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Anchoring world and time in biblical Hebrew[1]

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One of the most puzzling issues in biblical Hebrew has been its verbal system. In this article, I deal with one of the forms, namely *wayyiqtol*, suggesting that its meaning is compositional, calculated from three components: a verbal base and two morphemes. The verbal base is shown to be modal, involving quantification over possible worlds. The two morphemes prefixed to the verbal base restrict its modal nature. One morpheme functions like the definite article in a noun phrase; it picks out one of the possible worlds, the familiar actual world (Wo), and anchors the event into it. The other morpheme builds a reference-time, locating the event in time.

1. Introduction

One of the most discussed phenomena in biblical Hebrew (BH) has been the verb form *wayyiqtol*, labelled in different ways by scholars, depending on their theory.[2] *Wayyiqtol* will be discussed in this paper in the context of the other verb forms. I will give a short description of the verbal forms in BH in section 1.1 and in section 1.2 state the problem of *wayyiqtol* and outline the organization of the rest of the paper.

1.1 *Verbal forms in biblical Hebrew*

Hebrew, as a Semitic language, has discontinuous morphology in which it is hard to identify the root and the inflection. The root, which is (generally)

[1] This article is an extended version of a paper read at the conference of the Society of Biblical Literature (SBL), 2000. It was presented in departmental seminars at the Linguistics Section of the English Department at Hebrew University, the Linguistics Department at Tel Aviv University, the Department of Foreign Literatures and Linguistics at Ben Gurion University, and the Program in Linguistics at Emory University. I am grateful to the participants in all of these presentations for their valuable comments. I also want to thank my friends and colleagues Mohammad Mohammad and Edit Doron for discussing the subject with me prior to its presentation. Finally, I wish to thank the anonymous *JL* referees for their generous comments, which I used to improve the paper in both content and organization.

[2] The verbal system in BH has been investigated for the last thousand years. It is not my intention in this paper to provide an overview of the different theories. The interested reader is referred to McFall (1982), who provides a detailed survey with insightful criticism for the main theories up to 1954. In Hatav (1997), I give a short summary of those theories and add a survey of the main analyses proposed since 1954. Here I will provide only brief descriptions of issues relevant to this paper.

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tri-consonantal, is usually denoted by the convention *q.ṭ.l.*, where *q* marks the first radical, *ṭ* the second, and *l* the third. The paradigm consists of two major classes of verbal forms, the suffixed forms and the prefixed forms, in which suffixes or prefixes, respectively, are attached to the stem to conjugate the verb according to number, gender, and person. The forms are labelled according to their (unmarked) third-person masculine singular form (3sg, masc).

There are two suffixed forms, *qatal*[3] and *wqatal*, whose 3sg, masc suffix is zero, i.e. not realized phonetically. The other forms in the suffixed conjugations have phonologically realized suffixes: *tii* (1sg), *nuu* (1pl), *taa* (2sg, masc), *t* (2sg, fem), *tem* (2pl, masc), *ten* (2pl, fem), *aa* (3sg, fem), and *uu* (3pl). For instance, the root *š.m.r.* 'watch' in *qatal* is *šaamar* in 3sg, masc: 'he-watched' and *šaamart* for 2sg, fem: 'you-sg, fem-watched'. The prefixed group consists of the forms: *yiqtol*, *wayyiqtol*, and *wyiqtol*. Three directive forms are used to perform speech acts of command or request; one of them is the imperative *qtol*. (The imperative is considered by many Hebraists to be a prefixed form derived from *yiqtol*, with the prefixes removed; see McFall 1982: 77.) The participial *qotel* (called the *BENONI* in Hebrew) is not considered a verbal form, as it is conjugated according to gender and number only (not person), and has some non-verbal uses. However, it participates in the temporal system of BH and, because of its semantics, it will be considered a form of the verb in this paper.[4] The forms *qatal*, *wayyiqtol* and *qotel* are non-modal in nature, while *wqatal*, *yiqtol* and *wyiqtol* (as well as the imperative) are all modal.

1.2 Wayyiqtol

The form *wayyiqtol* is understood to consist of a prefixed verbal base to which the consonantal prefix /w/ (called *waw* in Hebrew) is attached, with the vowel /a/ called *PATAḤ*, and a *DAGESH FORTE* geminating the prefix of the verbal base. The gemination is realized by various consonants. In the third-person masculine, it is the consonant /y/ which is geminated, e.g. *wayyišmoor* 'he watched'; the prefix geminated in the first-person plural is /n/, e.g. *wannišmoor* 'we watched'; in the second person and third-person feminine, it

[3] In transcribing the Hebrew text, I follow McCarthy (1982: 2f.), with two exceptions. First, following Cohen (1990), long vowels will be indicated by simple gemination (aa, ee, ii, oo, uu), as in McCarthy for Arabic. Second, mater lectiones will be ignored; the shwa and the furtive *pataḥ* will not be indicated; and the *ḥâṭaapiim*, or the compound shwa, will be transcribed with a circumflex (â, ê, ô).

