reverse changes are often basically inexistent (see, e.g., Haspelmath 2004). In other words, language change is unidirectional. For instance, a *p* has changed to *f* in a number of unrelated (or distantly related) languages (e.g., Arabic, Greek, German, ...), but the reverse change from *f* to *p* is never attested at all. Thus, if we take two languages, one with *f* and one with *p* at the same position, it can be inferred instantly that the latter is the conservative one and that *p* is the correct proto-form, because *f* is an innovation and *p* a retention. According to the unidirectionality hypothesis, language change thus follows the same, unidirectional patterns, irrespective of the language family, the geographical area or the historical point in time. The claim of unidirectionality does not only hold for phonology, but also for morphology, syntax and semantics.

In morphosyntax, one of the most common types of diachronic change is the change of free lexical items into bound functional morphemes. This phenomenon is called grammaticalization (see, e.g., Lehmann 2015: 11f.). Typical examples of grammaticalization include the development from postpositions to case markers and from independent personal pronouns to verbal person markers. The increase in synthetic structure is often accompanied by a generalization in meaning (e.g., a postposition with the specific meaning ‘at’ may develop into a generic locative case).

Crucially, grammaticalization is a unidirectional process (see Haspelmath 1999). Independent lexical items may develop into grammatical markers, but grammatical markers never develop into independent lexical items. In other words, there is no degrammaticalization (see Lehmann 2015: 18). There are only rare and isolated counterexamples, and they are not even accepted by all as true counterexamples (see Haspelmath 2004). As with the example above with the change from *p* to *f*, if we take two languages which exhibit a similar construction, but one more analytic in structure and the second more synthetic, we can reconstruct the more analytic form of the construction as the pre-form. As has been seen in section 1.1, the Akkadian Stative is still more analytic and morphologically more transparent than the West Semitic Perfect. Based on the grammaticalization theory, the Akkadian form can be reconstructed as the more archaic of the two. For a further discussion of grammaticalization, see Lehmann (2015), Haspelmath (1998), Haspelmath (1999), Haspelmath (2004) and Bybee et al. (1994: 4f.).



Since the present study is concerned with linguistic reconstruction in the field of tense and aspect, it is of crucial importance to have a clear definition of these concepts. Unfortunately, there is little consensus among scholars about the nature of tense and aspect. Rather, a wide range of terminological and conceptual differences is found in the literature. Given this situation, it is even more necessary to specify how the concepts of tense and aspect are understood in this thesis. Thus, a relatively extensive part of this thesis (chapter 2) will be dedicated to the definition of the categories of tense and aspect as adopted in this thesis. As will be seen, many valuable insights are provided by linguistic typology. Tense and aspect have become a much-researched topic in typology in the last decades, and cross-linguistic studies such as Dahl (1985) or Bybee et al. (1994) have shown that the diverse systems found in the languages across the world can be described by means of a rather small set of prototypical semantic concepts expressed by grammatical morphemes which combine to systems of varying complexity (see chapter 2).

Any linguistic reconstruction is based on material from attested languages. In principle, material from all related languages should be considered for a reconstruction. At the beginning, however, it is advisable to only include material that is neither ambiguous nor doubtful. For this reason, the reconstruction of the Proto-West Semitic verbal system will be based on a selection of classical languages that are both well attested and well understood. The languages under consideration are Akkadian, Ge'ez, Biblical Hebrew and Classical Arabic. As a whole, they reflect the diversity among the classical Semitic languages sufficiently well in order to reconstruct a proto-language. Other languages will be considered only cursorily. The inclusion of Akkadian as an East Semitic language is crucial since it provides external evidence for what is innovated in Proto-West Semitic and what is inherited from Proto-Semitic.

### 1.3 Structure of the Thesis

The thesis is structured as follows. In chapter 2, I will discuss and define the notions of tense, aspect and aktionsart as adopted in this thesis. I will introduce a consistent terminology in order to prevent confusion. Furthermore, I will discuss the structure of tense-aspect systems in general as well as typical diachronic developments of tenses and aspects, based on typological evidence.

In chapter 3, I will give a rough outline of the tense-aspect systems of Akkadian, Ge'ez, Biblical Hebrew and Classical Arabic. The analysis of these four well-attested Semitic languages serves as the material considered for the reconstruction of tense and aspect in Proto-West Semitic. The analysis is based both on standard

grammar books on the respective languages and on papers concerned specifically with tense and aspect in the respective languages. The outline strictly follows the theoretical assumptions and the terminology developed in chapter 2.

In chapter 4, I will propose a reconstruction of the Proto-West Semitic tense-aspect system. The reconstruction is based on the application of typological evidence for the diachrony of tense and aspect (as established in chapter 2) onto the attested Semitic material (as outlined in chapter 3).

Finally, in chapter 5, I will give a short review of the results achieved and identify major implications for the understanding of the prehistory of West Semitic tense-aspect systems.

In the remainder of this chapter, I will discuss the genealogical classification of the Semitic languages.

#### 1.4 Genealogical Classification of the Semitic Languages

The topic of the present thesis is based on the assumption that the branching of Proto-Semitic into East and West Semitic is correct. It has been shown in section 1.1 that this claim is justified by linguistic data.

While this first branching of Semitic into East and West Semitic is uncontroversial, genealogical classification of West Semitic languages is less obvious. Most West Semitic languages have been in contact with other Semitic languages for long periods of time. This has led to convergence processes which partially obscure older divergent tendencies. It is often difficult to distinguish areal diffusion, shared retentions and shared innovations in a particular language (see Epps et al. 2013). While all of them are of interest, especially in a historical sense, only shared innovations are relevant for genealogical classification.

Arabic in particular is difficult to classify, because it shares similarities with both the languages to the north such as Hebrew and Aramaic and with the languages to the south such as Sabaic and Ge'ez. Traditionally, Arabic was grouped together with Ethio-Semitic, the Sayhadic (Old South Arabian) and the Modern South Arabian languages in a South Semitic branch, as opposed to Northwest Semitic comprising Canaanite and Aramaic (cf. Huehnergard & Rubin 2011: 260). This classification was based on shared properties such as the unconditioned shift of *p* to *f* or the extensive use of broken plurals.

Hetzron (1976) challenged this traditional classification. He argued that morphological innovations are more relevant for classification purposes than phonological or lexical innovations because, contrary to phonology or lexical items, morphology is rarely borrowed from one language to another. Shared lexical innova-

tions can hardly be distinguished from borrowings; hence, they do not represent reliable evidence for classification. On the other hand, shared morphological properties are likely to be shared innovations and, consequently, most reliable for genealogical classification.<sup>10</sup> Hence, Hetzron (1976: 103f.) based his classification on innovations in the verbal morphology.<sup>11</sup>

Ethio-Semitic and the Modern South Arabian languages exhibit a trisyllabic inflectional paradigm which involves doubling of the second root consonant (e.g. the Ge'ez Imperfect *yəqattəl*) or, in the case of Modern South Arabian, lengthening of the preceding vowel (e.g. Mehri *ysōbat*). This inflectional paradigm has a direct equivalent in the Akkadian Present (*iparras*). It is, however, completely absent in Canaanite, Aramaic, and Arabic. Based on this observation, Hetzron (1976) argued for a Central Semitic branch comprising of Canaanite, Aramaic and Arabic which is defined by the shared loss of the trisyllabic inflectional paradigm. For the remaining West Semitic sub-branches, viz. Ethio-Semitic, Sayhadic (i.e. Old South Arabian) and the Modern South Arabian languages, he proposed a South Semitic branch which is defined by its retention of the trisyllabic inflectional paradigm. As a consequence of this new classification, similarities between Arabic and the South Semitic languages (such as the broken plurals) have to be interpreted as either effects of areal diffusion or as shared retentions.

Two important modifications have been proposed to Hetzron's classification (cf. also Huehnergard & Rubin 2011). First, Nebes (1994b) showed that, contrary to what has been assumed earlier, Sabaic lacks the conjugational paradigm involving doubling of the second root consonant. Hence, it has taken part in the shared innovation of Central Semitic and, consequently, is now reclassified as belonging to the Central Semitic branch. The fact that Sayhadic lacks the trisyllabic conjugational paradigm is of great significance beyond the topic of linguistic classification: It means that Sayhadic languages are obviously not the direct ancestors of Modern South Arabian languages. Speakers of Sayhadic languages and those of Modern South Arabian languages form two different linguistic groups which had immigrated to South Arabia independently.<sup>12</sup>

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10 Faber (1997: 4) who principally accepts Hetzron's classification, argues that it is not morphology per se which is a good indicator of genealogical closeness, but idiosyncrasy. The more idiosyncratic an innovation, the less likely it is to have occurred independently in more than one language. Morphology is typically idiosyncratic. However, idiosyncratic phonological changes are no less valuable for genealogical classification.

11 Note that the Stative vs. Perfect isogloss separating East and West Semitic is also an innovation in the verbal morphology.

12 Speakers of Modern South Arabian language actually might have inhabited South Arabia already in antiquity, and possibly even before the arrival of the speakers of Sayhadic. It is obvious that the

A further modification was proposed by Porkhomovsky (1997). He argued that the main shared property of Modern South Arabian and Ethio-Semitic, viz. the existence of a trisyllabic inflectional paradigm (involving gemination of the second root consonant in Ethio-Semitic, but a long vowel after the first root consonant in Modern South Arabian) is a shared retention. However, shared retentions do not provide any evidence for a common ancestor. In lack of supporting evidence, it seems better to abandon the positing of a South Semitic subgroup and to classify Ethio-Semitic and Modern South Arabian on their own.

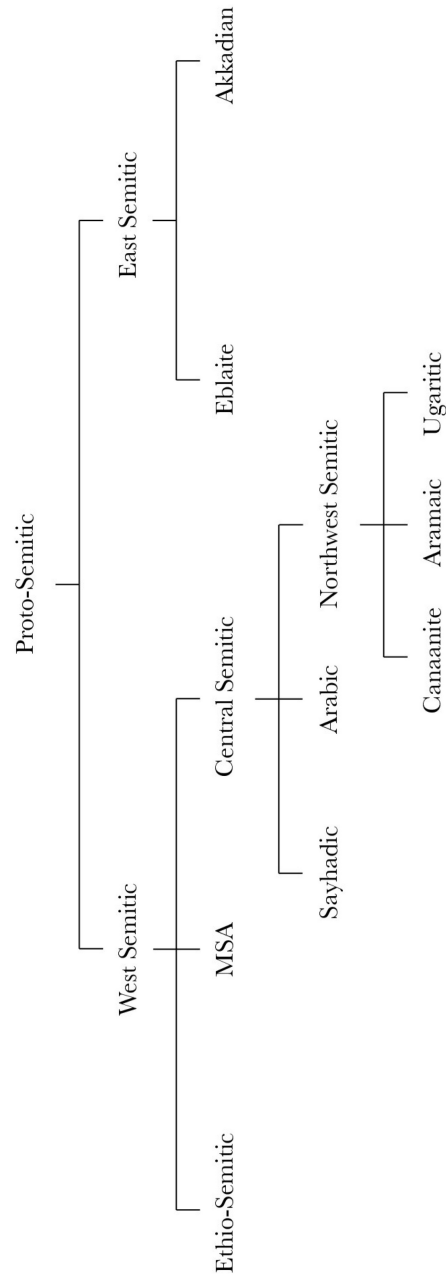
Interestingly, Kogan's (2015) extensive study of the genealogy of Semitic languages which is based on innovations in the basic lexicon rather than in morphology, has achieved a more or less identical classification of Semitic to the one discussed above. The above classification is probably the most widely accepted classification of Semitic today.<sup>13</sup> Figure (F1) on the next page presents the modified genealogical classification of Semitic as discussed in the previous paragraphs.<sup>14</sup>

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adjective 'modern' in the name 'Modern South Arabian' is inappropriate for a genealogical branch, because the historical attestation of a language has nothing to do with its genealogical classification and may cause confusion.

13 Note that, despite the fact that the genealogical branches of Sayhadic, Modern South Arabian and Ethio-Semitic are each generally accepted, these groupings are based mostly on geographic considerations, and proof of their genealogical closeness has yet to be established through isoglosses (see Voigt 2009 for Ethio-Semitic and Kogan 2015 for Sayhadic and MSA). For the present study, this is not relevant.

14 For a more detailed discussion of the classification of Semitic, the reader is referred to Rubin (2008) and Huehnergard & Rubin (2011). Huehnergard (2005) gives a good overview of shared features of Central Semitic, including Sayhadic.



**F1:** Classification of Semitic



## 2 Tense and Aspect

### 2.1 Introduction

Having a clear notion of the concepts of tense and aspect is a prerequisite for a successful analysis of tense and aspect in Semitic. The analysis of Semitic verbal systems given in chapter 3 will strictly go from form to function. In this chapter, I will discuss what functions may be expected for a given tense-aspect form.

Literature on tense and aspect is abundant, and existing accounts vary considerably both in conception and in terminology. In view of the numerous contradicting accounts, it is indispensable to establish a consistent terminology which will be used throughout the present thesis. Given the lack of consensus among scholars, I do not strictly follow any of the existing accounts on tense and aspect in this chapter. The account presented below is my own. It is a mixture of previous accounts, in particular, of the ‘classical’ ones by Reichenbach (1947), Comrie (1976, 1985), Dahl (1985) and Bybee & Dahl (1989). However, it is quite distinct from any of these. In any case, the framework established in this chapter is not to be understood as an elaborate theory on tense and aspect. It is a mere collection of relatively simple working definitions to provide consistency throughout this thesis.

The chapter is structured as follows: In section 2.2, I will argue that any verb (i.e. any verbal root) has an intrinsic time structure, i.e. an aktionsart. Aktionsart is a category complementary to tense and aspect, and the temporal meaning of a given verb form depends as much on aktionsart as it does on tense and/or aspect. In the subsequent sections, I will discuss the functional-semantic categories of aspect, absolute tense and relative tense, and then present an overview of possible tense and aspect systems resulting from the combination of these categories. Finally, in section 2.7, I will discuss some well-known diachronic developments in the realm of tense-aspect systems, which are of great value for the present study.

The topic of this chapter are the functional values of tense and aspect and not the morphological forms. Nonetheless, some remarks might be useful on how form

and function relate. It is well-known that a strict one-to-one relation between form and function is atypical for human languages in general, and this is also true of tense-aspect functions and forms. It often seems difficult to adequately describe the functional range of a grammatical morpheme, because more than one function is observed. Indeed, a grammatical morpheme may have two or more unrelated and clearly distinguishable functions. In this case, these morphemes are to be considered homonyms. More often, however, one finds a grammatical morpheme with two or more closely related, though not identical, functions. In such a case, it is useful to keep in mind the difference between meaning and implicature (see Comrie 1985: 23f.). Often, what seems to be part of the meaning of a morpheme, is merely implicated by the absence of any contradictory evidence. An implicature is however easily discernible by the fact that the respective information may explicitly be canceled. I will argue below that tense and aspect values do often interfere with each other, so that a certain tense or aspect value may implicate a second, implicit tense or aspect value.

Implicatures are also of interest for diachronic linguistics, because they are a source of semantic reinterpretation of the morpheme in ambiguous contexts, giving rise to either a shift in meaning or to a split into two or more related but not identical functions of the same morpheme. For the present purpose, it is important to understand that tense-aspect markers may well be ambiguous as to their function, so that two or more functions correspond to one single form. The opposite is also possible, and in certain contexts, two or more forms may be used interchangeably for the same function.

## 2.2 Aktionsart

A verbal root may refer to a state, an event, a process, etc. Following Comrie (1976: 13), I will use the term ‘situation’ as cover term for all of these concepts. Any verbal root thus refers to a situation. As a matter of fact, any situation has a temporal dimension. Depending on the kind of situation expressed by the verb, it either holds during a certain extent of time, or it happens at a specific point in time. Any verbal root has thus a temporal structure intrinsic to its semantics. This temporal structure is called *aktionsart*.<sup>15</sup> The intrinsic temporal structure of a verb is indepen-

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<sup>15</sup> There is some confusion in linguistics with this term. The term *aktionsart* is used sometimes for derivational morphology expressing verbal phases such as ‘starting’, ‘continuing’, ‘ending’. Verbal phases are a topic different from *aktionsart* as used in the present study and will not be discussed further here (see Plungian 1999 for a discussion of verbal phases). More relevant to the present topic, some linguists, especially those in the Anglo-American tradition, do not distinguish *aktionsart* from aspect (see Sasse 2001: 14f.). In my opinion, this is not justified, since aspect and *aktions-*



dent of the morphologically expressed categories of tense and aspect, but it interacts with it in a complementary way, as will be seen. The most influential account on aktionsart is that of Vendler (1957), who uses the term ‘time schemata’ to refer to the aktionsarten. Vendler’s motivation was to find an explanation for the different behavior of different groups of verbs, for instance, why in English some verbs are generally not used in the Continuous forms. Vendler identified four time schemata (i.e. aktionsarten), viz. states, activities, achievements and accomplishments.

Verbs that do not indicate a process extending over time, but rather a quality which is true or false at a given point in time (e.g. *to love, to know*), fall into the group of *states*. Verbs that indicate a linear process without any intrinsic endpoint (e.g. *to run, to push*) fall into the group of *activities*. Verbs that indicate a cumulative process ultimately leading to a ‘climax’ (e.g. *to build a house, to grow up*) are classified as *accomplishments*. Finally, verbs that indicate a change of state and are predicated only for single moments of time (e.g. *to win a race, to reach the top*) are classified as *achievements* (see Vendler 1957: 146).

Every verb does in principal belong to one of these four groups. Some verbs may however be ambiguous and exhibit two or three aktionsart types depending on the context. Vendler’s classification has proven quite robust for almost sixty years now, and I will follow it in this study.

The four aktionsarten established by Vendler can be described by two parameters: whether a situation is leading intrinsically to a ‘climax’ or not, and whether its predication holds for a duration of time or only for a single moment in time (see Borik 2002: 32). The first parameter distinguishes accomplishments and achievements on the one hand from states and activities on the other. This parameter is also known as telicity. Accomplishments and achievements are telic, while states and activities are atelic. The second parameter separates accomplishments and activities, which are both continuous, from achievements and states, which are punctual.

**T3:** Aktionsart types according to the parameters of telicity and continuity

	<i>telic</i>	<i>atelic</i>
<i>continuous</i>	accomplishments	activities
<i>punctual</i>	achievements	states

---

art refer to very different things: Whereas aktionsart is inherent to any verb and part of its lexical meaning, aspect is one kind of language-specific morphological means of time coding and does not affect the *lexical* meaning of a verb in any way. In this study, aktionsart and aspect will never be used interchangeably (see also section 2.3 on aspect).

Table (T3) gives an overview of how these parameters apply to the four situation types (see Borik 2002: 32). In the following sections, I will discuss the parameters of telicity and continuity in more detail.

### 2.2.1 *Telicity*

Some situations have an intrinsic endpoint while others lack such an intrinsic boundary. For instance, the act of filling a bottle comes to an end once the bottle is full; the act of opening a door is naturally finished once the door is open; the act of building a house is finished once the house is built. On the other hand, the act of running, dancing tango or loving someone will eventually come to an end at a certain point in time, but this endpoint is not intrinsic to the verbal semantics. The distinction outlined above is known as telicity. Any verb that has an intrinsic endpoint is telic, any verb which lacks an intrinsic endpoint is atelic. In Vendler's (1957) scheme, achievements and accomplishments are telic, while states and activities are atelic. Telicity is probably the more central aktionsart parameter. Some scholars (e.g. Borik & Reinhart 2004: 1) even equate aktionsart (or 'semantic aspect', in their words) with telicity. In any case, telicity is the parameter that interacts most intimately with tense and aspect. The interaction of aktionsart with tense and aspect is discussed in the subsequent sections 2.3 to 2.5 on tense and aspect.

Interestingly, the difference between telic and atelic verbs may as well be described as one between heterogeneous and homogeneous predicates, respectively (see Borik 2002: 32). A predicate like *dancing tango* (atelic) is homogeneous in that it does not involve any change of state. A predicate like *filling a bottle* (telic) is heterogeneous, because it involves a change of state. The observation of homogeneity vs. heterogeneity is valuable since it allows for an interesting analogy between verbs and nouns (see Borik 2002: 33). There are two types of nouns, mass nouns (e.g., *milk*) and count nouns (e.g., *house*). What distinguishes them is that mass nouns are homogeneous (just as atelic verbs), while count nouns are heterogeneous (just as telic verbs). A mass noun like *milk* may refer to both the sum and its parts. This is also why it is not countable. As for a count noun such as *house*, it only refers to the sum, whereas a single part of it cannot be referred to by the same noun (see *ibid.*). A very similar distribution is observed with telic and atelic predicates.

Crucially, the intrinsic endpoint of a telic verb is independent of the actual endpoint of a given situation. The fact that a telic predicate does, in a given situation, not reach its intrinsic endpoint is meaningful. If, for instance, someone *is building a house* but eventually gives up in the middle, the house will not be finished. In such a case, one cannot say '(s)he built a house' afterwards. With atelic predicates, this

is different. If someone *is dancing* and eventually will come to an end, one can in any case say '(s)he danced' afterwards. This gives already a first impression of how tense and aspect interact with aktionsart in order to produce meaningful statements about situations. To specify whether or not a telic situation has reached its intrinsic endpoint is one of the tasks of tense and aspect.

There is another phenomenon closely related to telicity, viz. boundedness. While telicity is a property of the verb, boundedness is a property of the verbal phrase. Boundedness does not solely depend on the verb itself but as well on some of the arguments dependent from the verb, most notably the direct object. Verbal arguments such as a direct object may introduce a bound, even to verbs that are atelic. At the same time, telic verbs may become unbounded if the direct object is unspecified for quantity.

In many cases, telicity and boundedness on the one hand, and atelicity and unboundedness on the other coincide. For example, the verb *to open* is telic, and the verbal phrase *to open the door* is bounded. However, in some cases, there is a mismatch. For example, *to run* is atelic, but *to run a mile* is bounded as there is a bound implied, after which the atelic situation will come to an end. Similarly, while *to build* is telic, *to build houses* is unbounded, as there is no bound implied after which the situation will come to an end (see Borik 2002: 14f.).

Verkuyl (1972), who himself does not distinguish aktionsart from boundedness, has nonetheless provided a compelling analysis of the phenomenon. He argues that boundedness is compositional and based on two features. In a nutshell, according to his analysis, a proposition is bounded if the verb is dynamic (as opposed to static)<sup>16</sup> and if the main argument is specified for quantity. Otherwise, i.e. if at least one of these conditions is not met, the proposition is unbounded (for a summary of Verkuyl's approach, see Borik 2002: 21f.).

To return to the examples given above, *to run*, *to open* and *to build* are all dynamic, so they can potentially be combined with an argument to create a bounded proposition. *To open a door* and *to build a house*, for instance, both have an argument specified for quantity (in these cases: one). Consequently, they are bounded predicates. The propositions *to open doors* and *to build houses* do, however, not meet the second condition and are thus unbounded. As for states, they lack dynamicity. Predicates based on state verbs are thus never bounded, irrespective of a specified quantity of the main argument. I will not go into further detail here. What should be noted is that bounded predicates behave similar to telic verbs.

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16 If applied to Vendler's time schemata, states are static while all other situations (activities, achievements, accomplishments) are dynamic. See also subsection 2.2.2 on continuity.

### 2.2.2 Continuity

The second parameter relevant for aktionsart assignment is continuity, i.e. the contrast between continuous and non-continuous or punctual verbs. The property of continuity means that the verb is evaluated at time *stretches*, while the property of punctuality means that a verb is evaluated at time *instants* (see Borik 2002: 32). In English, continuous verbs may take the Progressive forms while punctual verbs are normally used in the Simple forms (such as the Simple Present) and allow for the Progressive forms only under specific circumstances.

Activities and accomplishments are continuous because they are situations that extend over a certain amount of time and do not only hold for single moments. For example, the act of dancing is continuous because its semantics involve duration, however short it may be. An expression such as *'She is dancing'* may actually refer to a single moment, but in this case, it is implied that the act of dancing exceeds the very moment and that this very moment of dancing is embedded in a longer time stretch at which the same situation holds. On the other hand, states and achievements are punctual, because these are situations of which one can say at specific time instants whether they are true or false. For achievements, this is easier to understand, because they involve no duration of time at all. If someone *wins a race*, he wins it at a specific time instant, viz. the moment when he has passed the finish line.

With states, punctuality may seem not as obvious, given that states typically hold for a certain duration of time. However, irrespective of duration, states are evaluated at time instants. For example, whether someone knows something or not is evaluated at a single moment. A moment before the evaluation, he might not yet have known it, and it is possible that he has forgotten about it the moment following the evaluation without affecting the evaluation for the given moment. The same is actually true for any quality. Qualities such as *soft*, *green* or *hot* are thus also states (see Vendler 1967: 50).<sup>17</sup>

Crucially, just like telicity does not depend on whether a given situation actually comes to an end or not, the property of continuity does not depend on whether a continuous situation is actually ongoing. To make a statement about whether a given situation is ongoing or not is the task of tense and aspect markers to which I will now turn.

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<sup>17</sup> There seems to be a third parameter crossing through the parameters of telicity and continuity, viz. dynamicity (cf. section 2.2.1). States, including qualities, differ from all other aktionsarten in that they are static while activities, achievements and accomplishments are dynamic. A state can often be considered the result of a preceding telic process. For example, the state of 'knowing something' presupposes the preceding achievement of 'realizing' the same thing. A state is, so to say, 'post-telic' in that it refers to a situation which emerges from a change of state. This might be an explanation for why states are always atelic.

## 2.3 Aspect

Aspect is one of two grammatical categories which allow temporal specification of a given situation, the other being tense. As will be seen, tense is concerned with locating a given situation in relation to either the speech time or to another given situation. Aspect, on the other hand, is concerned with identifying a specific phase of a given situation. Thus, it might be said that aspect is internal while tense is external.<sup>18</sup>

Aspect as it is understood in this thesis identifies a phase of a given situation in relation to its endpoint. There are three possible values, indicated in the following table (T4).

### **T4:** Aspect values

- |    |   |
|----|---|
| 1) | <i>perfective aspect</i><br>The selected phase coincides with the endpoint of a given situation.            |
| 2) | <i>imperfective aspect</i><br>The selected phase is located prior to the endpoint of a given situation.     |
| 3) | <i>resultative aspect</i><br>The selected phase is located subsequent to the endpoint of a given situation. |

The perfective aspect presents a situation as complete, without saying anything about the phase before or after the endpoint. The perfective aspect might thus be considered the most unmarked aspect. The imperfective aspect presents a situation as ongoing and does not include the endpoint of the situation. Finally, the resultative aspect refers to the situation after the intrinsic endpoint or climax, in other words, to the state resulting from a preceding situation. With intransitive verbs, the resultative indicates the resultant state of the subject. With transitive verbs however,

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18 There are innumerable accounts on aspect which vary considerably in their assumptions. It is not possible to discuss different accounts here, but it should be noted that many aspect theories assume aspect to be a binary opposition between two basic aspects, perfective and imperfective (see, e.g., Borik 2002). Others assume a third basic aspect, traditionally known as ‘Perfect’ (see, e.g., Klein et al. 2000). Yet others are undecided as to whether ‘Perfect’ is an aspect or not (for example, Comrie 1976). In this thesis, I promote a tripartite aspect theory, including the resultative aspect which is one part of what is usually subsumed under the name ‘Perfect’.

the resultative most often indicates the resultant state of the object, because it is usually the object which undergoes a change of state. For this reason, the resultative is often passive in meaning, although it is more adequate to characterize it as voice-neutral. The resultative aspect is only compatible with telic verbs. On account of this restriction, the resultative aspect may be considered the most marked aspect.

Aspect as defined here is related to the endpoint of a situation. In section 2.2 on aktionsart, it has been discussed that telic verbs have an endpoint intrinsic to their semantics. Aspect is, however, concerned with the actual endpoint of a situation, whether it is intrinsic or not. But telicity is indeed a property relevant to the interpretation of an aspectually marked form. The imperfective aspect with a telic verb indicates that the intrinsic endpoint is not yet reached, and might actually not be reached at all. If someone *is filling a bottle*, the bottle is not yet full at the moment referred to, and the one who is filling the bottle might, for whatever reason, stop, before the bottle is filled. Hence, the imperfective does not allow for any inference whether the intrinsic endpoint will be reached in the subsequent time span.

With the perfective aspect, on the other hand, the situation is presented as including its endpoint. *'He filled the bottle'* refers to a completed action, and the bottle may be considered full at the moment immediately after the respective event.

The resultative aspect refers to the state resulting from a completed telic situation. The state resulting from *filling a bottle* would be that the bottle *is full* at the time span immediately following the respective event. The example also shows the prototypical passive interpretation of a transitive verb in the resultative aspect.

With atelic predicates, the endpoint does not involve a change of state but is simply the point in time when the respective action comes to an end. The perfective aspect of an atelic verb thus simply describes a complete action, while the imperfective aspect implies that the action described is, at the moment referred to, expected to go on for a certain amount of time. Since atelic verbs do not lead to a change of state, the resultative aspect is not used with atelic predicates. The intimate relation between aspect and aktionsart has often been noted (see, e.g., the 'selection theory' presented in Bickel 1997, or Johanson 1971 on aspect in Turkish).

Crucially, aspect is a grammatical means of *looking* at a situation. The linguistic choice of an aspect is thus independent of the the situation itself. One and the same situation may be referred to by using different aspects without any contradiction. This may be illustrated with the following example, taken from Comrie (1976: 4): *'John read that book yesterday; while he was reading it, the postman came.'* In order to refer to John's reading the book, two different aspect forms are used. An important task of aspect is the structuring of events in relation to each other. In narrative contexts, the perfective aspect is typically the main narrative form with which the succession

of events is described. The imperfective aspect, on the other hand, does not indicate temporal succession because it does not include the endpoint of a situation. The imperfective is instead used to indicate that an action happens simultaneously with another or to describe the background of a situation. Indeed, the differentiation between foreground and background is assumed by some to be the main task of aspect systems (see, for example, Cohen 2006: 34).

The category of aspect is very common in the languages of the world. The theory of aspect presented here proposes the existence of three main aspects, viz. perfective, imperfective and resultative. That does not mean, however, that aspect systems are always composed of these three aspect values. Some aspect systems may lack one of the oppositions (see the discussion in section 2.5). In addition, there are languages which lack the category of aspect altogether. Nonetheless, in a language lacking an aspect system or an aspectual value, similar notions may be achieved by the use of lexical items.

The difference between grammaticalized, morphological aspect and independent lexical items is that while the lexical items may be used to clarify the description of a situation, aspect is in general mandatory for the formation of a grammatical sentence. In the following sub-sections, I will discuss each of the three aspects in some more detail.

### 2.3.1 *Perfective*

The perfective refers to a complete situation including its endpoint. It is the most unmarked aspect. Owing to the emphasis on the endpoint of a situation, two or more perfectives in a row typically entail the notion of temporal succession. For this reason, the perfective aspect is prototypically used in narrative.

With telic verbs, the use of the perfective entails that the inherent endpoint of the situation has been reached. For instance, the sentence *'Mary woke up'* entails that at the moment immediately following after the situation of Mary's waking up, Mary is awake. The same is true for the sentence *'John died'*, which entails that John is dead at any time after. This may seem obvious, but note that there is no such entailment with the imperfective aspect (see 2.3.2).

With atelic verbs, the use of the perfective describes a situation as a whole, without any internal structure and including its arbitrary endpoint. For instance, the sentence *'Mary read the book'* describes a single situation without any internal structure or phases. Without further information, the use of the perfective implies that the situation has come to an end and is not ongoing anymore. This is an implicature and may be cancelled, however.

In aspectless languages, telic verbs are usually interpreted as perfective by default in the absence of further information.

There is a crucial semantic restriction in the use of the perfective. Given its focus on the endpoint of a situation, the perfective aspect is incompatible with a true present tense. Present tense, which refers to a situation overlapping with speech time, implies that the situation has not yet come to an end, i.e. that it is not perfective. I will discuss this restriction in further detail in section 2.4 on tense.

### 2.3.2 *Imperfective*

The imperfective aspect refers to a phase of a situation that is located prior to the endpoint of a given situation. It does not refer to the situation as a whole. It is more marked than the perfective aspect but less than the resultative aspect. The emphasis on a phase prior to the endpoint of a situation typically leads to the reading of a non-sequential, simultaneous situation in respect to another situation.

The use of the imperfective aspect with telic verbs does not entail that the inherent endpoint of the situation will be reached once the situation will come to an end. For instance, from the sentence *‘John was filling the bottle’*, it cannot be inferred that the bottle was full at any time after John’s filling the bottle. It may well be that John stopped in the course of filling the bottle, in which case the climax was never achieved. The use of the imperfective aspect with atelic verbs, on the other hand, allows to infer that situation is, was or will be happening at some time. For instance, from a sentence like *‘Mary was sleeping’*, the sentence *‘Mary slept’* can be inferred. Note the crucial difference to telic verbs which do not allow this inference.

In aspectless languages, atelic verbs and verbs in the present tense are usually interpreted as imperfective by default in the absence of further information.

The imperfective has an important subtype, viz. the progressive aspect. The progressive aspect is a variant of the imperfective aspect which excludes a habitual reading and is only used for verbs which are dynamic, i.e. non-stative (see Comrie 1976: 34). The progressive aspect does not only express that an activity is ongoing, but also that the activity is delimited temporally. The English Progressive is an example of the progressive aspect.

There is yet another aspect which is sometimes described as a subtype of the imperfective aspect, viz. the habitual aspect. The habitual aspect describes a situation that is viewed as a characteristic feature of a certain time period (see Comrie 1976: 26 for a discussion). However, habituality may be expressed with both the perfective and the imperfective aspect cross-linguistically, without a clear preference. In English, the (past) habitual is expressed with *used to*.



### 2.3.3 Resultative

The resultative aspect refers to a phase of a situation which is located subsequent to the intrinsic endpoint of the situation. In other words, it refers to the state resulting from a completed action. If someone *dies*, he, as a result, *is dead*. If someone *fills a bottle*, the bottle, as a result, *is full*. The resultative is voice-neutral. With transitive verbs, it is typically (but not always) the object which undergoes a change of state. For this reason, the resultative tends to be passive for transitive verbs (e.g., *‘the bottle is full’*). With intransitive verbs, it is the subject who results in a new state. The meaning of the resultative aspect is only compatible with telic verbs, because only telic verbs have an intrinsic endpoint from which a new state arises as a result. Hence, the resultative aspect can be considered the most marked aspect.

The resultative aspect has a certain superficial similarity to the anterior tense which expresses a current relevance of a preceding situation (see 2.5). However, the function of a tense, as will be seen, is to locate a given situation in relation to another point in time, for example to the moment of speech. Different from the anterior tense, the resultative aspect does not locate a situation in relation to another point in time, but selects a phase of the situation itself. For this reason, it is undoubtedly an aspect and has no tense function. In any case, in languages without a resultative aspect, the anterior tense (see section 2.5) may in certain cases express similar notions as the resultative aspect.

## 2.4 Absolute Tense

Tense is a grammatical category which allows locating a given situation in relation either to the moment of speech or to any other situation. Tense, unlike aspect, is not concerned with the structure of the situation itself or phases of a situation, but with the relative location of the whole situation on the time axis. Tense thus always needs a reference point. From the point of view of modern European languages, this reference point is most typically the time when a statement about the given situation is uttered, i.e. the moment of speech, or (henceforth:) speech time.<sup>19</sup> Tense which has the speech time as its reference point is called ‘absolute tense’. If the reference point is not the speech time, but another situation, this is called ‘relative tense’. A discussion of relative tense follows in section 2.5. In this section, I will focus on absolute tense. There are three logically possible values for absolute tense which are indicated in the following table (T5).

<sup>19</sup> The terms ‘point of speech’, ‘point of event’ and ‘point of reference’ have been introduced by Reichenbach (1947), who first proposed to analyze any tense as the relation between these three relative time points. ‘Speech time’, ‘event time’ and ‘reference time’ are used interchangeably to the terms of Reichenbach given above throughout this thesis.

### **T5:** Absolute tense values

- 1) *past tense*  
The situation is located prior to speech time.
- 2) *present tense*  
The situation is located at or overlapping speech time.
- 3) *future tense*  
The situation is located subsequent to speech time.

There is, however, a complication to the simple model just given. What is located subsequent to speech time (i.e. the future tense) has not yet happened, and if one speaks about a situation in the future, one does not know if it actually will ever happen. A statement about the future is thus not a pure indicative statement, but always conveys a modal note which may be more or less present. Therefore, it is not clear if the future may adequately be described as a tense.

In any case, most languages, even those that do have a future tense, exhibit a principally binary tense system with a basic distinction between past on the one hand and non-past (i.e. present and future) on the other (see Comrie 1985: 48ff.). Given the marginal position of the future tense in the classical Semitic languages, the future will be excluded from discussion wherever possible for the sake of simplicity. In this section, I will discuss the two basic tenses, i.e. the past tense and the non-past tense.

In addition to the tense values discussed in the preceding paragraph, there is one more logically possible tense value: the situation holds in general, i.e. without a temporal limit. An instance of a situation which is true at any time is, e.g., *Fire is hot*. Nevertheless, according to Comrie (1985: 40), no language is known to have a specific morphological form for such a ‘universal tense’.<sup>20</sup> Hence, I will not go into further detail on the expression of ‘universal tense’.

The category of tense interacts with both aktionsart and aspect. In particular, the present tense exhibits certain restrictions regarding its logically possible combinations with aspects and aktionsarten (see section 2.4.2).

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<sup>20</sup> In some languages, one finds a further differentiation of the past tense based on the remoteness to the speech time. As it has never been argued that there is such a category in Semitic, I will not discuss this topic in more detail. For a discussion see Comrie (1985: 83ff.).

Tense, be it absolute or relative, is not a mandatory feature of human language. There are tenseless languages, a prominent example is Chinese. In tenseless languages, the choice of a certain aspect together with the aktionsart of the verb often implies a certain tense interpretation (see, e.g., Lin 2005 for a discussion of implicit tense in Chinese). In the following sub-sections, a summary of the two basic absolute tense values is given.

#### 2.4.1 *Past*

The past tense locates a situation prior to speech time. Since it has no restrictions as to aspect or aktionsart, it may be considered the unmarked tense. The past tense only indicates that the situation described happened at one point in time in the past. It does not entail that the situation no longer holds at speech time, even though this might be an implicature (see Comrie 1985: 41).

The perfective aspect is the default aspect in combination with a past tense. In aspectless languages, a past tense tends to be interpreted as an implicit perfective. Owing to the emphasis on the endpoint of a situation, the perfective aspect conveys the notion of temporal succession. Therefore, a past perfective is typically used in narrative contexts. The Simple Past in English is an example of a past perfective.

The imperfective aspect in combination with a past tense does not convey temporal succession and is thus used to describe situations which happen simultaneously with another event. In other words, a past imperfective provides the ‘background’ to a narrative which is dynamic in terms of aktionsart.

The resultative aspect in combination with a past tense is also non-sequential. It describes a state in the past and provides the ‘background’ to a narrative which is static in terms of aktionsart.

In tenseless languages, telic verbs and verbs in the perfective aspect tend to be interpreted as past by default in the absence of further evidence.

#### 2.4.2 *Non-past*

The non-past tense locates a situation as overlapping with speech time or subsequent to speech time. It has two subforms, the present tense (overlapping with speech time) and the future tense (subsequent to speech time).

The present tense has a crucial co-occurrence restriction with the perfective aspect. It cannot be combined with a perfective aspect in order to express an actual present. If the present and the perfective are combined, the meaning of the form expresses future tense, universal tense or some kind of modality, but never the actu-

al present. The reason for this restriction is that a situation may only overlap with speech time if it has a certain duration and has not yet reached its intrinsic endpoint. For this reason, in aspect-languages, telic predicates are only compatible with a true present tense in combination with an imperfective aspect. In aspectless languages, telic predicates are not compatible with a true present tense, or they are implicitly interpreted as imperfective. The imperfective aspect indicates that the situation is still ongoing and that the endpoint is not yet reached. Verbs with the aktionsart of achievement are also restricted regarding their use with a present tense. Achievements (such as *to find*) have no duration but refer to a mere change of state at a given time instant. Hence, they cannot happen simultaneously with speech time. At the very moment when one finds something, one cannot say *'I find it'* but only *'I have found it'*. In some languages (e.g., in Russian), the combination of a telic predicate with the present tense yields a future tense reading.

A non-past tense in combination with a perfective aspect yields either a future tense (as in Russian), a universal tense or a modal form. It is not used to make statements about situations which happen simultaneous to the speech time. A non-past tense in combination with an imperfective aspect typically yields a present tense. The imperfective and the present tense have an intimate relation as the actual present is always imperfective. A non-past tense in combination with a resultative aspect is used to describe a present state (or more rarely, a future state).

In tenseless languages, atelic verbs and verbs in the imperfective aspect tend to be interpreted as non-past by default in the absence of further information.