In representing the forms, I follow other conventions. The second letter of the radical is transcribed as *t*, without a dot, and long vowels are indicated like the short ones, e.g. instead of *qaaṭal*, the form is labelled *qatal*.

[4] There are also two kinds of infinitive: construct and absolute. The infinitive construct is similar to the English infinitive in many respects; the use of the infinitive absolute is not clear to me.

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is /t/, e.g. *wattišmrii* 'you-sg, fem-watched'. In the first-person singular, the prefix of the verbal base is /ʔ/, which cannot be geminated; instead the short vowel *pataḥ* is lengthened to a *qamaṣ*, e.g. *waaʔešmoor* 'I watched'.[5]

Many theories have tried to account for the meaning of this form.[6] The approach most widely adopted among contemporary Hebraists is a comparative-historical approach (Hetzron 1969; Blau 1972; Rainey 1986; Smith 1991; Lipinski 1997). Comparing data from Akkadian, Ugaritic, Arabic, and other Semitic languages, these scholars trace the verbal base in *wayyiqtol* to a Proto-Semitic prefixed form, which they believe denoted past (Blau 1972), preterit (Rainey 1986), or perfect (Hetzron 1969).

I follow the synchronic approach (Ben-Ḥayyim 1977; Washburn 1994; Hatav 1997), which attempts to analyse *wayyiqtol*, along with the other forms, within the context of the biblical text, according to its use at the time it was written (or edited).

Within a synchronic analysis, in Hatav (1997) I show that the verb forms in BH do not encode tenses. Thus, clauses in one of the verb forms *yiqtol*, *qatal*, *wqatal*, or the participial *qotel* may be interpreted as referring to the past, the present, or the future, depending on the linguistic or the extra-linguistic context.[7] Clauses in the form *wayyiqtol*, however, are interpreted as depicting only events in the past.[8] In Hatav (1997), I stipulate that *wayyiqtol* is a sequential non-modal form, and I explain its interpretation as past due to the combination of these two properties. In this article, I will show that the meaning of *wayyiqtol* is compositional, calculated from three components: the verbal base *yiqtol* and two grammatical morphemes. One morpheme is

[5] Note that when the consonant is /y/ with a shwa, it is not geminated and yet the vowel remains short /a/, e.g. *waydabbeer* 'he spoke'.

Note also that the paradigm accords with one of the seven patterns called *BINYANIM* (singular: *binyan*). The vowels of the stem and/or the prefix may be different in other *BINYANIM* (or roots). For example, in *wayyalbeeš* 'he clothed (someone)', which is in *binyan hip̄ʕiil*, the vowel of the *yiqtol* prefix is /a/ and the vowel of the stem is /ee/.

[6] Over time, the Hebrew language has lost the form of *wayyiqtol* altogether, so it is not found in Mishnaic Hebrew or in Modern Israeli Hebrew. There is evidence that its meaning, along with the meaning of the other forms, had started to deteriorate in the Second Temple era (see discussion in Smith 1991: 27–33). Therefore, the corpus taken into account here is only the portion of the Hebrew Bible that is attributed to the First Temple period, namely from Genesis to Kings. Note that the genre is also relevant. As is stated by Ben-Ḥayyim (1977), prose and poetry material may use the forms differently. Poetry texts are excluded from this study.

[7] Examples (43), (44), and (46) below illustrate *yiqtol* clauses locating the situations in the future, the past, and the present, respectively. Examples (31), (34), and (40) illustrate *qatal* clauses locating the situation in the past, the present, and the future, respectively. Examples (45), (46), and (49) illustrate *wqatal* in each of the three spheres of time. For the participial, see Gen 16: 8 (present), Judg 6: 11 (past), and 2Kgs 4: 16 (future).

[8] Furuli (1995: 5) claims that there are as many as 463 examples of *wayyiqtol* clauses with non-past meanings. The statistical findings of Hatav (1997) show that in the corpus described above, only 0.2% of the *wayyiqtol* clauses are understood to be modal, i.e. as not necessarily referring to the past (see Hatav 1997: 142, table 4.1).

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the onset of the first syllable, namely the consonant *w*. The other morpheme corresponds to the rhyme *ay* of that syllable in the surface structure of the third-person singular masculine, representing the vowel and the gemination. Its exact morpho-phonological nature, however, is not certain. For mnemonic reasons, I will label it *ay*.

This paper is organized as follows. Section 2 discusses the form *yiqtol*, and sections 3 and 4 discuss the morpheme *ay*. I will show that *yiqtol* clauses indicate modal situations involving quantification over possible worlds, and that *ay* functions to pick out from those worlds a unique world, usually the actual one, anchoring the event to it. Section 5 will be devoted to the morpheme *w*, showing that it functions to build reference-time, anchoring the event in time. Section 6 summarizes the findings in the previous sections, explaining how the combination of the morphemes *ay* and *w* results in a past interpretation.