## 2.5 Relative Tense

Relative tense locates a situation on the time axis relative to some other point in time. Like absolute tense, relative tense is not concerned with the structure of a situation itself or phases of a situation, but with the relative location of the whole situation on the time axis. Hence, relative tense, like absolute tense, always needs a situation-external reference point. The crucial difference to an absolute tense is that an absolute tense has a fixed reference point, viz. the speech time. A relative tense, on the other hand, only specifies the temporal location relative to a certain reference point; it does however not specify the reference point itself. The reference point has to be established by the context, i.e. by time adverbials ('yesterday', ...), by another verb form (e.g., a past perfective), or even by extra-linguistic information (see Comrie 1985: 56ff).<sup>21</sup> Relative tense may as well have the speech time as a

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<sup>21</sup> Relative tense is sometimes also called *taxis* in order to distinguish it more clearly from absolute tense (see, e.g. Maslov 1988). However, absolute tense is nothing more than a special case of

reference point, especially in the absence of any contextual information implying another reference point, e.g. at the beginning of a narrative. Yet the reference point itself, whatever it may be, is not part of the meaning of a relative tense. Note, however, that in the absence of absolute tense, relative tense can always have the speech time as its reference point. As with absolute tense, there are three logically possible relative tenses which are indicated in the following table T6.

**T6:** Relative tense values

- |    |  |
|----|--|
| 1) | <i>anterior tense</i><br>The situation is located prior to the time of reference.                              |
| 2) | <i>parontive tense</i> <sup>22</sup><br>The situation is located at or overlapping with the time of reference. |
| 3) | <i>posterior tense</i><br>The situation is located subsequent to the time of reference.                        |

The parontive tense may be considered the unmarked relative tense, as it indicates mere temporal coincidence with the point of reference. The anterior tense is yet more marked than the parontive tense. It locates a situation prior to the time of reference, or, in other words, it refers to a preceding situation which is still relevant at reference time. It is often said that the anterior tense expresses the current relevance of a preceding situation. The anterior tense is often called ‘Perfect’ (see, e.g., Lindstedt 2000), yet this term is problematic for a number of reasons which are discussed in section 2.5.1.

Finally, the posterior tense is the most marked relative tense, and it is quite rare as a morphological form. The posterior tense does not simply express that a situation takes place after another. Given that, in a narrative, a perfective aspect or a past tense may easily be used to express a temporal succession of events, the posterior tense is not needed for the expression of immediate succession. The posterior tense is instead used for situations which are anticipated at reference time, but will not take place directly subsequent to it. The posterior tense is very similar to a fu-

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relative tense. Seeing that the two categories are closely related, I think it is justified to call both of them ‘tense’.

22 I would like to thank Stefan Schumacher for his suggestion of the term ‘parontive’.

ture tense in this respect, and like the future, it often conveys a modal note. An example of a posterior tense in combination with a past tense is the English Future-in-the-past such as *'He would never return'* (example from Comrie 1981: 27). Hence, in parallel with absolute tense, I assume a basically binary system of relative tense, comprising of an anterior tense and a non-anterior (parontive and posterior) tense. Like the future tense, I do not discuss the posterior tense in detail in this chapter.

Relative tense is not widespread in contemporary European languages. Hence it might be difficult at first to see the advantages of relative tense over absolute tense. However, in a short narrative which starts with a verb in the past tense (i.e. an absolute tense), the past tense marker on the first verb serves to indicate that what follows is a narrative about a past happening. It is now somewhat redundant to mark every subsequent verb again with a past tense marker, since the story has already been located in the past by the first verb. What is more of interest for the structure of the narrative is its temporal relation between the different situations described in the narrative. This is precisely what relative tense can provide.

Another typical use of relative tenses is in subordinate clauses. What matters is not the temporal location of a subordinated verb in relation to speech time but rather in relation to the situation described by the verb in the main clause. Even in languages which have principally an absolute tense system, relative tense may be present in certain syntactic structures. In English, for example, the Present Participle is usually interpreted as simultaneous to the main verb, i.e. as a parontive tense. The Past Participle, on the other hand, is usually interpreted as preceding the event denoted by the main verb, i.e. as an anterior tense (see Comrie 1985: 59).

The description of tense using the three time points *time of event*, *time of reference* and *time of speech* goes back to the classical account of Reichenbach (1947). Reichenbach argues that every tense can be sufficiently described by the relative location of these three time points to each other on the time axis. However, as Comrie (1981) rightly argues, relative tense can exist independently from absolute tense in which case only two time points are necessary, viz. event time and reference time, in order to sufficiently define a relative tense value. Similarly, in order to sufficiently define an absolute tense value, only two time points are necessary, viz. event time and speech time.

Only in a combination of absolute and relative tense all three time points are necessary for a sufficient definition. The combination of an absolute and a relative tense is called an absolute-relative tense. An example of an absolute-relative tense is the Pluperfect in English which establishes both a past time reference in relation to speech time and a relative past time reference (that is, an anterior relation) in relation to the reference time.

In some languages with an absolute tense system, some subordinated clauses require special use of inflectional paradigms which differs from the use in main clauses. This is called ‘sequence of tense’ (e.g., in English or Latin) or ‘embedded tense’. Sequence of tense and embedded tense are a form of relative tense, albeit not the prototypical one. I will not discuss this topic further in this thesis. For a discussion of embedded tense, see Ogiwara & Sharvit (2012). It suffices to note here that an inflectional paradigm may in certain subordinate clauses have a function different from its function in main clauses. In the following subsections, a summary of the two main relative tense values is given.

### 2.5.1 *Anterior*

The anterior tense locates a situation prior to some other point in time, the reference time. It often conveys the notion of the current relevance of the situation at the reference time. Crucially, the anterior tense is agnostic as to the temporal location of the situation relative to speech time, i.e. the situation may be located either in the past, in the present or in the future. Furthermore, the anterior tense does not specify what its point of reference is. Rather, the reference time has to be established based on the context. The reference point can be indicated by a time adverbial, by another verb form or by extra-linguistic information.

The anterior tense may be combined with an absolute tense in order to express an absolute-relative tense. When the anterior tense is combined with an absolute tense, it does express the current relevance of a situation at a temporally subsequent reference point in the time interval indicated by the absolute tense. Hence, a present anterior indicates the relevance of a preceding situation at speech time, a past anterior indicates the relevance of a preceding situation at a certain point of time in the past, a future anterior indicates the relevance of a preceding situation at a certain point of time in the future.

The combination of the anterior tense with an absolute tense is traditionally called a ‘Perfect’. Depending on the value of the absolute tense, there are, in traditional terminology, the Present Perfect, the Past Perfect and the Future Perfect. In the terminology applied here, these tenses are called present anterior, past anterior and future anterior, respectively. Following Bybee et al. (1989) and Kortmann (1991), I prefer to use the term ‘anterior tense’ over the term ‘Perfect’, because ‘Perfect’ has the disadvantage that it may easily be confused with ‘perfective’, with which it has nothing in common.

It is often argued that the ‘Perfect’ and the resultative are closely related to each other (see, e.g., Maslov 1988, or Ritz 2012: 900). This is certainly true in di-

achronic terms, as will be seen in section 2.7. Synchronically, however, the two are quite distinct. The ‘Perfect’ expresses the current relevance of a preceding event at a reference time. The ‘Perfect’ is thus clearly situation-external and hence a tense. The resultative, on the other hand, indicates a phase of a given situation relative to the intrinsic endpoint of the situation itself. The resultative is thus clearly situation-internal and hence an aspect.

Another major difference between an anterior tense and a resultative aspect is that the latter is only formed from telic verbs due to its semantic concept, while the former is compatible with any verb, be it telic or atelic. This is a useful diagnostic test in case one is unsure whether a given inflectional paradigm is a resultative aspect or an anterior tense.<sup>23</sup>

The anterior tense is the marked member of the opposition anterior vs. non-anterior. It is typically a non-narrative tense and is used to describe the ‘background’ of a narrative, specifically, what has happened prior to the reference point of time. In a simple tense system comprising only an opposition between an anterior tense and a non-anterior tense, the anterior tense is nevertheless used as a narrative tense due to the lack of a suitable alternative.

The anterior tense is prototypically combined with a perfective aspect. The resultative aspect is used when reference is made to the resulting state of a previous situation. The imperfective aspect is used more rarely with an anterior. It conveys the extra-notion that the situation of relevance at the reference time has held over an extended span of time, as in the sentence ‘*She had been dancing all night long*’, where *had been dancing* is a past anterior progressive (the progressive being a subtype of the imperfective).

### 2.5.2 *Non-anterior*

The non-anterior tense locates a situation as overlapping with or subsequent to the reference time. The non-anterior tense has two subtypes, the parontive tense (overlapping with reference time) and the posterior tense (subsequent to reference time).

The non-anterior tense is the unmarked member of the opposition anterior vs. non-anterior. It is defined negatively as ‘not anterior’. In combination with a perfective aspect, the non-anterior tense is usually interpreted as a posterior tense. In combination with an imperfective aspect, the non-anterior tense is usually interpreted as a parontive tense. Note that the same distribution is found for the two non-past tense values, viz. the present tense and the future tense.

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23 See also Nedjalkov (1988) for differences between the ‘Perfect’ and the resultative aspect.



The parontive tense expresses simultaneity with the reference time and is thus typically used to provide the ‘background’ of a narrative. The posterior tense locates a situation in the relative future from the point of reference, however not directly subsequent to it. The posterior tense is not used to express the succession of events in a narrative.

## 2.6 Tense-Aspect Systems

In the preceding sections of this chapter, the three categories of aspect, relative tense and absolute tense have been introduced. In this section, I will discuss, how the values of these three categories may be combined in order to constitute a tense-aspect system.

At first sight, the languages of the world show an immense variability in regards to their tense-aspect systems. Yet, Dahl (1985), Bybee et al. (1994) and Bybee & Dahl (1989) have shown that the inflectional paradigms found in the languages around the world can be analyzed as belonging to a small set of semantic concepts. Bybee & Dahl (1989) have identified perfective, imperfective, progressive, present, past, future and anterior as the most common tense-aspect values. These values are more or less identical to the ones discussed in the preceding sections. Given the fact that these tense-aspect values are found universally, it should in principle be possible to describe at least the central part of any tense-aspect system with this small set of tense-aspect values.

One of the most striking differences between the tense-aspect systems of different languages is that some languages exhibit very complex and elaborate tense-aspect systems, while others make do with minimalistic tense-aspect systems of only two or three contrasting inflectional paradigms. Turkish, Bulgarian, Greek and English are examples of the former, complex type. Chinese and many Semitic languages are placed more to the minimalistic end of the spectrum. One may wonder whether the minimalistic systems manage to express the same semantic subtleties as do the complex systems. It has been shown in the previous section that there are various interference effects between aktionsart, aspect and tense. For instance, an actual present tense is always imperfective, hence it is not necessary to mark the imperfective aspect explicitly. Even in an aspectless language, an actual present tense is implicitly imperfective. On the other hand, if a perfective aspect is used in a tenseless language, it cannot refer to a present tense situation for the same reason. The perfective in a tenseless language is thus typically interpreted as an implicit past tense, unless the situation is located in the future by lexical means. Given these interferences among the categories of aktionsart, aspect and tense, the difference

between a small and a large tense-aspect system is mainly that the latter makes explicit what the former leaves implicit.

In conclusion, there are four linguistic categories which express some temporal specification of a situation: aktionsart, aspect, relative tense and absolute tense. Aktionsart, being a lexical category, is typically a fixed property of the verbal root. A change in aktionsart is not an inflectional, but a derivational process. Aktionsart is typically implicit. Some languages, however, mark aktionsart morphologically. This seems to be the case in the Slavic languages (see, e.g. Dahl 1985: 27). The other three categories of aspect, relative tense and absolute tense are inflectional categories. They may be present or absent in a particular language and, if present, are always morphologically marked.

A simple tense-aspect system exhibits only one of the three categories of aspect, relative tense and absolute tense. In complex tense-aspect systems, two or three of the categories are used in combination. Hence, the inventory of a tense-aspect system may range from only two inflectional paradigms (e.g. imperfective vs. perfective in a tenseless language) to around twenty inflectional paradigms in a language which combines all categories.<sup>24</sup> Crucially, no language is known which does not exhibit at least one of the above categories; in other words, every language has a tense-aspect system.

It is not possible to combine different values of the same category at the same time. Hence, an inflectional paradigm is never past *and* present, or perfective *and* imperfective. Nevertheless, an existing opposition may be cancelled in certain syntactic environments. In the following sections, I will present an overview of simple and complex tense-aspect systems.

### 2.6.1 *Simple systems*

Simple tense-aspect systems mark only one of the three categories at disposal (aspect, relative tense, absolute tense) morphologically. Table T7 indicates the possible simple tense-aspect systems. Note that the unmarked member of an opposition is always present as a default value. Hence, there is, e.g., no aspect system without a perfective aspect.

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<sup>24</sup> There may be further inflectional paradigms in a particular language which express mood or evidentiality; these are excluded from the discussion here since they are not concerned with temporal specification.

**T7:** Simple tense or aspect systems

<i>Simple aspect systems</i>			
variant 1:	perfective	imperfective <sup>25</sup>	—
variant 2:	perfective	imperfective	resultative

<i>Simple absolute tense systems</i>			
variant 1:	past	non-past	—
variant 2:	past	present	future

<i>Simple relative tense systems</i>			
variant 1:	anterior	non-anterior	—
variant 2:	anterior	parontive	posterior

In simple tense-aspect systems, it is sometimes difficult to grasp whether the opposition is one of aspect, relative tense or absolute tense. Given the interferences between those categories discussed above, the use of a specific tense and a specific aspect do often coincide. In order to find out what opposition is present in a specific language, it is necessary to focus on those contexts which are not ambiguous. For instance, if a particular inflectional paradigm is used in a context which is clearly in the past, it cannot be a present tense. It has to be either an imperfective aspect or a non-anterior tense. If it is used as the main form in narrative, it cannot be an imperfective aspect, because the imperfective aspect cannot be used for the expression of temporal succession.

### 2.6.2 Complex systems

Complex tense-aspect systems combine two or three of the categories at disposal (aspect, relative tense, absolute tense). Table (T8) gives an overview of two-dimensional tense-aspect systems. Note again that the unmarked member of an opposition is always present as a default value.

For the sake of simplicity, absolute tense and relative tense are always given as the binary opposition past vs. non-past and anterior vs. non-anterior, respectively.

<sup>25</sup> Progressive instead of imperfective or in addition to imperfective is also possible.

Furthermore, the progressive aspect is not indicated in the table. Brackets indicate that the value may be present or absent in the system.

**T8:** Complex tense-aspect systems (1)

<i>Complex aspect-absolute tense systems:</i>			
	perfective	imperfective	(resultative)
past	*	*	*
non-past	*	*	*

<i>Complex aspect-relative tense systems:</i>			
	perfective	imperfective	(resultative)
anterior	*	*	*
non-anterior	*	*	*

<i>Complex absolute tense-relative tense systems:</i>		
	past	non-past
anterior	*	*
non-anterior	*	*

It is possible for a tense-aspect system to have all three categories present. Table (T9) gives one example of a possible threedimensional system. The English tense-aspect system is an instance of this kind. English has a progressive aspect instead of an imperfective aspect and only remnants of a resultative aspect.

**T9:** Complex tense-aspect systems (2)

	perfective	imperfective	(resultative)
past non-anterior	*	*	*
past anterior	*	*	*
non-past non-ant.	*	*	*
non-past anterior	*	*	*

## 2.7 Tense and Aspect in Diachrony

In section 2.6, it has been discussed what basic types of tense-aspect systems exist in the languages of the world. Any language should more or less conform with one of the models indicated. However, every language is constantly evolving over time, and so is its tense-aspect system. In this section, some well-known diachronic paths of development in the realm of the tense-aspect system are discussed.

Bybee & Dahl (1989) and Bybee et al. (1994) have shown that there is a small number of prototypical diachronic paths of evolution in the realm of tense-aspect systems which is frequently found cross-linguistically. The most important of these diachronic paths are the following two:<sup>26</sup>

- from progressive to imperfective to present
- from resultative to anterior to perfective to past

These two paths are in a way complementary, and together they account for most of the tense and aspect values possible. Both paths start with a highly specific aspectual form and result in a tense form. The resultative and the progressive have in common that they are in the majority of cases expressed periphrastically, and often, their construction is still transparent (see Bybee & Dahl 1989: 56f.). The most common source of progressives is a locative construction ‘to be located in or at an activity’ (Bybee & Dahl 1989: 77). The locative may be expressed either with a locative verb ‘to be at’, or with a copula and a nominal verb form with a locative adposition or case. On the other hand, the most common source of resultatives is an adjective denoting the result of an action in combination with a copula or a possessive construction.

In addition, the resultative and the progressive have in common that they are not compatible with all types of aktionsarten. The resultative is only used with telic verbs, the progressive is only used with dynamic (vs. static) verbs. The resultative and the progressive are thus more closely interacting with the semantics of the verb than any other temporal or aspectual value.

The resultative and the progressive have the most transparent form, and the most specific semantics of all tenses and aspects. In other words, they are the least grammaticalized of all tense-aspect values, both in form and in meaning.

In diachrony, a progressive tends to lose its restriction for dynamic verbs and becomes a general marker of an ongoing situation. The result of this generalization

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<sup>26</sup> Another important path is from verbs indicating volition or movement to future tense. As the future is not considered in this thesis, this path is not discussed here. See Bybee & Dahl (1989: 90) for a discussion.

is an imperfective aspect. The change from progressive to imperfective is often accompanied by a reduction of the morphosyntactical form (see Bybee & Dahl 1989: 56f.). An imperfective aspect may sometimes develop further into a present tense. This process can be understood as a further generalization, since tense is less closely interacting with aktionsart than aspect.

Similarly, the resultative, which expresses the state resulting from a preceding action, tends diachronically to generalize its function from ‘current result’ to ‘current relevance’ (see Lindstedt 2000: 368). Part of this change is the loss of its restriction to telic verbs. When the original resultative has lost its restriction to telic verbs and expresses ‘current relevance’ rather than ‘current result’, it has become an anterior tense. While the resultative aspect refers to the intrinsic result of an action, the anterior tense expresses the current relevance, without being specific as to what exactly makes the preceding situation relevant at the reference time. Again, this change is often accompanied by a reduction of morphosyntactical form (see Bybee & Dahl 1989: 56f.).

As a further development, the anterior tense tends to develop into a perfective aspect and then into a past tense, or, most typically, into a past perfective. This is a generalization of the ‘current relevance’ concept: Speakers use the anterior tense extensively as a narrative tense in order to emphasize the current relevance of the story. The result of this over-use is a past perfective.

The grammaticalization processes described in the preceding paragraphs combine a gradual semantic bleaching, a loss of restriction in use and a tendency towards generalization. Nevertheless, when an inflectional paradigm acquires a new function, it may at the same time keep its original function in some cases. For instance, an inflectional paradigm used as an anterior tense may still be in use as resultative aspect in certain contexts. This is one reason for why it is often impossible to describe the function of an inflectional paradigm with only one concept (see Bybee et al. 1994: 17f.).

The diachronic paths are in fact diachronic circles. A new construction eventually will fill the gap created by the generalization of another construction. For instance, after a resultative has developed into an anterior tense, speakers might create a new, periphrastic resultative construction to express their ideas more clearly. In consequence, the rise of a new inflectional paradigm may narrow the function of an older, existing inflectional paradigm, e.g. an anterior tense may lose its remnants of a resultative function after a new resultative is introduced.

In the following subsections, a summary of the two important diachronic paths in the realm of tense and aspect is given.

### 2.7.1 *The progressive in diachrony*

The progressive is a young and typically periphrastic inflectional paradigm which is often still transparent in its semantic and its morphosyntactic structure. Its use is restricted to dynamic verbs. The most common construction yielding a progressive aspect is a locative construction ('be in or at an activity').

When a progressive loses its restriction for dynamic verbs and its use is generalized to all types of verbs, it becomes an imperfective aspect. The semantic bleaching is often accompanied by a reduction of morphosyntactic structure which makes the construction of the inflectional paradigm less transparent.

The imperfective aspect may further develop into a present (or parontive) tense. The partial functional overlap of the imperfective aspect and the present (or parontive) tense facilitates this development.

### 2.7.2 *The resultative in diachrony*

The resultative is a young and typically periphrastic inflectional paradigm which is often still transparent in its semantic and morphosyntactic structure. Its use is restricted to telic verbs. The most common construction of a resultative aspect is a combination of a copula with a stative adjective.

When a resultative loses its restriction for telic verbs and shifts functionally from the expression of 'current result' to the expression of 'current relevance', it becomes an anterior tense (see Lindstedt 2000: 368). The shift from 'current result' to 'current relevance' involves the change from a voice-neutral to a principally active construction (i.e., unless modified with a marker for passive voice). The semantic bleaching is often accompanied by a reduction of morphosyntactic structure which makes the construction of the inflectional paradigm less transparent.

When the 'current relevance' function of an anterior tense is overused for pragmatic reasons, i.e. to emphasize the current relevance of a narrative, the anterior tense develops into a basic narrative form, i.e. it develops into a perfective, a past, or, most typically, a past perfective.





## 3 Tense and Aspect in Classical Semitic

### 3.1 Introduction

In the preceding chapter, the categories of tense and aspect and their possible values have been defined in a language-unspecific way. In this chapter, I will turn to Semitic. The aim of this chapter is to discuss the linguistic data on which the reconstruction of the Proto-West Semitic tense-aspect system is based. As indicated in chapter 1, the languages under consideration are Akkadian, Ge‘ez, Biblical Hebrew and Classical Arabic. As a whole, these four languages reflect the diversity among the classical Semitic languages sufficiently well in order to reconstruct a proto-language.

Given that the Proto-West Semitic language is a direct descendent of Proto-Semitic, it is important to know which Proto-West Semitic inflectional paradigms have been inherited from Proto-Semitic and which are to be considered innovations. In accordance with the methods of historical linguistics, only inflectional paradigms which are present both in East and in West Semitic can be reconstructed for Proto-Semitic. All other inflectional paradigms have to be understood as later developments<sup>27</sup>. For this reason, it is important to identify the shared inflectional paradigms. This is the topic of section 3.2.

In the subsequent sections of this chapter, a brief outline of the tense-aspect systems of the four languages under consideration is given. It is of course outside of the scope of the present study to provide a detailed description of tense and aspect in these languages. For the present purpose, it is sufficient to identify the basic functional oppositions which are present in the tense-aspect systems in question. Particular attention is given to the shared inflectional paradigms according to section 3.2. The sketches are as far as possible synchronic. An analysis of the diachronic paths involved in the creation of the attested tense-aspect systems is left for chapter 4.

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<sup>27</sup> The complete loss of a particular inflectional paradigm in one of the two branches is possible in theory, but impossible to prove in practice.

The topic of the present study is tense and aspect. For this reason, inflectional paradigms which express a modal value are excluded from the discussion whenever possible. The discussion is furthermore restricted to inflectional paradigms as ‘bare’ forms. The comparison of morphological markers for number, gender and person added to the inflectional paradigms is not part of this study. Likewise, a detailed survey of verbal stems and voice distinctions is outside of the scope of this study. Finally, the discussion is limited to finite verbal forms. Nominal verb forms such as participles and masdars are not included in the discussion unless they clearly form an integral part of the tense-aspect system under consideration.

It is crucial to keep in mind that classical Semitic languages do not exhibit very complex synthetic verbal systems like, e.g., Bulgarian, Greek, Turkish or Georgian. Classical Semitic tense-aspect systems are located towards the minimalistic end of the spectrum of systemic complexity. Interferences between explicit and implicit tense and aspect values thus naturally play a more prominent role. This is probably one of the main reasons for why it has been so difficult to adequately describe the Semitic tense-aspect systems. In any case, it should be the aim of any analysis to distinguish explicit tense-aspect values from implicit ones.

### 3.2 Shared Inflectional Paradigms

In this section, the inventories of inflectional paradigms in the various Semitic languages are compared and shared inflectional paradigms are identified. It is crucial to distinguish form from function. While morphological cognates are found throughout Semitic, the particular function of the inflectional paradigms has to be described separately for every single language. This section is only concerned with the morphological forms. The language-specific functions of these inflectional paradigms are the topic of the subsequent sections.

Akkadian has four indicative inflectional paradigms: the Present *iparras*, the Preterite *iprus*, the Perfect *iptaras* and the Stative *paris*. Three of these have cognates in West Semitic. Cognates of *iprus* and *paris* are found in all classical West Semitic languages, e.g., in Hebrew (*wayyiqtol* and *qatal*). The Akkadian inflectional paradigm *iparras* has cognates only in Ethio-Semitic (e.g., Ge‘ez *yəqattəl*) and Modern South Arabian (e.g., Mehri *yəkōtəb*).

There is no trace of an inflectional paradigm cognate with Akkadian *iptaras* in any of the West Semitic languages. *iptaras* has thus to be understood as an East Semitic innovation. The other three inflectional paradigms (*iprus*, *iparras* and *paris*) have to be considered inherited from Proto-Semitic, since they are found in both East and West Semitic.

**T10:** Shared inflectional paradigms in East and West Semitic

<b>Akkadian</b>	<i>paris</i>	<i>iḫrus</i>	–	<i>iḫarras</i>
<b>Ge‘ez</b>	<i>qatala</i>	<i>yəqtəl</i>	–	<i>yəqattəl</i>
<b>Mehri</b> <sup>28</sup> <i>yəkōtəb</i>		<i>kātōb</i>	<i>yəktēb</i>	–
<b>Central Semitic</b>				
<b>Hebrew</b>	<i>qatal</i>	<i>yiqtol</i>	<i>yiqtol</i>	–
<b>Arabic</b>	<i>fa‘ala</i>	<i>yaf‘al</i>	<i>yaf‘alu</i>	–
<b>Syriac</b>	<i>katab</i>	<i>nektāb</i>		–
<b>Ugaritic</b>	<i>ktb</i>	<i>yktb</i>	<i>yktb</i> (pl. -n)	–
<b>Sabaic</b>	<i>fʿl</i>	<i>yfʿl</i>	<i>yfʿln</i>	–

In Central Semitic, there is more than one cognate to Akkadian *iḫrus*. Central Semitic languages do not only exhibit an inflectional paradigm *\*yiqṭVl* (pl. *\*yiqṭVlū*), but also an inflectional paradigm *\*yiqṭVlu* (pl. *\*yiqṭVlūna*) with a suffixed morpheme *\*-u/-ni/-na*. While the former inflectional paradigm is the direct cognate of Akkadian *iḫrus*, the latter inflectional paradigm is absent from Akkadian. Hence, the inflectional paradigm *\*yiqṭVlu* cannot be reconstructed for Proto-Semitic. Yet, Akkadian exhibits a subordinating particle *-u/-ni/-na* which is added to any inflectional paradigm when used in a subordinate clause. The formal similarity of the allomorphs *-u/-ni/-na* with the endings of the *\*yiqṭVlu* (pl. *\*yiqṭVlūna*) paradigm in West Semitic is striking. It is very likely that the *\*yiqṭVlu* (pl. *\*yiqṭVlūna*) paradigm is a petrified form of *\*yiqṭVl* in conjunction with the subordinating particle. I will discuss this development in more detail in chapter 4. For the moment, it suffices to note that the

<sup>28</sup> Forms taken from Bubenik (2017: 77).

subordinating morpheme *-u/-ni/-na* found in Akkadian should be reconstructed for Proto-Semitic because it is present in West Semitic too, albeit with another, secondary function.<sup>29</sup>

To recapitulate, the following inflectional paradigms are clearly Proto-Semitic because they are found both in Akkadian and in West Semitic:

- *\*yiq̄tVl* (cf. Akk. *iprus*, Ge'ez *yəqtəl*)
- *\*yiq̄attVl* (cf. Akk. *iparras*, Ge'ez *yəqattəl*)
- *\*qatVla* (cf. Akk. *paris*, Ge'ez *qatala*)

Furthermore, a subordinating particle *\*-u/-ni/-na* (cf. Akk. *iprus-u*, Ar. *yaf'al-u*) can be reconstructed for Proto-Semitic. All other inflectional paradigms, whether Akkadian *iptaras* or Arabic *yaf'alu*, cannot be reconstructed to Proto-Semitic because they are absent from one of the two Semitic branches. Crucially, what has been reconstructed is the morphological forms. Nothing is said about the functions of the inflectional paradigms in the individual languages. Where functions do not coincide, diachronic changes are to be identified in order to explain the semantic differences (see chapter 4). Table (T10) gives an overview of the inflectional paradigms in eight Semitic languages.

The reconstruction presented in the previous paragraphs is straightforward. However, if one takes a look at the details, the situation is somewhat more complicated. In particular the vowel correspondences between the cognate forms pose some difficulties. There are three main areas of differences: 1) the prefix vowels; 2) the vowel between stem and ending of the suffix conjugation; 3) the stem vowels.

I will discuss the stem vowels first. In order to get a correct picture of the situation, it is necessary to look not only at the basic G stem, but at the derivational stems as well. Table (T11) indicates the vowels possible in each language in each stem. Note that Hebrew *e* and *o* reflect *\*i* and *\*u*, respectively, and Ge'ez *ə* and its variant  $\emptyset$  (zero) reflect both *\*i* and *\*u*.

As can be seen from table (T11), *\*yiq̄tVl* poses little difficulties. It has a variable stem vowel *a/i/u* in the G stem both in East and West Semitic, and a consistent *i* vowel in most of the derived stems. The T stem is an exception, with a variable stem vowel *a/i/u* in East Semitic and a fixed *i* vowel in West Semitic.

The picture is less clear for *\*yiq̄attVl*. In East Semitic, the inflectional paradigm has a variable stem vowel *a/i/u* in the G stem and in the T stem, as well as some remnants of a variation in the N stem. The D and Š stem both have a fixed *a* vowel.

<sup>29</sup> There is a third form based on *\*yiq̄tVl* in Central Semitic, viz. *\*yiq̄tVla* (pl. *\*yiq̄tVlā*). As it is a modal form, I will not discuss it here.

Crucially, the fixed *a* vowel in Akkadian constitutes the only (!) difference in form between the Present *iparras* and the Preterite *iprus* for the Š and D stems (and some other stems not discussed here), e.g. Š: Present *ušapras* – Preterite *ušapris*, D: Present *uparras* – Preterite *uparris*. In Ge‘ez, on the other hand, the situation looks very different. Unlike Akkadian, Ge‘ez exhibits a gemination of the second radical in all derived stems. The stem vowel is an invariable *ə* for all stems including the G stem, with the notable exception of the T stem which has an invariable *a* vowel.

\**qatVla* has a variable stem vowel *a/i/u* in the G stem both in East and West Semitic, with a very strong preference of *i* in East Semitic (see Kouwenberg 2010: 161f. for Akkadian). In the derived stems, the situation is more complicated. While East Semitic has an invariable *u* vowel in all derivational stems, Ge‘ez and Arabic exhibit mainly an invariable *a* vowel, and Hebrew an invariable vowel *e* or *i*.

**T11:** Stem vowels in the G stem and in some important derivational stems

**\**yiqtVl***

	G	D	Š/A	N	T
Akkadian	<i>a/i/u</i>	<i>i</i>	<i>i</i>	<i>i</i>	<i>a/i/u</i>
Ge‘ez	<i>a/ə</i>	<i>ə</i>	<i>ə</i>	—	<i>a</i>
Hebrew	<i>a/o</i>	<i>e</i>	<i>i</i>	<i>e</i>	<i>e</i>
Arabic	<i>a/i/u</i>	<i>i</i>	<i>i</i>	<i>i</i>	<i>i</i>

**\**yiqattVl***

	G	D	Š/A	N	T
Akkadian	<i>a/i/u</i>	<i>a</i>	<i>a</i>	<i>a/i</i>	<i>a/i/u</i>
Ge‘ez	<i>ə</i>	<i>ə</i>	<i>ə</i>	—	<i>a</i>

**\**qatVla***

	G	D	Š/A	N	T
Akkadian	<i>(a)/i/(u)</i>	<i>u</i>	<i>u</i>	<i>u</i>	<i>u</i>
Ge‘ez	<i>a/∅</i>	<i>a</i>	<i>a</i>	—	<i>a/ə~∅</i>
Hebrew	<i>a/e/o</i>	<i>e</i>	<i>i</i>	<i>a</i>	<i>e</i>
Arabic	<i>a/i/u</i>	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>

In conclusion, the two main issues are the following: 1) Ge‘ez *yəqattəl* has an invariable *ə* vowel in the G stem and an invariable *a* vowel in the N stem, whereas Akkadian *iparras* has variable vowels in both cases; 2) the derivational stems of *\*qatVla* exhibit very different, but invariable vowel patterns throughout Semitic.

It is difficult to address these issues in a convincing way, especially because it is probably impossible to say which forms are conservative and which ones are innovative. Furthermore, the matrix of derivational stems and inflectional paradigms, as well as different verb classes (such as weak verbs) offer numerous opportunities for analogical assimilations or dissimilations during the history of Semitic.<sup>30</sup>

I will leave the question open for now; it suffices to note that since the majority of stem vowel patterns of the inflectional paradigms at question are the same across the Semitic languages, it is justified to assume a common origin of the inflectional paradigms in question.

The second vowel issue are the endings of the *\*qatVla* form. In Akkadian, an *-ā-* is inserted between the stem and the personal suffixes of *paris*; e.g. 2<sup>nd</sup> sg. m. *pars-ā-ta*. This vowel is absent in West Semitic; e.g. Arabic 2<sup>nd</sup> sg. m. *fa‘al-ta*. On the other hand, in the 3<sup>rd</sup> sg. m., the Akkadian Stative is endingless (i.e. *paris*), but has a final *-a* in West Semitic (e.g. Arabic *fā‘al-a*). Given that the loss of a final vowel is easier to explain than its attachment, the final *-a* in West Semitic 3<sup>rd</sup> sg. m. is most likely archaic. The *-ā-* suffix is a more serious issue. As a speculative solution, Brockelmann (1908: 583) suggests that the original set of endings was the personal pronouns (*anāku*, *anta*, *anti*, etc.) without the initial *an-*, viz. *\*-āku*, *\*-ta*, *\*-ti*, etc. East and West Semitic each would have leveled out the paradigmatic differences, but in the opposite direction. East Semitic innovated the second person in analogy to the first person, while West Semitic innovated the first person in analogy to the second person. In turn, this means that Proto-Semitic had the original set of suffixes *\*-āku*, *\*-ta*, *\*-ti*.

The last issue are the vowels of the prefixes in both *\*yiqTVl* and *\*yiqattVl*. Akkadian has *i* for some persons and *a* for others in the G stem. Arabic exhibits an *a* vowel for all persons. In Ge‘ez, however, the prefix vowel is *ə* in the G stem. It is probable that Akkadian preserves the original prefix vowels, whereas in Arabic and Ge‘ez, these were harmonized by paradigmatic leveling. In any case, the prefix vowel is of little importance for the present study. I will follow Kouwenberg (2010: 98) and reconstruct *\*yi-* as the prefix of both *\*yiqTVl* and *\*yiqattVl*.

30 It might be worth taking into account that some West Semitic languages exhibit internal passives which are characterized by nothing more than a vowel pattern different from the active counterpart; e.g. Arabic active *fa‘ala* ‘to do’, passive *fu‘ila*. The rise of the internal passive is probably a West Semitic innovation, which may well have influenced vowel patterns towards greater invariance (see also chapter 4).

### 3.3 The Tense-Aspect System of Akkadian

The Akkadian verbal system encompasses four finite indicative inflectional paradigms, viz. *iḫrus*, *iḫarras*, *ḫaris* and *iḫtaras*. All but the last are inherited from Proto-Semitic. Unlike in many West Semitic languages, there are no compound verbal forms based on two finite inflectional paradigms (such as Arabic *kāna yafʿalu*).

The four inflectional paradigms mentioned above are basically non-modal, i.e. indicative. All inflectional paradigms with the exception of *iḫtaras* can be combined with a modal particle or prefix in order to express deontic modality (see Kouwenberg 2010: 211f.). In addition, Akkadian has an imperative (*ḫurus*), which is a purely modal inflectional paradigm and which is morphologically related to *iḫrus*.

In subordinate clauses, a suffix *-u* is added to any inflectional paradigm, if the underlying inflected form ends in a consonant. In Assyrian, the subordinating suffix has an allomorph *-ni* which is added to an inflected form (after an object suffix), either instead of *-u*, or in addition to *-u*. This allomorph is rarely found in Sargonic Akkadian as well (see Kouwenberg 2010: 23f.).

There is no generally accepted analysis of the tense-aspect values of the Akkadian inflectional paradigms. This is actually not particularly surprising. Given that the Akkadian inventory of inflectional paradigms is small, interferences between implicit and explicit tense and aspect values are expected to be relatively strong. Interferences between tense and aspect (as discussed in chapter 2) lead to implicit tense in tenseless languages and implicit aspect in aspectless languages. As a result, it is often difficult to define the explicit category and to distinguish it from implicit ones. To give an example, Akkadian *iḫrus* is only used in past contexts. This does not at any rate characterize *iḫrus* as a past tense, however. The association of *iḫrus* with the past tense may as well be the result of a co-occurrence restriction of its aspect value with the non-past domain (see below). Nonetheless, non-modal *iḫrus* has at least implicitly a past tense value. In the following paragraphs, I will discuss the basic functional values of *ḫaris*, *iḫrus*, *iḫarras*, and *iḫtaras*.

I will begin my discussion with *ḫaris*, because its function is uncontroversial. *ḫaris* is used in both past and non-past contexts (see Kouwenberg 2010: 164). It denotes a state, most typically the state resulting from a prior telic action. It is neutral with regards to the voice distinction, i.e., the state expressed may be ‘active’ or ‘passive’. With high-transitivity verbs, *ḫaris* is mostly ‘passive’, because it is the object which undergoes a change of state while the subject is typically not affected by the event. With low-transitivity verbs, it may also be the subject which undergoes a change of state; hence, *ḫaris* may be ‘active’ or ‘passive’ in these cases (see Kouwenberg 2010: 172). Typical examples of ‘active’ statives include verbs of possession, e.g. *ṣabātu* ‘to take, seize’ or *leqû* ‘to receive’ (see Kouwenberg 2010: 173).

It follows from the above description that *paris* expresses the prototypical resultative aspect. There is no additional tense value, be it absolute or relative. *paris* is a tenseless, purely aspectual form.

The inflectional paradigms *iprus* and *iparras* pose more difficulties. It is generally agreed upon that these two inflectional paradigms constitute the main opposition in the Akkadian tense-aspect system. Some authors assume that they express aspect and tense at the same time. For instance, according to Kouwenberg (2010: 91f. and 127f.), *iprus* and *iparras* have both tense values and aspect values, *iprus* being perfective and past/anterior, *iparras* being imperfective and non-past/non-anterior. From a functional point of view, this is difficult to maintain. If two categories (e.g., aspect and absolute tense) are expressed at the same time, at least a third member has to be present in the opposition (e.g., an imperfective past), otherwise, there would be a gap in the matrix (see section 2.6).

According to Cohen (2006: 34), it is crucial to distinguish between narrative and discourse (or ‘dialogue’, in Cohen’s terminology). There are many characteristics which set them apart. For instance, while in the discourse, all grammatical persons are used — the 1st and 2nd person being the prototypical grammatical persons in discourse —, the prototypical, detached narrative (in which the narrator is not involved in the story) exhibits only 3rd persons; in other words, the distinction of grammatical person is irrelevant in the prototypical narrative (see Cohen 2006: 36f.). Other characteristics include use vs. non-use of modality, of vocatives, and of interrogatives (see *ibid.*). As for Old Babylonian, Cohen (2006: 66) proposes the following tense-aspect oppositions. In narrative, *iprus* and *iparras* have aspect values. *iprus* expresses the perfective aspect, *iparras* the imperfective aspect. In discourse, on the other hand, *iprus* and *iparras* do not have aspect values, but absolute tense values. *iprus* expresses the past tense, *iparras* the non-past tense.

Cohen’s (2006) analysis is compelling, yet it has the disadvantage that narrative and discourse each have completely different tense-aspect oppositions, although making use of exactly the same inflectional paradigms. It seems to me that it is possible to analyze the tense values in discourse as the result of interferences of the underlying aspectual values (*iprus* perfective, *iparras* imperfective). In Akkadian, non-modal *iprus* is incompatible with any non-past context in general. This can be understood as a generalization of the universal co-occurrence restriction of the perfective aspect with (actual) present contexts. Cross-linguistically, the co-occurrence restriction of the perfective aspect applies not to the non-past realm as a whole, but only to the actual present (i.e., the speech time). The perfective is compatible with future contexts cross-linguistically. However, Akkadian does not regularly distinguish between present and future contexts. As far as I can see, there is no trace of



the future tense being a grammatical category in Akkadian whatsoever. Given that future contexts are not differentiated from present contexts, the whole non-past realm is as a consequence only compatible with the imperfective aspect. Hence, at the time of speech (i.e. the time of the discourse), a perfective event is interpreted as past and an imperfective event as non-past. The use of the imperfective aspect for the whole non-past realm, including future and habitual contexts, actually seems to be a characteristic trait of classical Semitic in general (see the following paragraphs).

Based on the above interpretation, it seems justified to attribute aspect values to *iprus* and *iparras* in both narrative and discourse. The main difference between narrative and discourse is that in discourse, the implicit tense values are strongly present, while in the narrative, these are mostly absent. In other words, discourse exhibits very strong tense-aspect interferences which lead to implicit tense values of basically aspectual forms.

The analysis of *iprus* and *iparras* as expressing aspect fits well with the undoubtedly aspectual nature of *paris*. But there are even more indications which point to aspect being primary to tense in these inflectional paradigms. First, the inflectional paradigm *purus*, which is used for the imperative, is morphologically related to *iprus*; both are based on the stem *-prus-*. It would be difficult to explain the relationship between a past tense and an imperative mood. Yet, given that unmarked imperatives are typically perfective, it is easy to understand the relationship between *iprus* and *purus*, if one assumes that the morpheme *-prus-* expresses a perfective aspect.

Secondly, when *iprus* is combined with a modal particle or prefix, it does not express irrealis mood (which is related to past tense in some languages), but rather various kinds of volitive nuances (see Kouwenberg 2010: 212). Again, this is easier to explain under the assumption that *iprus* expresses a perfective aspect rather than a past tense.

Finally, as has already been mentioned above, Akkadian exhibits no compound verbal forms based on two finite inflectional paradigms (such as Arabic *kāna yafʿalu*). In West Semitic, compound verbal forms are used to indicate absolute and relative tense at the same time (see, e.g., section 3.6). In a pure aspect system, the combination of two aspect values does not make any sense. The lack of compound verbal forms is thus a further indication that Akkadian lacks explicit tense distinctions.

If the above arguments are accepted, Akkadian has a purely aspectual system (disregarding *iptaras* for the moment). It is basically tenseless, but exhibits implicit tense values in discourse. It is important to note that a pure aspect system without tense is neither primitive nor archaic. The most widely spoken mother tongue of

the world today is tenseless and purely aspectual, viz. Chinese (see Li & Thompson 1989: 184f.). In Chinese, as in Akkadian, tense values can be implicitly derived from the explicit aspect values (see Lin 2005).<sup>31</sup> The following table (T12) gives an overview of the tense-aspect system of Akkadian (without *iptaras*).

**T12:** The basic tense-aspect system of Akkadian (without *iptaras*)

	<b>Aspect value</b>	<b>Implicit tense value (discourse)</b>
<i>iprus</i>	perfective	past
<i>iparras</i>	imperfective	non-past (dynamic)
<i>paris</i>	resultative	present (stative)

The functional value of the remaining inflectional paradigm *iptaras* is inconclusive. In some syntactical environments, *iptaras* seems to convey the notion of current relevance at speech time. In others, it seems to be but a mere syntactical variant of *iprus* without any additional nuance. The notion of current relevance at speech time, which is often present, points to *iptaras* expressing an anterior present tense, or, in traditional terminology, a Present Perfect (see Loesov 2004: 171). The fact that *iptaras* is frequently used in letters (a discourse genre) and its general increase in use during the history of Akkadian at the expense of *iprus* are strong indications of *iptaras* expressing an anterior present tense.<sup>32</sup> The details need not to concern us here, because *iptaras* is an East Semitic innovation (see section 3.2). It worth noting, nonetheless, that there seems to be a diachronic tendency towards tense in Akkadian as a result of the *iptaras* innovation.

### 3.4 The Tense-Aspect System of Ge'ez

The Ge'ez verbal system encompasses two finite indicative inflectional paradigms, viz. *qatala* and *yəqattəl*. Both are inherited from Proto-Semitic. In addition, it encompasses two finite non-indicative inflectional paradigms, viz. *yəqtəl* and *qatal*, which are as well inherited from Proto-Semitic. Furthermore, Ge'ez exhibits a converb *qatilo* which is of nominal origin but without doubt an integral part of the verbal system. It is an innovation of Ge'ez. Due to its nominal origin, the subject of

<sup>31</sup> A comparison of the tense-aspect systems of Akkadian and Chinese would certainly be worth a study.

<sup>32</sup> For a further discussion of *iptaras*, see Loesov (2004), Streck (1999) and Kouwenberg (2010: 140f.).

*qatilo* is marked with a possessive suffix added to the nominal base. As it is expected for a converb, *qatilo* is used only in adverbial position, yet never in predicative position.<sup>33</sup>

In addition, Ge'ez exhibits a number of compound verbal forms based on two finite inflectional paradigms. These compound verbal forms consist each of one of the existential verbs *hallo*, *kona*, *nabara* and a main verb; both parts agree with each other in person, number and gender. At least the following combinations are attested (see Weninger 2001: 37f.): *hallo yəqattəl*, *hallo yəqtəl*, *hallo qatilo*; *kona yəqattəl*, *kona qatala*; *nabara yəqattəl*, *nabara qatilo*. Furthermore, there is a construction *hallawo yəqtəl* in which the main verb agrees in person, gender and number with the object suffix on the existential verb *hallo*, while *hallo* itself is always in the 3rd sg. (see Tropper 2002: 198).

Most of these constructions are attested rarely, and often very late historically. Some of these seem to be calques from Arabic and Amharic. For instance, *kona qatala* is found exclusively in texts translated from or influenced by Arabic (see Weninger 1999: 178 and Weninger 2001: 42). It is difficult to say which of these constructions, if any, should be considered an integral part of the Ge'ez tense-aspect system. In any case, none of these compound verbal forms is used regularly in Aksumite texts (see Tropper 2002: 197f.). They are thus innovations in the linguistic history of Ge'ez and will not be discussed thoroughly in this section. It is worth mentioning, though, that the Central Semitic languages exhibit compound verbal forms which are constructed in exactly the same way (cf. Arabic *kāna yaf'alu*). The grammatical pattern of combining two finite inflectional paradigms asyndetically is likely to be a Proto-West Semitic innovation (see chapter 4).

Whether the Ge'ez inflectional paradigms do express tense or aspect, is difficult to establish, and both analyses have been put forward. Tropper (2002: 182f., 186f.) suggests that *qatala* expresses a perfective aspect and *yəqattəl* an imperfective aspect. Weninger (2001: 309f., 314f.), on the other hand, suggests that *qatala* expresses an anterior tense and *yəqattəl* a non-anterior tense. Given that the Ge'ez inventory of inflectional paradigms is small, interferences between implicit and explicit tense and aspect values are again expected to be relatively strong. In the following paragraphs, the main uses of inflectional paradigms *qatala*, *yəqattəl* and *qatilo* and *yəqtəl* will be discussed.

*qatala* is the inflectional paradigm regularly used in narrative (see Weninger 2001: 63f.). A sequence of narrated events is expressed by a row of *qatala* forms, each prefixed with the particle *wa-* 'and (then)'. In past context subordinate clauses, *qatala* denotes an event that has happened prior to the event denoted by the verb in

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33 For a discussion of the cross-linguistic category of converb, see Haspelmath (1995).

the main clause (see Weninger 2001: 55f.). In addition, *qatala* is regularly used in the protasis of both irreal and real conditional clauses (see Weninger 2001: 82f. and Tropper 2002: 245). *qatala* is not used in present or future context main clauses, except for very specific contexts such as performatives and with verbs expressing a mental state (see Weninger 2001: 75)<sup>34</sup>.

*yəqattəl* is the inflectional paradigm regularly used in actual present contexts and in future contexts (see Weninger 2001: 127f. and 143f.). In past contexts, the use of *yəqattəl* is more restricted. There are two main functions: First, it describes a situation as happening simultaneously with the situation described in the preceding main clause (see Weninger 2001: 105f.). Secondly, it describes a situation as iterative or habitual (see Weninger 2001: 109).

The converb *qatilo* is often used in narrative and typically expresses immediate anteriority to the main clause verb. *qatilo* conveys the notion of the relevance of the described situation at the time of the subsequent situation described in the main clause. It is a non-narrative form which is used to indicate anterior or perfective background information (see Weninger 2001: 330).

Finally, the inflectional paradigm *yəqtəl* has two basic functions. In independent use, it expresses volitive mood. In subordinate clauses (typically final and consecutive clauses), it functions as a posterior tense (see Weninger 2001: 321f. and Tropper 2002: 192). Given that the expression of futurity (and likewise, of posteriority) is often based on volitive constructions, the close relation between these two functions is obvious. The fact that *yəqtəl* as a modal inflectional paradigm is cognate with Akkadian *iprus* which itself is not per se modal, deserves further discussion (see chapter 4).

It becomes clear from the above descriptions that in most cases, it is difficult, if not impossible, to opt for the priority of aspect over tense, or vice versa, because in most contexts either of the suggested tense or aspect values fits equally well.

The main argument of Weninger (2001: 335f.) for the attribution of relative tense values instead of aspect values to *qatala* and *yəqattəl* is the argument put forward by Kuryłowicz (1973b) that a binary system cannot be an aspect system, because aspect is subordinate to tense. This argument is clearly vitiated by the well-known existence of tenseless languages. A prominent example is Chinese, as has been mentioned already (see Li & Thompson 1989).

The second argument of Weninger (2001: 335f.) for the attribution of relative tense is the fact that *yəqattəl* is consistently used rather than *qatala* in order to express

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<sup>34</sup> With verbs expressing a mental state (thinking, feeling), *qatala* expresses present tense states (see Weninger 2001: 75). This might be a remnant of the original resultative aspect function of the suffix conjugation (see chapter 4).

a future situation. This distribution fits well with a relative tense analysis of *yəqattəl* as non-anterior, but is less expected if *yəqattəl* expresses an imperfective aspect, because the future area is not restricted to imperfective situations like the present time. Nevertheless, the same distribution is found in Akkadian which has been argued to have an aspect system without tense. Like in Akkadian, the use of the imperfective aspect in future contexts may be explained by the fact that Ge‘ez has no grammatical means in order to distinguish a situation located in the future from one located at the time of speech.

As an argument in favor of an aspect analysis of Ge‘ez, one may note that the distribution of the two main inflectional paradigms *qatala* and *yəqattəl* is very similar to the distribution of *iḫrus* and *iḫarras* in Akkadian, with *qatala* being used in place of *iḫrus*. Under the premise that the analysis of Akkadian given in the previous section is accepted, it seems reasonable to describe the verbal system of Ge‘ez as an aspect system. On the other hand, there are at least two indications in favor of a relative tense analysis. First, it is rather obvious that the converb *qatilo* expresses an anterior tense. Hence, tense is in any way not completely absent from Ge‘ez and thus might play a role elsewhere in the system. Secondly, the emergence of compound verbal forms with two finite verbs during the history of Ge‘ez is an indication of increasing importance of tense in Ge‘ez, because in an aspect system, the expression of two aspect values at the same time is impossible.

In conclusion, the Ge‘ez tense-aspect system is probably best described as being in an intermediate stage between an aspect system and a relative tense system. Based on the typological evidence presented by Bybee & Dahl (1989) and Bybee et al. (1994), it is safe to say that the aspect system represents the older stage, and the tense system the innovative one (see section 2.7). This is further corroborated by the fact that the main indications for the relevance of tense, viz. *qatilo* and the compound verbal forms, are both innovations of Ge‘ez. The following table (T13) gives an overview of the tense-aspect system of Ge‘ez.

**T13:** The basic tense-aspect system of Ge‘ez

	<b>Aspect value</b>	<b>&gt;</b>	<b>Relative tense value</b>
<i>yəqattəl</i>	imperfective	>	non-anterior
<i>qatala</i>	perfective	>	anterior
<i>qatilo</i>	—	>	anterior
<i>yəqtəl</i>	—	>	posterior

### 3.5 The Tense-Aspect System of Biblical Hebrew

The Biblical Hebrew verbal system encompasses two basic inflectional paradigms, viz. *qatal* and *yiqtol*. In addition, there exist three forms which are made up of one of the two basic inflectional paradigms and a prefixed *waw*, viz. *wəqatal*, *wayyiqtol* and *wəyiqtol*. It is not entirely clear nor agreed upon whether it is suitable to analyze the *waw*-prefixed forms together with their non-prefixed counterpart or whether they should be considered inflectional paradigms of their own. In any case, only the inflectional paradigms *qatal* and *wayyiqtol* are basically non-modal forms, whereas the remaining inflectional paradigms function as modal forms.<sup>35</sup>

A related difficulty of the Biblical Hebrew verbal system is the fact that the prefix conjugation exhibits two different forms for certain root types, viz. a short *yiqtol* and long *yiqtol* (see Waltke & O'Connor 1990: 469). The difference in form is apparent only for certain verbal root types, and for certain person, gender and number combinations. In most inflected forms, there is no morphological difference between a short and a long *yiqtol*. In cases where a morphological difference is apparent, *wayyiqtol* always has the short variant, simple *yiqtol* usually has the long variant. Diachronically, short and long *yiqtol* go back to two different inflectional paradigms without doubt. Whether they should actually be considered as two different forms in Biblical Hebrew, is yet another question. In any case, there is a significant overlap with the presence or absence of a prefixed *waw*. For the present purpose, it thus suffices to note that *wayyiqtol* has the short form which is directly cognate with Akkadian *iprus*, and that simple *yiqtol* is based on the long form which is cognate with Arabic *yaf'alu*.

Finally, in addition to the forms based on *yiqtol* and *qatal*, Biblical Hebrew makes use of the inherited active participle *qotel* in predicative position. While the participle had been left out in most older studies on the Biblical Hebrew verbal system, there is an emerging consensus that the participle is to be considered part of the Biblical Hebrew tense-aspect system (see, e.g., Cook 2012: 223f.).

Hence, the main non-modal inflectional paradigms in Biblical Hebrew are *wayyiqtol*, *qatal* and *qotel* (see, e.g., Hatav 1997: 29). The simple *yiqtol* without a prefixed *waw* can convincingly be argued to be purely modal (see Hatav 1997: 143f.), but some of its uses are non-modal in more traditional terms.

The tense-aspect system of Biblical Hebrew has been discussed for centuries, and various analyses have been proposed. It is neither possible nor necessary to discuss the history of research here; for a concise summary see Waltke & O'Connor (1990: 455f.), Cook (2012: 77f.), Penner (2013: 918f.) and Joosten (2013). I will con-

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<sup>35</sup> In addition to *yiqtol*, *wəyiqtol* and *wəqatal*, Biblical Hebrew exhibits a number of modal forms, among them the inherited imperative *qitol*. These will not be discussed in this section.

concentrate on some of the most up-to-date accounts, viz. Hatav (1997), Joosten (2002, 2012) and Cook (2006, 2012). In the following paragraphs, I will first summarize these accounts very briefly, and then propose an analysis for each of the inflectional paradigms.

Cook (2012: 269f.) describes the Biblical Hebrew verbal system as exhibiting elements of both tense and aspect. To each of the inflectional paradigms, Cook (2012: 270) attributes a range of functions, while at the same time some functions are attributed to more than one inflectional paradigm, i.e. there is a certain functional overlap between the inflectional paradigms. According to his analysis, the central opposition is between *qatal* and *yiqtol* (see Cook 2006: 32f.). The former expresses a perfective aspect, the latter the imperfective aspect. *wayyiqtol*, on the other hand, is a specialized past narrative tense, i.e. a simple past tense. The central function of *qotel* is the expression of the progressive aspect (see Cook 2012: 270).

Joosten (2002: 66f.) argues in favor of a relative tense analysis. He correctly notes that *yiqtol* is not used in two of the most prototypical imperfective contexts, viz. the actual present and attendant circumstances in the past (see Joosten 2002: 53f.). It is thus certainly not justified to attribute to *yiqtol* the value of an imperfective aspect, as does Cook (2006). Joosten (2002: 68) speculates that the interpretation of *yiqtol* as an imperfective aspect might have its origin in an undue application of Arabic categories to Biblical Hebrew. He analyzes *yiqtol* as a modal and future inflectional paradigm, with a number of secondary functions, including general present and repetition in the past (see also Joosten 2012: 261f.). *qatal*, according to his analysis, mainly expresses the current relevance of a preceding action at the present time, in other words, a ‘Perfect’ (Joosten 2012: 193f.). This corresponds to an anterior tense in the terminology applied here. The participle *qotel* expresses contemporaneousness (Joosten 2012: 229f.) and would thus be a parontive tense in the terminology applied here. For *wayyiqtol*, Joosten (2012: 161f.) assumes that the inflectional paradigm is an aspectually neutral Preterite, i.e., it expresses a simple past tense.

Hatav’s (1997) analysis is based on truth-conditional semantics. According to her analysis, the main opposition is between inflectional paradigms expressing sequentiality (*wayyiqtol*, *wəqatal*) and inflectional paradigms not expressing sequentiality (*yiqtol*, *qatal*, *qotel*) (see Hatav 1997: 29). Among the sequential forms, *wayyiqtol* differs from *wəqatal* in that it is a non-modal sequential form, while the latter is a modal sequential form. Unfortunately, it is not possible to transfer a mere sequential form directly into a value of the framework applied here. However, Hatav (1997: 29) also specifies that *wayyiqtol* does not express Inclusion (i.e. progressive in the terminology applied here), nor a Perfect (i.e. an anterior tense). From these neg-

ative values, it is possible to infer that *wayyiqtol* is, at least implicitly, perfective and non-anterior in Hatav’s framework. As for the non-sequential inflectional paradigms, Hatav (1997: 89f.) proposes that *qotel* expresses the Inclusion value, i.e. a progressive aspect in the terminology applied here; *qatal* expresses the Perfect value, i.e. an anterior tense (see Hatav 1997: 163). As for *yiqtol*, Hatav convincingly argues that, in terms of truth conditions, all functions of *yiqtol* are modal, including futurity and habituality (see Hatav 1997: 123f. and 131f.).<sup>36</sup>

The picture that emerges from the analyses of Hatav (1997), Joosten (2002, 2012, 2013) and Cook (2006, 2012) is that both tense and aspect seem to play a role in Biblical Hebrew. Similar to Ge’ez, the Biblical Hebrew tense-aspect system is at an intermediate stage between an aspect system and a tense system. Both aspect and relative tense values may be attributed to the inflectional paradigms, but it is often impossible to determine which of the categories is more relevant.

One of the major deficiencies of many earlier accounts on Biblical Hebrew, still pursued by Cook (2006, 2012), is the interpretation that *yiqtol* expresses an imperfective aspect. Joosten (2002: 53f.) has convincingly demonstrated the non-use of *yiqtol* in prototypical imperfective contexts. In fact, no one of *yiqtol*’s functions is unambiguously imperfective. Both habituality and general present are not prototypical imperfective contexts, but may just as well be expressed by a perfective aspect. What is more, all functions of *yiqtol* are actually consistent with a perfective analysis, and if it expresses an aspect value at all, it has to be the perfective aspect. In terms of relative tense, many of *yiqtol*’s functions, specifically its use in future and modal contexts, suggest that this inflectional paradigm expresses a posterior tense.<sup>37</sup>

The analysis of *yiqtol* as perfective and posterior actually puts the form more closely to *wayyiqtol*. The vast majority of instances of *wayyiqtol* is found in narrative and used to express the temporal succession of events. Being used as the narrative form, *wayyiqtol* has per se a perfective value. With stative verbs, *wayyiqtol* often expresses the emergence of a state. This is what is expected from the perfective aspect, as it has its focus on the climax of a situation. In terms of relative tense, both an anterior tense and a non-anterior tense value are in principle possible for a narrative form. In the first case, the speech time functions as the reference point and the anterior value is thus implicitly interpreted as absolute (i.e. as a past tense). This is the case in Ge’ez (see section 3.4). In the latter case, the non-anterior value is interpreted in relation to the preceding event in the chain of events. The non-anterior

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36 Hatav’s analysis of *yiqtol* has the advantage that its seemingly disparate functions are unified under a single concept and can be shown to be semantically related. Hatav (1997: 123f.) defines modality as quantification over branching options. See Hatav (1997: 117f.) for a thorough discussion.

37 As is well known, *yiqtol* develops into a future tense in Mishnaic Hebrew, and is used as such in Modern Hebrew. This is in line with the present analysis.



value facilitates the expression of temporal succession of events. This is exactly what is found in Biblical Hebrew. The main function attributed to *wayyiqtol* is typically temporal succession (e.g. Hatav 1997: 29). This function is a direct result of the non-anterior tense value of *wayyiqtol* in relation to the preceding event. In any case, given that the use of *wayyiqtol* is virtually limited to past contexts, it is probably better to analyze it as an absolute past tense.

The inflectional paradigm *qatal*, is best described as an anterior tense, following both Hatav (1997: 163) and Joosten (2012: 193f.). Crucially, *qatal* is a non-narrative form, because its anterior value does prevent an interpretation of temporal succession. *qatal* has a number of secondary functions; it is used in ‘gnomic’ statements, in prophetic texts and as a performative. Rogland (2003) has shown that all these secondary functions of *qatal* are in line with an analysis of *qatal* expressing relative past tense, i.e. anterior tense (see Rogland 2013: 15f., 53f. and 115f. for a detailed discussion). A different function of *qatal* is found with verbs that have a stative aktionsart. With these, *qatal* expresses the resultant state, either in the past or in the non-past (see Cook 2012: 195, 198f.). It is a resultative in the terminology applied here. Hence, *qatal* is best described as anterior in terms of relative tense, and as resultative in terms of aspect.

The participle *qotel* is used to express that an action is ongoing at the reference time. It is described as a progressive aspect by Cook (2012: 270) and by Hatav (1997: 89f.), and as a parontive tense by Joosten (2012: 229f.). There is a significant functional overlap between these two values. Hence, *qotel* is best described as progressive in terms of aspect, and as parontive in terms of tense. The correctness of this analysis is corroborated by the fact that verbs with stative aktionsart are rarely used in the *qotel* inflectional paradigm (see Cook 2012: 195). Stative verbs are compatible with the progressive aspect in very specific contexts only, as is well known from English.

**T14:** The basic tense-aspect system of Biblical Hebrew

	<b>Aspect value</b>	<b>&gt;</b>	<b>Tense value</b>
<i>qatal</i>	resultative	>	anterior
<i>wayyiqtol</i>	perfective	>	past
<i>yiqtol</i>	perfective	>	posterior
<i>qotel</i>	progressive	>	parontive

In conclusion, the Biblical Hebrew verbal system is at an intermediate stage between aspect-prominent and tense-prominent. Stative verbs are still marked for aspect and are basically tenseless. Dynamic verbs, on the other hand, tend to be marked for relative tense; aspect does only play a marginal role and mainly results from relative tense interferences. Crucially, the prefix conjugations are not imperfective, as has long been assumed, but instead perfective. Table (T14) gives an overview of the tense-aspect system of Biblical Hebrew.

### 3.6 The Tense-Aspect System of Classical Arabic

The Classical Arabic verbal system encompasses four basic inflectional paradigms, viz. the suffix conjugation *faʿala* and the three prefix conjugations *yafʿalu*, *yafʿal* and *yafʿala*. In addition, there is an imperative inflectional paradigm *ifʿal* which is morphologically related to *yafʿal*. Furthermore, the participle *fāʿil* is used in predicative position. *faʿala* and *yafʿal* (including *ifʿal*) and the participle *fāʿil* are inherited from Proto-Semitic. *yafʿalu* is cognate with the Hebrew long *yiqtol*, but has no East Semitic cognate and hence is not inherited from Proto-Semitic. The history of *yafʿala* poses more difficulties and will not be discussed here.

Classical Arabic exhibits a number of verbal modifiers which are used in conjunction with the above inflectional paradigms, viz. *qad*, *sawfa/sa-*, and *la-*. *yafʿalu* is compatible with all of these modifiers, *faʿala* only with *qad*, *fāʿil* only with *la-* (see Marmorstein 2016: 65). Only *sa-yafʿalu* and *qad faʿala* are included in the following discussion.

In addition to the above inflectional paradigms, Classical Arabic exhibits a number of compound forms based on the auxiliary verb *kāna/yakūnu* and another verb which typically agrees in person, number and gender with the auxiliary verb. *kāna* is compatible with *faʿala*, *yafʿalu*, *fāʿil* and *qad faʿala*; *yakūnu* only with *fāʿil* and *qad faʿala* (see Marmorstein 2016: 70).

Negation of verbal forms is not trivial in Arabic. The negated forms do not simply consist of the affirmative inflectional paradigm plus a negation particle. Rather, the negated paradigms form a system of their own (see Marmorstein 2016: 74f.). I will not discuss the system of negated inflectional paradigms, but I will include in my discussion one specific negated inflectional paradigm, viz. *lam yafʿal*. This form contains the inflectional paradigm *yafʿal* which is cognate with Akkadian *iḫrus* and which is thus of interest for the present topic.

The Arabic tense-aspect system has been discussed for a long time, and various analyses have been proposed. It is not necessary to discuss the history of re-

search at this place. Rather, I will rely on Marmorstein (2016) in my discussion, which is the most up-to-date monograph on tense and aspect in Classical Arabic.<sup>38</sup>

The analysis of Marmorstein (2016) is discourse-orientated and analyzes the use of the inflectional paradigms in different grammatical and textual contexts. Focussing on indicative inflectional paradigms, Marmorstein (2016: 62f.) assumes that there are four basic indicative inflectional paradigms in Classical Arabic, viz. *yafʿalu*, *faʿala*, *qad faʿala* and *fāʿil*. The inclusion of the complex form *qad faʿala* results from the fact that its syntactic distribution is clearly distinct from simple *faʿala* (see Marmorstein 2016: 65f.).

Marmorstein (2016: 234f.) describes the Classical Arabic verbal system as a relative tense system. Aspect in the sense as defined in chapter 2 of this study plays a marginal role in Arabic and is only implicit. However, according to Marmorstein (2016: 236), boundedness, which is a concept very similar to telicity (see chapter 2), plays an important role in the Arabic verbal system. Many inflectional paradigms are interpreted differently depending on the telicity value of the verb in use. Some inflectional paradigms do per se express boundedness and thus only allow for a telic reading, no matter the telicity value of the underlying verb. These are *qad faʿala* and *sa-yafʿalu*, and the passive variant of the participle (*mafʿūl*). The remaining inflectional paradigms each exhibit two different readings.

According to Marmorstein (2016: 236), *faʿala* expresses anterior tense with telic verbs. With atelic verbs, it expresses ‘persistence’. The term ‘persistence’ means that the event described has begun prior to the reference point in time, and still goes on at reference time. Unfortunately, in the preliminary framework applied in this study, there is no concept directly corresponding to ‘persistence’. However, ‘persistence’ can be understood as a special case of anteriority. Hence, *faʿala* is best described as an anterior tense.

*yafʿalu* and *fāʿil* both express posterior tense with telic verbs, but ‘concurrence’, i.e. parontive tense, with atelic verbs according to Marmorstein (2016: 236). The difference between *yafʿalu* and *fāʿil* is that the former is used to express the notion of dynamicity, while the latter is used to express the notion of stativity. Both parontive and posterior tense are special values of the non-anterior tense. Hence, disregarding the telicity value of a particular verb, *yafʿalu* and *fāʿil* can be described as non-anterior tenses.

*sa-yafʿalu* (or *sawfa yafʿalu*) is a specialized variant of *yafʿalu* which is inherently bounded and thus expresses posterior tense irrespective of the telicity value of the underlying verb according to Marmorstein (2016: 236). With atelic verbs, *sa-yafʿalu* is a means of expressing a posterior tense value instead of a parontive tense value,

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38 For another analysis, see Reuschel (1996) on Quranic Arabic.

which it would have with simple *yaf'alu*. With telic verbs, *sa-yaf'alu* emphasizes the posterior value which simple *yaf'alu* already expresses (see Marmorstein 2016: 68). As far as I can see, the reference time of *sa-yaf'alu* is not context-dependent, but always the speech time. Hence, in my opinion, it is preferable to describe *sa-yaf'alu* not as a posterior tense, but as an absolute future tense.

*qad fa'ala* is described by Marmorstein (2016: 237) as 'coincidental' with the reference time and as 'resultative'. The latter term should not be confused with the aspect of resultative as defined in chapter 2 of this study. Rather, what Marmorstein describes by this term is, in other words, that *qad fa'ala* expresses the current relevance of a situation at reference time. Hence, in the framework applied here, it is best to describe *qad fa'ala* as an anterior tense with a strong focus on the notion of current relevance at reference time.

The negative inflectional paradigm *lam yaf'al* is used as a negation of the past (see Marmorstein 2016: 100). It may be regarded as the negated counterpart of *fa'ala*. However, unlike *fa'ala*, *lam yaf'al* always has the speech time as its reference time. Hence, as far as I can see, it does not express anterior tense, but rather (negated) absolute past tense.

Finally, the compound verbal forms are analyzed by Marmorstein (2016: 69) as expressing relative tense and aspect at the same time. The auxiliary verb forms *kāna/yakūnu* function as a tense indicator, allowing the main verb to express an aspect value. *kāna* expresses anterior tense and *yakūnu* expresses posterior tense. However, as far as I can see, the reference point of the auxiliary verb is always the speech time. Hence, I prefer to analyze the compound verbal forms as a combination of absolute tense and relative tense. *kāna* and *yakūnu* express past tense and future tense, respectively. The main verb has its expected relative tense function as described in the preceding paragraphs depending on the inflectional paradigm in which it is inflected. Aspect values are only implicitly present due to tense-aspect interferences.

In conclusion, the Classical Arabic tense-aspect system is a relative tense system with a tendency towards absolute tense. Some specialized forms, viz. *sa-yaf'alu*, *lam yaf'al* and the compound verbal forms express absolute tense values in all contexts. The remaining inflectional paradigms express relative tense values, but are typically interpreted as absolute tense values in independent clauses. Aspect is marginal and only implicit in Arabic. The priority of tense over aspect in Classical Arabic is corroborated by the fact that the language exhibits obvious signs of tense, including the future particle *sa-/sawfa* and the compound verbal forms with *kāna/yakūnu* as a tense indicator. The following table (T15) gives an overview of the basic tense-aspect system of Classical Arabic.

**T15:** The basic tense-aspect system of Classical Arabic

	<b>Relative tense value</b>	<b>Absolute tense value</b>
<i>fāʿala</i>	anterior	past
<i>yafʿalu</i>	non-anterior	non-past
<i>fāʿil</i>	non-anterior	non-past
<i>sa-yafʿalu</i>	—	future
<i>lam yafʿal</i>	—	past



## 4 Tense and Aspect in Proto-West Semitic

### 4.1 Introduction

In chapter 2, I have defined the categories of aspect, absolute tense and relative tense in a preliminary language-unspecific framework. Furthermore, I have pointed to some diachronic paths along which tense and aspect are known to develop diachronically. In chapter 3, I have discussed which inflectional paradigms can be reconstructed to Proto-Semitic by means of the comparative method. In addition, I have given a very brief outline of four classical Semitic tense-aspect systems. By combining the theoretical framework established in chapter 2 and the linguistic evidence introduced in chapter 3, it is now possible to proceed to the reconstruction of the Proto-West Semitic tense-aspect system.

The present chapter is structured as follows: In section 4.2, I will discuss the Proto-Semitic tense-aspect system or, more specifically, what functions can be reconstructed for the Proto-Semitic inflectional paradigms. This is necessary in order to distinguish innovations from retentions in Proto-West Semitic. In section 4.3, I will analyze each Proto-West Semitic inflectional paradigm and identify diachronic developments from Proto-Semitic to Proto-West Semitic and Proto-West Semitic innovations. In section 4.4, I will present my reconstruction of the Proto-West Semitic tense-aspect system, based on the analysis of the individual inflectional paradigms in section 4.3. Finally, in section 4.5, I will point to some implications of my reconstruction for the synchronic and diachronic analysis of the tense-aspect systems in the attested West Semitic languages. In the remainder of this section, I will discuss some other attempts at the reconstruction of tense and aspect in Semitic.

To the best of my knowledge, no reconstruction of the Proto-West Semitic tense-aspect system has ever been conducted. Yet there have been attempts at reconstructing the tense-aspect system of Proto-Semitic and its diachronic paths towards the attested languages. One of the most prominent scholars in the field has been Rundgren, who provided a number of studies on tense and aspect (1959,

1961, 1963) which have been quite influential in Semitic linguistics. However, the theoretical understanding of tense and aspect in a cross-linguistic perspective has increased and developed much since the publication of these articles. The divergent theoretical assumptions make his studies difficult to compare to my own, which is why I will not discuss them here.

Among the more recent studies are Kienast (1995), Voigt (2004) and Kouwenberg (2010). All three studies have in common that they reconstruct the inflectional paradigms *\*yiq̄tVl* and *\*qatVla* in Proto-Semitic (see Kienast 1995:126f.; Voigt 2004: 43f.; Kouwenberg 2010: 181f.). This corresponds to my reconstruction and probably constitutes a consensus among scholars of the field in general (see also, e.g., Tropper 1995).<sup>39</sup> Opinions vary, however, on the age of the remaining inflectional paradigms.

Voigt (2004: 35f.) assumes that the Akkadian inflectional paradigm *iptaras* is inherited from Proto-Semitic. He argues that *iptaras* cannot be an Akkadian innovation given its opaque and thus ancient morphology. However, even though the morphological pattern itself is probably old, its use as an inflectional paradigm is arguably a recent development in Akkadian. The obvious similarity to the derivational T-stem points in this direction. Huehnergard (2006: 13f.) notes that perfective verbs are commonly derived from derivational morphology cross-linguistically. Further evidence put forward by Huehnergard (2006: 13f.) in favor of an Akkadian innovation is the fact that *iptaras* is rare in Old Akkadian, has restricted usages in Old Babylonian and Old Assyrian, and finally develops into a main past tense in Middle Babylonian. This is a grammaticalization pattern well-known and points to *iptaras* being a new inflectional paradigm in Akkadian. In addition, Kouwenberg (2010: 157) notes that *iptaras* as an inflectional paradigm has no convincing cognate either in West Semitic or in another Afro-Asiatic language. Hence, without any cognate outside of East Semitic, it is not justified to reconstruct the inflectional paradigm *iptaras* to Proto-Semitic.

A Proto-Semitic inflectional paradigm *\*yiq̄attVl* is endorsed by those who accept the cognacy of Akkadian *iparras* and Ge'ez *yəqattəl* (and its Ethio-Semitic and Modern South Arabian cognates). These include Voigt (2004: 35/39) and Kienast (1995: 126). Kouwenberg (2010: 100f.), on the other hand, denies the Proto-Semitic age of *\*yiq̄attVl* as an inflectional paradigm. He admits that the morphological pat-

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39 Hetzron (1969) differs from the consensus in that he proposes the reconstruction of two independent inflectional paradigms with the same morphological form, but with different stress position, a past tense *\*yiq̄tVl* and an irrealis mood *\*yiq̄tVl*. Evidence for this reconstruction is scarce, however. Minimal pairs differing only in stress position, as well as free accent in general are alien to Semitic. In any case, no one of the scholars mentioned above follow Hetzron's reconstruction, and Kouwenberg (2010: 130f.) explicitly dismisses it for the reasons just mentioned.



tern itself is ancient and even has parallels in other Afro-Asiatic languages (see Kouwenberg 2010: 97). Yet he assumes that the pattern serves not as an inflectional paradigm in Proto-Semitic, but as a derivational stem with pluractional function. His main argument against a Proto-Semitic imperfective *\*yiqattVl* is that it is implausible on typological grounds that an alleged Proto-Semitic imperfective *\*yiqattVl* would have been replaced in West Semitic by the less marked pattern *\*yiqTVlu* as the imperfective inflectional paradigm (see Kouwenberg 2010: 98). I will discuss this view in more detail below.

The cognacy of West Semitic *\*yiqTVlu* with East Semitic *iprus-u* is generally acknowledged (see Kienast 1995: 124; Voigt 2004: 36f.; Kouwenberg 2010: 98f.). However, the morpheme *-u/-ni/-na* in Akkadian is not restricted to *iprus*, but is also regularly attached to other inflectional paradigms in subordinate clauses, most notably to *iparras*. In Akkadian, *iprus-u* is clearly a variant of *iprus* with a subordination marker, and not an inflectional paradigm on its own; the same is true for the remaining paradigms with a suffixed *-u/-ni/-na*. In West Semitic and most notably in Classical Arabic, on the other hand, *\*yiqTVlu* (Classical Arabic *yafʿalu*) has to count as an independent inflectional paradigm rather than as a variant of *\*yiqTVl* (Classical Arabic *yafʿal*). It is thus debatable whether there is an independent inflectional paradigm *\*yiqTVlu* in Proto-Semitic. Voigt's (2004) and Kienast's (1995) position regarding this question is not entirely clear to me. Kouwenberg (2010: 98f.), however, who does not accept a Proto-Semitic origin of an imperfective *\*yiqattVl*, argues for a Proto-Semitic imperfective *\*yiqTVlu*, which stands in opposition to the perfective *\*yiqTVl*.

I will come back in sections 4.2 and 4.3 to some more details of the studies mentioned above. It becomes apparent from the preceding paragraphs, however, that Kouwenberg's position is diametrically opposed to mine. Unlike Kouwenberg (2010), I follow Voigt (2004), Kienast (1995) and others (e.g., Porkhomovsky 1997: 222) and reconstruct Proto-Semitic *\*yiqattVl* on the basis of Akkadian *iparras* and Geʿez *yəqattəl*. Unlike Kouwenberg (2010), I reconstruct *\*-u/-ni/-na* as a marker of subordination on the basis of Akkadian and I do not assume that there are independent inflectional paradigms differing only in the presence or absence of *\*-u/-ni/-na*. These major differences to Kouwenberg (2010) make it necessary to discuss his reconstruction in more detail.

In Kouwenberg's (2010: 98f.) reconstruction, the main opposition in the Proto-Semitic verbal system is between a perfective *\*yiqTVl* and an imperfective *\*yiqTVlu*. *\*yiqattVl-* is not an inflectional paradigm, but a derivational stem with pluractional function.<sup>40</sup> As is expected for a derivational stem, there is thus an opposition be-

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40 Kouwenberg (2010: 98f.) reconstructs the derivational stem with a fixed vowel *-a-*, because

tween a perfective *\*yiqattVl* and an imperfective *\*yiqattVlu* (see Kouwenberg 2010: 100f.). The reconstruction, according to Kouwenberg (2010: 595f.) indicates that Central Semitic has the most conservative tense-aspect system, having preserved the opposition between perfective *\*yigtVl* and imperfective *\*yigtVlu*. The only innovations of Central Semitic would be the intrusion of *\*qatVla* in the perfective sphere and the loss of the derivational stem *\*yiqattVl-*. Akkadian, on the other hand, has undergone a major rebuilding of the original tense-aspect system according to Kouwenberg (2010: 103).

The alleged East Semitic rebuilding of the verbal system happens in a number of successive changes. First, the original pluractional function of *\*yiqattVlu* is utilized as a more expressive device of marking imperfectivity, and, in consequence, *\*yiqattVlu* begins to replace *\*yigtVlu* as the imperfective inflectional paradigm in main clauses (see Kouwenberg 2010: 100). It is argued by Kouwenberg (2010: 230) that it is typologically common that a new inflectional paradigm is first introduced in main clauses. Second, because *\*yigtVlu* becomes restricted to subordinate clauses, it is reinterpreted as a subordinate paradigm (see Kouwenberg 2010: 230). Third, due to its morphological similarity with *\*yigtVl*, the subordinated form *\*yigtVlu* loses its original imperfective value and becomes associated with perfective aspect (see Kouwenberg 2010: 230). Finally, the reinterpretation of *\*-u/-ni/-na* as a subordination marker leads to its omission on main clause imperfective *\*yiqattVlu*, which becomes reduced to *\*yiqattVl*, while *\*yiqattVlu* becomes restricted to be used in subordinate clauses (see Kouwenberg 2010: 230). The rebuilding of the system results in the historically attested opposition between perfective *iprus* and imperfective *iparras* in main clauses, and between perfective *iprusu* and imperfective *iparrasu* in subordinate clauses.

Kouwenberg (2010: 100/595) further assumes that the same reinterpretation of the originally pluractional stem *\*yiqattVlu* to an imperfective aspect happens again much later in South Semitic, yielding Ge'ez *yəqattəl* and its cognates. Ge'ez *yəqattəl* would thus be ultimately derived from the same Proto-Semitic source as Akkadian *iparras*, yet the reinterpretation would have happened twice independently.

According to Kouwenberg (2010: 595f.), the alleged East Semitic rebuilding of the verbal system has happened already in Proto-East Semitic, and still before the Proto-West Semitic reinterpretation of the suffix conjugation. This assumption leads in consequence to a reversal of the widely accepted genealogical classification by Hetzron (1976), as is admitted by Kouwenberg (2010: 595). Unlike in Hetzron's

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derivational stems typically have a fixed vowel. I will use *\*yiqattVl-* in the following discussion for the sake of simplicity.

(1976) classification, it is Proto-East Semitic which first branches off from Proto-Semitic in Kouwenberg's scenario. And diametrically opposed to Hetzron's (1976) classification, Central Semitic is the most conservative branch in Kouwenberg's scenario.

Kouwenberg's account is very elaborate, and he provides ample justification for his assumptions. Nevertheless, his reconstruction suffers from a number of serious shortcomings. First, it seems unnecessarily complicated to assume that the reinterpretation of a derivational stem *\*yiqattVl-* to an imperfective inflectional paradigm *\*yiqattVl* happened twice in the history of Semitic in an almost identical way, only in order to maintain the reconstruction of a Proto-Semitic imperfective *\*yiqTVlu*. Second, there is no evidence for a perfective *\*yiqattVl* (vs. imperfective *\*yiqattVlu*) anywhere in Semitic. The assumption of the existence of such a paradigm in Proto-Semitic is thus purely speculative. Third, the alleged Proto-Semitic aspect opposition between perfective *\*yiqTVl* and imperfective *\*yiqTVlu* is implausible. Aspect oppositions are typologically expected to be marked irregularly, for instance, by the use of different verb stems (see Bybee & Dahl 1989: 84f.). It seems unlikely that a major aspectual contrast is expressed by the mere absence or presence of a suffix *\*-u/-ni/-na*. Kouwenberg himself (2010: 100) explains the alleged East Semitic innovations with the weak contrast between the two inflectional paradigms which the East Semites presumably have felt to be insufficient. In any case, it is worth noting that none of the classical Semitic languages actually exhibits an aspect system which is based on an opposition between perfective *\*yiqTVl* and imperfective *\*yiqTVlu*, which makes the reconstruction much more speculative than it may look at first sight. Finally, it is extremely unlikely that Classical Arabic has preserved core elements of the Proto-Semitic system rather accurately over several millennia, whereas Akkadian, which is attested already more than three thousand years earlier than Classical Arabic, has rebuilt the verbal system completely. What makes Kouwenberg's scenario even less plausible is that the complex diachronic processes in East Semitic seem to be completed even before the earliest attestation of Akkadian, and no trace of, say, a perfective *\*yiqattVl* or a main clause imperfective *\*yiqTVlu* is found anymore. This is a much more serious issue than a complete and traceless loss of *\*yiqattVl* in Central Semitic which Kouwenberg (2010: 102) argues to be unlikely.

Kouwenberg scenario of very complicated and speculative diachronic changes in order to account for a Proto-Semitic imperfective *\*yiqTVlu* and the Proto-Semitic absence of the inflectional paradigm *\*yiqattVl* does not convince me. In the following section, I will present my own analysis. As will be seen, if *\*yiqattVl* is accepted as a Proto-Semitic inflectional paradigm and *\*yiqTVlu* as a West Semitic innovation, far

less complicated changes have to be posited in order to account for the attested tense-aspect systems of both East and West Semitic.

## 4.2 The Tense-Aspect System of Proto-Semitic

The Proto-West Semitic language is a direct descendent of Proto-Semitic. In order to analyze both innovations and retentions in Proto-West Semitic, it is necessary to first discuss the Proto-Semitic tense-aspect system. As I have argued in the preceding section and in section 3.2, Proto-Semitic exhibits three (indicative) inflectional paradigms, viz. *\*yiqṭVl*, *\*yiqattVl* and *\*qatVla*. In addition, there is a subordinating particle *\*-u/-ni/-na* which is added to both *\*yiqṭVl* and *\*yiqattVl* in subordinate clauses. These inflectional paradigms can be reconstructed because they are reflected in both East and West Semitic. Other inflectional paradigms cannot be reconstructed in Proto-Semitic, because they are absent in one of the two branches of Semitic.

As I have argued already in chapter 1, the inflectional paradigm *\*qatVla* is without doubt originally a resultative construction. This function is retained in the Akkadian Stative *paris*. There is ample typological evidence for the development of an original resultative construction into a perfective past or anterior inflectional paradigm, as attested in West Semitic (see also section 4.3 below). Hence, Proto-Semitic *\*qatVla* can safely be reconstructed as expressing a resultative aspect.

The reflexes of the inflectional paradigm *\*yiqṭVl* function as a perfective narrative paradigm in both Akkadian (*iḫrus*) and Biblical Hebrew (*wayyiqṭol*). In Classical Arabic, *\*yiqṭVl* is reflected in *lam yaḫal*, which expresses negated situations in the past. In addition, the reflexes of *\*yiqṭVl* are used in all three languages to express deontic modality, usually in combination with specific particles. The corresponding inflectional paradigm in Ge'ez, *yəḳṭal*, is actually restricted to the expression of deontic modality. All attested usages have in common that they can be subsumed under the concept of perfectivity. In other words, the reflexes of *\*yiqṭVl* express perfective aspect throughout Semitic. The tense function seems to be secondary, because it is apparent only in the narrative usages, and in Arabic *lam yaḫal*, whereas the usage in the context of deontic modality, which is common in all four languages, is obviously free of past tense connotations. On the basis of these observations, Proto-Semitic *\*yiqṭVl* can be unambiguously reconstructed as expressing a perfective aspect.

The inflectional paradigm *\*yiqattVl* is reflected only in Akkadian, Ethio-Semitic and Modern South Arabian. The reflexes in Akkadian (*iḫarras*) and Ge'ez (*yəḳattal*) both exhibit similar usages. Their function can be described as either imperfective

aspect or non-past/non-anterior tense. Hence, Proto-Semitic *\*yiqattVl* arguably has a similar function. Given that *\*yiqVl* and *\*qatVla* have been analyzed as aspectual rather than tense forms, I propose to reconstruct for Proto-Semitic *\*yiqattVl* an aspect value as well. Proto-Semitic *\*yiqattVl* can thus be described as expressing imperfective aspect. Due to the considerable overlap between the functions of imperfective aspect and non-past/non-anterior tense, implicit tense values are however present in many contexts.

It results from the preceding discussion that Proto-Semitic exhibits a pure aspect system and is basically tenseless. *\*yiqVl* expresses a perfective aspect, *\*yiqattVl* an imperfective aspect, and *\*qatVla* a resultative aspect. Due to tense-aspect interferences, implicit tense values are present in certain contexts, e.g. in discourse.

Crucially, a pure aspect system without explicit tense is neither primitive nor archaic, and I do certainly not reconstruct a pure aspect system for Proto-Semitic because of its alleged primordial or primitive nature. Proto-Semitic is not an archaic undeveloped pre-language. It is a fully developed language which simply happens to have been spoken before the advent of writing. Pure aspect systems are also common today. It has been mentioned earlier that Chinese, the most widely spoken mother tongue of the world, is tenseless and purely aspectual (see Li & Thompson 1989: 184f.). The following table (T16) gives an overview of the basic tense-aspect system of Proto-Semitic.

**T16:** The basic tense-aspect system of Proto-Semitic

	<b>Aspect value</b>	<b>Implicit tense value</b>
<i>*yiqVl</i>	perfective	past
<i>*yiqattVl</i>	imperfective	non-past
<i>*qatVla</i>	resultative	present (stative)

The reconstructed Proto-Semitic tense-aspect system happens to be very similar, in fact almost identical, to the Akkadian one. In other words, the Proto-Semitic tense-aspect system is reflected very accurately in Akkadian. The main difference is the emergence of an inflectional paradigm *iptaras* in Akkadian. I agree thus with Voigt (2004: 43) who claims that the Akkadian tense-aspect system must be relatively similar to the Proto-Semitic one, given that there are no obvious indications for any recent innovations in the Akkadian verbal system.

Two further considerations seem to corroborate the reconstruction above. First, Akkadian is attested far earlier than any of the classical West Semitic languages. This does not per se indicate that its tense-aspect system has to be archaic, of course. Yet in the absence of contradicting evidence, it is certainly preferable to assume that the earliest attested language reflects the proto-language more closely than others, which are attested several millennia later. Second, it has been shown in the discussion of well-known typological patterns of diachronic change in the realm of tense and aspect in chapter 2 that it is a very common phenomenon that aspect values develop into tense values diachronically, but not vice versa. This fits well with the above reconstruction of an aspect-prominent system in Proto-Semitic.

### 4.3 The Proto-West Semitic Inflectional Paradigms

Proto-West Semitic, as I have argued in the preceding section, has inherited three inflectional paradigms from Proto-Semitic, viz. the perfective *\*yiqṭVl*, the imperfective *\*yiqattVl* and the resultative *\*qatVla*. The three paradigms together constitute a tenseless, purely aspectual system in Proto-Semitic. In the following subsections, I will propose a scenario for the diachronic development of each inflectional paradigm from Proto-Semitic to Proto-West Semitic.

#### 4.3.1 *\*qatVla*

The Proto-Semitic inflectional paradigm *\*qatVla* expresses a resultative aspect. It refers to the state which arises from a completed situation. Crucially, the resultative aspect is only compatible with telic verbs, since only these have an intrinsic endpoint which gives rise to a new state.

With intransitive verbs, the resultative indicates the resultant state of the subject. With transitive verbs, however, the resultative aspect prototypically indicates the resultant state of the object, because it is usually the object which undergoes a change of state. Nevertheless, some transitive verbs, especially verbs referring to mental activities (e.g., ‘to recognize’) and possession (e.g., ‘to receive’), involve a resultant state of the subject as well. With these verbs, the resultative aspect may be used in an active sense. In other words, the resultative aspect is commonly underspecified for voice, and this is presumably also the case with Proto-Semitic *\*qatVla*.<sup>41</sup>

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41 Both Kouwenberg (2010: 176) and Tropper (1995: 502) reconstruct Proto-Semitic *\*qatVla* as a passive paradigm and assume that the active usage of *paris* is an Akkadian innovation. However, in no attested Semitic language is *\*qatVla* restricted to passive. Hence, the assumption of a Proto-Semitic voice restriction is purely speculative.

The resultative has a strong cross-linguistic tendency to be expressed periphrastically (see Bybee & Dahl 1989: 56f.). This is also the case in Proto-Semitic. The Proto-Semitic resultative *\*qatVla* originates from a juxtaposition of a stative participle and a morphologically reduced personal pronoun.

Eventually, in parts of the linguistic community of Proto-Semitic speakers, the inflectional paradigm *\*qatVla* begins to lose its restriction to telic verbs and becomes increasingly used with both telic and atelic verbs in order to express the ‘current relevance’ of a preceding situation. The functional shift from the expression of the ‘current result’ to the expression of the ‘current relevance’ of a preceding situation is equivalent to a shift from resultative aspect to anterior tense (see Lindstedt 2000: 368).

As a result, the emergence of the new anterior tense *\*qatVla* brings to an end the Proto-Semitic unity. The innovation constitutes the hallmark of the dialect which splits off first from the Proto-Semitic speaker community (see Hetzron 1976). Being the ancestor to all West Semitic languages, the innovative dialect group is called Proto-West Semitic.

The diachronic development from resultative to anterior is a semantic path well-known in diachronic typology (see Bybee & Dahl 1994: 68f.), and it is acknowledged by many scholars of Semitic linguistics that the Proto-West Semitic inflectional paradigm *\*qatVla* is an instantiation of this process (see, e.g., Kouwenberg 2010: 181; Kogan 2015: 50; Hetzron 1976: 104f.).

Unlike the original resultative, the Proto-West Semitic anterior *\*qatVla* is not voice-neutral, but has active voice by default (i.e. unless modified, e.g., by a derivational stem). The shift from voice-neutral to active is unproblematic. An exact parallel to the diachronic development in Proto-West Semitic from a voice-neutral resultative aspect to an active anterior tense is found, for instance, in contemporary South Western Macedonian dialects (see Lindstedt 2000: 377f.). If one assumes that the active usage of *paris* is an Akkadian innovation, this would provide a further evidence for a similar, yet incomplete process (see Kouwenberg 2010: 186).<sup>42</sup>

The development from resultative to anterior is commonly accompanied by a reduction in morphosyntactic structure which makes the construction of the inflectional paradigm less transparent (see Bybee & Dahl 1989: 66). This is indeed observed in Proto-West Semitic as well. In Akkadian, which preserves the Proto-Semitic situation, the two juxtaposed elements are to a certain degree indepen-

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42 Tropper (1995: 503) notes that the active usage of *paris* is declining during the history of Akkadian, and *paris* becomes increasingly perceived as a passive conjugation. This attested diachronic process makes it more likely that the active usage of *\*qatVla* is inherited from Proto-Semitic. It is interesting to see, however, that the Akkadian development of *\*qatVla* is diametrically opposed to its development in West Semitic.

dent of each other. The reduced personal pronoun may be attached to nouns as well when these are used in predicative position, and the stative participle is not restricted to the resultative construction, but may also be used as a noun or adjective. In West Semitic, however, the reduced personal pronouns may no longer be attached to any other word classes than verbs. Even more importantly, there is no longer a stative participle corresponding directly to the stem of the *\*qatVla* paradigm for every single verb. As a result, the two elements of the construction constitute an inseparable unit in Proto-West Semitic.

An unsolved issue concerning *\*qatVla* is the vowel in the second syllable. Akkadian has predominantly *-i-*, but some instances of *-a-* and *-u-* are attested. In West Semitic, however, the vowel is variable and can be each of the three short vowels *-a-*, *-i-*, *-u-*. There is a clear preference of active, dynamic and transitive verbs to have *-a-*, while stative and intransitive verbs tend to have *-i-* or *-u-*. It is unclear whether this has to count as an innovation or as a retention. The most promising hypothesis is that the West Semitic ablaut patterns are an innovation which is in some way related to the rise of the internal passive. This hypothesis has been put forward by Kuryłowicz (1973a: 64), Tropper (1995: 505) and Huehnergard (2006: 15/18). Nevertheless, whether the internal passive itself constitutes a Proto-West Semitic innovation, is actually open to question. To my knowledge at least, Ethio-Semitic lacks any trace of an internal passive. Hence, the internal passive might as well be a later Central Semitic innovation. Further research in this direction would certainly be useful.<sup>43</sup>

In conclusion, the Proto-West Semitic inflectional paradigm *\*qatVla* with a resultative value has developed into an anterior tense in Proto-West Semitic. A crucial side effect of the reinterpretation of *\*qatVla* is the fact that (relative) tense is introduced to an originally tenseless system. The old resultative function of *\*qatVla* has not become completely obsolete, though. With intransitive telic verbs and stative verbs, *\*qatVla* is still used to express the original resultative function in Proto-West Semitic, as is evidenced by the fact that this restricted usage of resultative *\*qatVla* is retained in some West Semitic languages, e.g., in Biblical Hebrew. However, in its main function as an anterior tense, Proto-West Semitic *\*qatVla* has as an implicit perfective (and not resultative) aspect value. This follows from the fact that an anterior tense refers to a situation, telic or atelic, including its endpoint.

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43 Another scenario is proposed by Voigt (2004: 46), who reconstructs a Proto-Semitic ancestor of the Akkadian inflectional paradigm *iptaras*. Voigt argues that the Proto-Semitic predecessors of *paris* and *iptaras* have merged in Proto-West Semitic to one inflectional paradigm. The morphological base of *paris* would have been combined with the variable vowel of *iptaras*. This scenario seems unlikely to me. The merger of two completely different inflectional paradigms is, as far as I know, without a typological parallel.



### 4.3.2 \*yiqṭVl

Proto-Semitic \*yiqṭVl expresses a perfective aspect. Given its perfective function, Proto-Semitic \*yiqṭVl is prototypically used in narrative chains. In the context of narratives, \*yiqṭVl has a strong implicit past tense value. In addition to its indicative use, \*yiqṭVl is used for the expression of deontic modality, especially in combination with the particle *la-*. The modal use of \*yiqṭVl is unproblematic, since it corresponds to its perfective value. Deontic modality typically refers to a situation including its endpoint and is thus aspectually perfective. Crucially, the use of \*yiqṭVl for the expression of deontic modality shows that the past tense value of \*yiqṭVl is not its primary function, but an interference from its perfective nature.

The perfective aspect, unlike the resultative aspect, has a cross-linguistic tendency to be expressed by bound (instead of periphrastic) morphology (see Bybee & Dahl 1989: 74). Bound morphology is a sign of age. Perfective inflectional paradigms are in the majority of cases ultimately derived from an earlier resultative aspect (see chapter 2). Indeed, Proto-Semitic \*yiqṭVl exhibits bound morphology. Kouwenberg (2010: 130) points to the fact that in Akkadian, the perfective verbs *idû* ‘to know’ and *išû* ‘to have’ may refer to the present. According to Kouwenberg, this might be a vestige of the original (pre-Proto-Semitic) resultative function of \*yiqṭVl.

In subordinate clauses, Proto-Semitic \*yiqṭVl is extended with the suffix \*-u/-ni/-na. \*-u is attached to endingless forms and \*-ni/-na to all other forms (see Kouwenberg 2010: 228). Proto-Semitic \*yiqṭVl-u is not an inflectional paradigm on its own. It exhibits the same perfective function as \*yiqṭVl, but additionally indicates syntactic subordination.

Eventually, in Proto-West Semitic, the originally subordinate variant \*yiqṭVlu is increasingly being used in main clauses and develops into an inflectional paradigm of its own, as is witnessed by the existence of this inflectional paradigm in Classical Arabic (*yafʿalu*) and Biblical Hebrew (long *yiqṭol*). Given the subordinating function of the suffix -u/-ni/-na in Akkadian and, presumably, in Proto-Semitic, it is tempting to analyze the main clause use of \*yiqṭVlu as a cleft sentence. This has already been proposed by Voigt (2004: 49f.). In my opinion, main clause \*yiqṭVlu is best understood as a rhematization of \*yiqṭVl. Rhematization is the counterpart of topicalization and can be described as the marking of the rhema or logical theme (see Cohen 2000: 214). The result of both rhematization and topicalization is a cleft sentence. An indication for the correctness of this analysis is the fact that a direct parallel to this presumptive syntactic construction is found in Akkadian. Cohen (2000: 214) convincingly argues that one function of the ubiquitous Akkadian particle *-ma* can be described as rhematization. It remains an open question, however, why and

under which condition the supposed rhematization was introduced. In any case, given the fact that cleft sentences emerge very commonly across the languages of the world, this is certainly not a major deficit of the rhematization hypothesis.

Hence, in Proto-West Semitic, both *\*yiqṭVl* and *\*yiqṭVlu* appear in main clauses owing to the rhematization of *\*yiqṭVlu*. As a result, a functional differentiation between them begins to be established, and finally, *\*yiqṭVl* and *\*yiqṭVlu* split up into two different inflectional paradigms. In addition, the original subordination function of *\*yiqṭVlu* becomes obsolete. The inflectional paradigm *\*yiqṭVl* is retained without any morphological change in Proto-West Semitic.

To my knowledge, reflexes of an inflectional paradigm *\*yiqṭVlu* are only found in Central Semitic. Hence, it is debatable whether the rise of *\*yiqṭVlu* as an independent inflectional paradigm is a Proto-West Semitic or rather a Proto-Central Semitic innovation. As for Ge'ez, the ending *\*-u* is lost in either case due to the regular sound change *\*u > ə/∅*. However, the endings *-na* and *-ni* seem to be absent in Ge'ez as well, as far as I can see. Ge'ez thus seems to have lost the suffix *\*-na/-ni*, irrespective of its function. The reason for the loss in Ge'ez remains an open question. Yet in my opinion, it is simpler to assume *\*yiqṭVlu* to be a Proto-West Semitic innovation, because there is no trace of a subordinating suffix *\*-u/-ni/-na* anywhere in West Semitic. That *\*yiqṭVlu* is a Proto-West Semitic innovation is also put forward by Joosten (2013: 922).

Both *\*yiqṭVl* and *\*yiqṭVlu* have inherited from Proto-Semitic a perfective value. However, the Proto-West Semitic shift of *\*qatVla* from a resultative inflectional paradigm to a perfective anterior inflectional paradigm has resulted in the intrusion of *\*qatVla* into the perfective sphere which had previously been dominated exclusively by *\*yiqṭVl* (and *\*yiqṭVl-u*). In consequence of the intrusion of *\*qatVla* into the perfective sphere, *\*yiqṭVl* and *\*yiqṭVlu* become restricted to non-anterior perfective functions. Typical non-anterior perfective functions include future and posterior tense, deontic modality and, in some cases, habituality. It is exactly this range of functions which is attested for the newly introduced inflectional paradigm *\*yiqṭVlu* in Biblical Hebrew and Classical Arabic. Hence, Proto-West Semitic *\*yiqṭVlu* can be defined as a non-anterior perfective inflectional paradigm. Crucially, its newly acquired restriction to non-anteriority transforms the originally purely aspectual inflectional paradigm to an inflectional paradigm which exhibits both an aspect and a relative tense value.

The old, non-rhematized inflectional paradigm *\*yiqṭVl* is similarly affected by the innovated *\*qatVla*. In non-modal contexts, it becomes restricted to the use in narrative chains and develops into a specialized narrative past perfective tense in Proto-West Semitic. As such, it is attested, for instance, in Biblical Hebrew *wayyiqṭol*.

The prototypical anterior tense is non-narrative, because it does not allow for temporal succession. In a narrative, its main function is to provide background information about preceding events (see section 2.5.1). It is this opposition between temporal succession and anterior background which enabled *\*yiqṭVl* to survive in its narrative tense function. In addition to its non-modal narrative tense function, *\*yiqṭVl* retains its function of expressing deontic modality, as is attested, for instance, in the Classical Arabic Jussive.

It has already been proposed by Kuryłowicz (1973a: 64) that the functional range of *\*yiqṭVl* in West Semitic may be explained by the fact that the innovated *\*qatVla* has ousted *\*yiqṭVl* from parts of its original range of functions. However, to my knowledge, it has to date not been proposed that the *\*qatVla* innovation is as well responsible for the functional range of Biblical Hebrew long *yiqṭol* and Classical Arabic *yafʿalu*. Yet, as I have tried to show, the functional range of *\*yiqṭVlu* in West Semitic fits perfectly with the assumption that it originally exhibited a perfective value (like *\*yiqṭVl*, from which it is derived) and was subsequently ousted in Proto-West Semitic from the anterior sphere by the innovated *\*qatVla* (see also section 4.5).

### 4.3.3 *\*yiqattVl*

Proto-Semitic *\*yiqattVl* expresses an imperfective aspect. The most prototypical contexts in which the imperfective aspect is used include the actual present and attendant circumstances in the past. In addition, Proto-Semitic *\*yiqattVl* is used also in future contexts. This is evidenced by both Akkadian and Geʿez, which both make regular use of the reflex of *\*yiqattVl* in future and posterior contexts. Thus, given that *\*yiqattVl* covers the whole range of non-anterior functions, it has a strong implicit non-anterior value.

The imperfective aspect tends cross-linguistically to be expressed by bound (instead of periphrastic) morphology, which is a sign of age (see Bybee & Dahl 1989: 95). Imperfective inflectional paradigms are in many cases derived diachronically from earlier progressive inflectional paradigms (see chapter 2). Indeed, Proto-Semitic *\*yiqattVl* exhibits bound morphology. Different from the progressive, the imperfective has no aktionsart restrictions. Hence, it may be used with any verb.

In subordinate clauses, Proto-Semitic *\*yiqattVl* is extended with the suffix *\*-u/-ni/-na*. *\*-u* is attached to endingless forms and *\*-ni/-na* to all other forms (see Kouwenberg 2010: 228). Proto-Semitic *\*yiqattVl-u* is not an inflectional paradigm on its own. It exhibits the same imperfective function as *\*yiqattVl*, but additionally indicates syntactic subordination.

In Proto-West Semitic, the inflectional paradigm *\*yiqattVl* is retained without any morphological or semantic change. However, as a side effect of the *\*qatVla* innovation, the category of relative tense has been introduced to Proto-West Semitic, as I have argued above. A relative tense value has also been adopted by *\*yigtVl* and *\*yigtVlu* as a consequence of their opposition with *\*qatVla*. Due to the fact that *\*yiqattVl* has not been directly affected by the *\*qatVla* innovation, it has not attained an explicit relative tense value, though. *\*yiqattVl* is thus underspecified in regard to the newly introduced category of relative tense, and its position in the Proto-West Semitic verbal system is somewhat weak.

I have argued in section 4.3.2 above that the subordinate Proto-Semitic *\*yigtVl-u* has developed into an independent inflectional paradigm *\*yigtVlu* in Proto-West Semitic. It is unclear, however, whether the same rhematization process should be posited for *\*yiqattVl-u*. No evidence comes from Central Semitic, which has in any case lost both the inflectional paradigm *\*yiqattVl* and its variant *\*yiqattVl-u*. In Ge'ez, the ending *-u* is lost regularly due to the sound change *\*u > ə/∅*. Hence, the only possible remnant of either the subordinate *\*yiqattVl-u* or a supposed main clause *\*yiqattVlu* would be the suffixes *\*-ni* and *\*-na* in Ge'ez. As far as I can see, there is no trace of these endings in Ge'ez, neither in combination with *\*yigtVl* nor in combination with *\*yiqattVl*. Hence, the only thing which is clear is that in the time span between Proto-Semitic and the attested West Semitic languages, Proto-Semitic *\*yiqattVl-u* has been lost. Whether the loss of *\*yiqattVl-u* was preceded by a Proto-West Semitic rhematization in parallel to *\*yigtVlu* has to remain an open question. In principle, a rhematized *\*yiqattVlu* would be expected in parallel with *\*yigtVlu*. However, given the fact that there is no evidence for such a paradigm anywhere in West Semitic, this is purely speculative.

#### 4.4 The Tense-Aspect System of Proto-West Semitic

Proto-West Semitic is defined by the shift of *\*qatVla* from an originally resultative inflectional paradigm to a perfective anterior inflectional paradigm. In addition, the Proto-Semitic subordinate marker is utilized in Proto-West Semitic to mark the rhematization of a verbal form. This results in the emergence of a new inflectional paradigm *\*yigtVlu*, which is independent from *\*yigtVl*.

The shift of *\*qatVla* to a perfective anterior inflectional paradigm has resulted in Proto-West Semitic in the intrusion of *\*qatVla* into the perfective sphere, which had previously been dominated exclusively by *\*yigtVl* (and *\*yigtVl-u*). As a result, *\*yigtVl* and *\*yigtVlu* are relegated to non-anterior perfective functions. *\*yigtVlu* acquires the functions of future and posterior tense, deontic modality and habituality.

*\*yiqṭVl* does express deontic modality as well. In addition, it is used as a specialized narrative form, i.e. a past perfective tense.

As a side effect of the *\*qatVla* innovation and the subsequent restriction of *\*yiqṭVl* and *\*yiqṭVlu* to non-anterior perfective functions, tense is introduced to an originally tenseless system. The increasing relevance of tense in West Semitic is corroborated by the fact that compound verbal forms, i.e. the asyndetic juxtaposition of two finite inflectional paradigms (as in, e.g., Classical Arabic *kāna yafʿalu*) are widespread in West Semitic, but alien to East Semitic. Compound verbal forms serve to express either two tense values or a tense and an aspect value at the same time. The introduction of compound verbal forms is thus a direct consequence of the emergence of tense in Proto-West Semitic. Given the similar syntactic structure of compound verbal forms throughout West Semitic, their emergence is likely to be already a Proto-West Semitic innovation.

The inflectional paradigm *\*yiqattVl* is not directly affected by the *\*qatVla* innovation. It is retained unchanged in Proto-West Semitic as an imperfective aspect. Owing to its imperfective value, it has, however, an implicit non-anterior tense value (cf. Akkadian).

In conclusion, the Proto-West Semitic verbal system is characterized by the following innovations:

- 1) the shift of *\*qatVla* from a resultative inflectional paradigm to a perfective anterior inflectional paradigm for dynamic verbs;
- 2) the introduction of *\*yiqṭVlu* to main clauses and the subsequent split of *\*yiqṭVl* and *\*yiqṭVlu* into two independent inflectional paradigms;
- 3) the loss of subordinate *\*yiqṭVl-u* and *\*yiqattVl-u*;
- 4) the restriction of *\*yiqṭVlu* to non-anterior perfective functions (future, modality, habituality) in consequence of the intrusion of *\*qatVla* into the perfective sphere;
- 5) the restriction of indicative *\*yiqṭVl* to a past perfective narrative tense for the same reason;
- 6) the introduction of relative tense to an originally tenseless system as a direct consequence of the shift of *\*qatVla* to an anterior tense;
- 7) the emergence of compound verbal forms.

The Proto-West Semitic inflectional paradigms express both tense and aspect. *\*qatVla* is a perfective anterior, *\*yiqṭVlu* perfective non-anterior and *\*yiqṭVl* a perfective past. *\*yiqattVl* is an exception, as far as it is only marked for imperfective aspect

and has no explicit tense value. Nevertheless, given its imperfective value, *\*yiqattVl* is implicitly non-anterior.

What has been said so far about the tense-aspect values of the inflectional paradigms is mainly true for dynamic verbs. With stative verbs, the original aspect values are retained. Hence, stative verbs in Proto-West Semitic are still tenseless. *\*qatVla* expresses the resultative aspect (i.e. the reference to a resultant state), *\*yiqtol*, on the other hand, expresses a perfective aspect (i.e. the reference to a change of state). In accordance with the observation that stative verbs are in general not compatible with the imperfective aspect (cf., for instance, English), *\*yiqattVl* is not used with stative verbs.

The following table (T17) gives an overview of the basic tense-aspect system of Proto-West Semitic.

**T17:** The basic tense-aspect system of Proto-West Semitic

	<b>Tense value</b>	<b>Aspect value</b>
<i>*yiqtVl</i>	past	perfective
<i>*yiqtVlu</i>	non-anterior	perfective
<i>*yiqattVl</i>	non-anterior	imperfective
<i>*qatVla</i>	anterior	perfective

All Proto-West Semitic inflectional paradigms with the exception of *\*yiqattVl* have a perfective aspect value. This means that the aspectual opposition is canceled between these inflectional paradigms. The Proto-West Semitic verbal system is thus mainly based on tense oppositions. *\*yiqattVl*, however, does primarily express an imperfective aspect. As to its implicit tense value, it stands in direct competition with *\*yiqtVlu*, which has acquired the identical non-anterior function in Proto-West Semitic. Hence, there is a functional conflict between *\*yiqattVl* and *\*yiqtVlu*. In addition to the fact that *\*yiqattVl* is incompatible with stative verbs, the newly arisen conflict with *\*yiqtVlu* results in *\*yiqattVl* having a relatively weak position in the Proto-West Semitic tense-aspect system.

## 4.5 Diachronic Developments in West Semitic

In the preceding section, I have presented a reconstruction of the Proto-West Semitic tense-aspect system. In this final section, I will briefly outline the supposed diachronic developments between Proto-West Semitic and the attested West Semitic languages. I will focus again on Ge'ez, Biblical Hebrew and Classical Arabic.

### 4.5.1 Ge'ez

In Ge'ez, Proto-West Semitic *\*qatVla* has become a narrative tense in main clauses (Ge'ez *qatala*). The development of an anterior tense into a past, a perfective, or a past perfective is a well-known diachronic path (see chapter 2). When the 'current relevance' function of the anterior tense is overused for pragmatic reasons, i.e. to emphasize the current relevance of a narrative, the anterior tense develops into a simple past tense (cf., for instance, spoken French and southern German).

In consequence of the shift of *\*qatVla* from an anterior tense to a simple past tense, *\*yiqTVl* is ousted from its past perfective function and is thus restricted to the expression of deontic modality (Ge'ez *yəqtəl*).

Due to the loss of final *-u* in Ge'ez, the Proto-West Semitic inflectional paradigm *\*yiqTVlu* has collapsed in many inflected forms with *\*yiqTVl*. For this reason, the Proto-West Semitic conflict between *\*yiqattVl* and *\*yiqTVlu* is solved by the loss of *\*yiqTVlu*. *\*yiqattVl* (Ge'ez *yəqattəl*) is again the only inflectional paradigm with a non-anterior tense value.

The tenselessness of stative verbs is given up in the prehistory of Ge'ez. In Ge'ez, stative verbs conform mainly to the general tense-aspect system.

### 4.5.2 Central Semitic

In Proto-Central Semitic, the inherited conflict between *\*yiqattVl* and *\*yiqTVlu* is solved by the loss of *\*yiqattVl*. It has been argued by Kienast (1995: 132) that *\*yiqattVl* was lost due to its similarity with the D stem. It is true that the stem of *\*yiqattVl* is the only inflectional stem in Proto-West Semitic which is also marked by a consonantal difference, viz. the lengthening of the second root consonant. The remaining inflectional stems are exclusively marked by ablaut. Interestingly, Ge'ez, which has retained *\*yiqattVl*, has completely lexicalized the opposition between the G stem and the D stem (and the L stem). Seeing that Ge'ez exhibits 'base stems' which are marked by the lengthening of the second root consonant, the inflectional stem of *\*yiqattVl* with a lengthening of the second root consonant is far less exceptional than it would have been in Central Semitic.

In Akkadian too, as a result of the emergence of *iptaras*, *\*yiqattVl* is not the only inflectional stem with a consonantal marking. Hence, it may be observed that *\*yiqattVl* has survived in those languages in which it is not the only inflectional paradigm marked by a consonantal difference. In Proto-Central Semitic, however, *\*yiqattVl* has been given up. This was facilitated by its somewhat weak position in the Proto-West Semitic tense-aspect system.

Apart from the loss of *\*yiqattVl*, the Proto-West Semitic tense-aspect system is retained in Proto-Central Semitic.

In Biblical Hebrew, the Proto-Central Semitic tense-aspect system is reflected rather closely. *\*qatVla* and *\*yiqVl* are retained with the functional range which has been established in Proto-West Semitic (Biblical Hebrew *qatal* and *wayyiqtol*). Due to the introduction of the active participle (Biblical Hebrew *qotel*) with a parontive tense function, *\*yiqVlu* (Biblical Hebrew long *yiqtol*) is restricted to posterior tense in Biblical Hebrew. Stative verbs in Biblical Hebrew are in the majority of cases still tenseless and purely aspectual.

In Classical Arabic, *\*qatVla* has become a narrative tense in main clauses due to the same diachronic path as in Ge'ez (Classical Arabic *fa'ala*). As a result of this typologically common diachronic path, *\*yiqVl* is ousted from its past perfective (narrative) function and is restricted in Classical Arabic to the expression of deontic modality (Classical Arabic *yaf'al*). A notable exception is the Classical Arabic past negation *lam yaf'al*, in which a residual use of the perfective *\*yiqVl* has survived.

The category of aspect is marginalized in Classical Arabic. This process has started already in Proto-Central Semitic, where aspectual distinctions have ceased for dynamic verbs due to the loss of the imperfective *\*yiqattVl*. In addition, there is a tendency towards absolute tense in Classical Arabic, as is witnessed by the future particle *sa-/sawfa* and the use of compound verbal forms in order to express both a relative and an absolute tense value at the same time.

In consequence of the general loss of aspect, *\*yiqVlu* (Classical Arabic *yaf'alu*) has lost its perfective value in Classical Arabic. As a result, the incompatibility of *\*yiqVlu* with the actual present and parontive is lost. Classical Arabic *yaf'alu* has become a general non-anterior tense and is thus used not only for the expression of the future or posterior tense, but also for the expression of the actual present and attendant circumstances in the past.



#### 4.5.3 *General observations*

Some general diachronic tendencies may be observed in West Semitic:

- 1) The loss of either *\*yiqattVl* or *\*yiqTVlu* as a result of the Proto-West Semitic conflict between these two inflectional paradigms.
- 2) The typologically well attested development of *\*qatVla* to a past tense, and, as a result, the loss of indicative *\*yiqTVl*. In addition to Ge'ez and Classical Arabic, this process is also observed in post-Biblical Hebrew.
- 3) The general tendency towards tense-prominent verbal systems, which ultimately originates in the Proto-West Semitic shift of *\*qatVla* from a resultative aspect to an anterior tense.



## 5 Conclusion

### 5.1 Results

The aim of the present thesis has been the reconstruction of the Proto-West Semitic tense-aspect system. I have suspected that the reconstruction of the Proto-West Semitic tense-aspect system will allow for a better understanding of the pre-history of the classical West Semitic tense-aspect systems.

The reconstruction of the Proto-West Semitic tense-aspect system has been based on the established methods of diachronic linguistics, as well as on typological evidence regarding diachronic paths of grammaticalization that are commonly observed in the realm of tense and aspect. Linguistic material has been included from Akkadian, Ge'ez, Biblical Hebrew and Classical Arabic. The inclusion of evidence from Akkadian as an East Semitic language is crucial, since it provides external evidence for what tense-aspect system Proto-West Semitic has been inherited from Proto-Semitic.

To my knowledge, there has been no previous attempt to reconstruct the Proto-West Semitic tense-aspect system. Yet it is widely acknowledged that Proto-West Semitic is known to be characterized by the typologically well-known shift of the inflectional paradigm *\*qatVla* from an originally resultative aspect function to an anterior tense function.

As a result of my diachronic analysis, I have argued that the *\*qatVla* innovation has not been the only innovation in the Proto-West Semitic verbal system. I have in fact identified a number of further innovations by which Proto-West Semitic is characterized (see also chapter 4):<sup>44</sup>

- 1) the introduction of *\*yigtVlu* to main clauses and the subsequent split of *\*yigtVl* and *\*yigtVlu* into two independent inflectional paradigms;

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<sup>44</sup> The internal passive which is attested in some West Semitic languages may as well be a Proto-West Semitic innovation (see Kuryłowicz 1973a: 64; Tropper 1995: 505; Huehnergard 2006: 15/18). This supposed innovation is not directly related to the tense-aspect system, however.

- 2) the loss of subordinate *\*yigtVl-u* and *\*yiqattVl-u*;
- 3) the restriction of *\*yigtVlu* to non-anterior perfective functions (future, modality, habituality) in consequence of the intrusion of *\*qatVla* into the perfective sphere;
- 4) the restriction of indicative *\*yigtVl* to a past perfective narrative tense for the same reason;
- 5) the emergence of a conflict between *\*yigtVlu* and *\*yiqattVl* which both happen to express non-anterior tense;
- 6) the introduction of relative tense to an originally tenseless system as a direct consequence of the shift of *\*qatVla* to an anterior tense;
- 7) the emergence of compound verbal forms.

The Proto-West Semitic tense-aspect system is the result of these innovations. I have identified four indicative inflectional paradigms: an anterior perfective *\*qatVla*, a non-anterior perfective *\*yigtVlu*, a past perfective *\*yigtVl*, and an imperfective *\*yiqattVl* with implicit non-anterior tense. Together, they form the Proto-West Semitic tense-aspect system.

## 5.2 Implications

The reconstructed Proto-West Semitic tense-aspect system has two major implications for the understanding of the prehistory of West Semitic tense-aspect systems which have to the best of my knowledge not been previously proposed:

- 1) It was the *\*qatVla* innovation of Proto-West Semitic which has, as a side effect, introduced tense to an originally tenseless system. The spread of tense triggered by the *\*qatVla* innovation has resulted in the attested tense-prominent West Semitic verbal systems.
- 2) Contrary to what is usually supposed, the inflectional paradigm *\*yigtVlu* has never had an imperfective value throughout its history. Crucially, in none of the languages which have been discussed in this thesis does *\*yigtVlu* express an imperfective aspect. In fact, *\*yigtVlu* rather exhibits a perfective (!) non-anterior value (e.g., in Biblical Hebrew). The seemingly imperfective use of *\*yigtVlu* in Classical Arabic can be explained by the eventual loss of aspectual distinctions. As a result, Classical Arabic *yafʿalu* is a simple non-anterior tense and as such may have an implicit imperfective value.

I hope to have been able to show that the presented reconstruction of the Proto-West Semitic tense-aspect system may account for the attested West Semitic tense-aspect system. Notably, the diachronic developments from Proto-Semitic to Proto-West Semitic, and from Proto-West Semitic to the attested West Semitic languages which I have posited in the course of the present study are much simpler than the scenario put forward by Kouwenberg (2010). What is even more important, the supposed diachronic developments are, as far as I can see, perfectly in accordance with what is known from linguistic typology.



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## Abstract

This Master's thesis presents a reconstruction of the Proto-West Semitic tense-aspect system. The reconstruction is based on the established methods of diachronic linguistics, as well as on typological evidence regarding diachronic paths of grammaticalization that are commonly observed in the realm of tense and aspect.

The thesis endorses the widely accepted view that West Semitic is defined by a shared innovation in the verbal system, viz. the semantic shift of the suffix conjugation from a resultative construction (retained in the Akkadian Stative *paris*) to a perfective anterior conjugation (reflected in, e.g., the Arabic Perfect *fa'ala*).

It is argued that the Proto-West Semitic semantic shift of the suffix conjugation from resultative aspect to an anterior tense had as well an impact on the functional value of other elements of the Proto-West Semitic tense aspect system. In particular, the functions associated with the *\*yiqṭVl-* conjugation in West Semitic (e.g., Classical Arabic *yaf'al-*, Biblical Hebrew *yiqṭol*, Ge'ez *yəqṭəl*) are argued to be the result of a subsequent restriction of an originally perfective *\*yiqṭVl-* to non-anterior perfective functions.

The reconstruction of the Proto-West Semitic tense-aspect system allows for a new perspective on the prehistory of tense and aspect in classical West Semitic languages like Ge'ez, Biblical Hebrew and Classical Arabic.





## Abstract (German)

Diese Masterarbeit stellt eine Rekonstruktion des urwestsemitischen Tempus-Aspekt-Systems vor. Die Rekonstruktion basiert sowohl auf den gängigen Methoden der diachronen Sprachwissenschaft, als auch auf sprachtypologischen Erkenntnissen in Bezug auf diachrone Entwicklungen, welche im Bereich von Tempus und Aspekt oft beobachtet worden sind.

Die vorliegende Arbeit stimmt der weithin akzeptierten Ansicht zu, dass das Westsemitische durch eine gemeinsame Innovation im Verbalsystem definiert ist, nämlich durch die semantische Verschiebung der Suffixkonjugation von einer ursprünglichen Resultativkonstruktion (erhalten im akkadischen Stativ *paris*) zu einer Konjugation mit einer perfektiv-vorzeitigen Funktion (reflektiert im arabischen Perfekt *faʿala*).

Es wird argumentiert, dass die urwestsemitische Verschiebung der Suffixkonjugation von einem resultativen Aspekt hin zu einem Tempus der relativen Vergangenheit unmittelbare Auswirkungen auf den funktionalen Wert anderer Elemente im urwestsemitischen Tempus-Aspekt-System hatte. Insbesondere wird vorgeschlagen, dass die Funktionen der *\*yiqṭVl*-Konjugation im Westsemitischen (z. B. Arabisch *yafʿal-*, Hebräisch *yiqṭol*, Geʿez *yəqtəl*) als das Ergebnis einer nachfolgenden Beschränkung eines ursprünglich perfektiven *\*yiqṭVl*- auf nicht-vorzeitige perfektive Funktionen aufgefasst werden können.

Die Rekonstruktion des urwestsemitischen Tempus-Aspekt-Systems ermöglicht eine neue Perspektive auf die Vorgeschichte von Tempus und Aspekt in klassischen westsemitischen Sprachen wie Geʿez, Biblisch-Hebräisch und Klassisch-Arabisch.