2. THE FORM *YIQTOL*

Regardless of whether the form *yiqtol* originated in a perfect/preterit form, becoming in time similar to the other prefixed forms, or was a modal form all along, synchronically speaking, I adopt the assumption that the base verb in *wayyiqtol* is the regular form *yiqtol*.

I will account for *yiqtol* within the framework of modality, as analysed in possible world semantics, which extends the analysis of modal logic to natural language. According to possible world semantics, modal sentences contain a *must* or a *may* expression, as illustrated in (2) and (3), respectively:

(1) Mary went to the beach.
(2) Mary must have climbed Mount Toby. (Giorgi & Pianesi 1997)
(3) John may go to the beach.

Must/*may* sentences are analysed as involving quantification over possible worlds, in contrast to non-modal sentences such as (1).[9] Accordingly, (2) is true in a world w if and only if Mary has climbed Mount Toby in every possible world accessible to w.[10] The sentence in (3) is true in a world w if and only if there is a world w′ accessible to w and John goes to the beach in w′.

[9] (a) In this paper I will assume familiarity with the notion of possible worlds, the accessibility relation, and other issues concerning modality. For a formal analysis of modality, the interested reader is referred to Hatav (1997) and references cited there. A good summary of modal logic is provided in McCawley (1993: chapter 11), and a comprehensive survey can be found in Hughes & Creswell (1968).
(b) Note that in Hatav (1997) I adopt the notion of possible futures, or branching time, instead of possible worlds. For the points I am trying to make in this article, I do not need to discuss which model is better. I will use both notions interchangeably.

[10] Note that Giorgi & Pianesi (1997) claim that sentences like (2) must be evaluated also with respect to an ideal world they define for this sentence as 'what the normal course of events is' (p. 298). In discussing (2) and other, similar examples, I will ignore this requirement.

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Note that the set of possible worlds includes the actual realized world, which I label here Wo, and that accessibility is a reflexive relation. Since Wo is accessible to itself, the sentence in (2), for example, entails that Mary has (actually) climbed Mount Toby. The sentence in (3) leaves it open whether Wo is included among the possible worlds in which John will go to the beach. In contrast, the non-modal sentence in (1) makes a direct statement concerning Wo, anchoring the situation in it (and leaves the truth-value of the sentence in other possible worlds open).

2.1 *The modal nature of* yiqtol

Translated into BH, a non-modal sentence like (1) will have a verb in the form *wayyiqtol* or *qatal* (depending on the possibility of building a reference-time; see discussion in section 5 below), while the sentences in (2) and (3) will have verbs in *yiqtol* (or in another modal form). It has been shown in the linguistic literature that future sentences, such as (4a) below, generics, such as (4b), habituals, such as (4c), conditionals, such as (4d), and directives, such as (4e), contain an invisible *must/may* operator, and are therefore modals involving quantification over possible worlds; see Hatav (1997: chapter 4) for references and detailed discussion. In Hatav (1997: section 4.2), I show that not only the sentences in (2) and (3) but also all the sentences in (4a–d) would be expressed either by *yiqtol* or *wqatal* clauses in BH (depending on their ability to build a reference-time).[11]

(4) (a) John will go to the beach.
(b) Beavers build dams.
(c) Mia goes to the beach every Friday.
(d) If it rains we will take an umbrella.
(e) Turn the light on!

The command in (4e) would most likely appear in the imperative, but may also be performed by *yiqtol* (or *wqatal*). Hence I conclude that *yiqtol* (as well as *wqatal*) is a general modal form. Accordingly, *yiqtol* clauses involve quantification over possible worlds in the sense that they assert that the situation depicted is true in every (or in some) possible world.

3. The morpheme *ay* (I)

Since many of the basic claims made in this paper are based on the non-conventional assumption that the form *wayyiqtol* is prefixed not only by a *waw* but also by a morpheme *ay*, section 3.1 will be devoted to establishing

[11] At least the sentence in (4a), it seems to me, may also appear in *wyiqtol*; cf. example (5) below and the discussion of the modal forms in section 5.2.2, notably fn. 36.

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the existence of this morpheme. Since its realization in the surface structure is indicated by the vowels, a short discussion of the vowel system in BH will be provided first. Section 3.2 discusses the morphology of *ay*, concluding that it is to be investigated further.

3.1 *The vowel system in BH and its relevance to the analysis*

The forms of *wayyiqtol* and *wyiqtol* are identical in their spelling, and the difference between them lies only in the vowels of the *waw* prefix. Therefore, a short discussion of the vowels marking in BH is in place. (For a more elaborate description, see Dothan 1971, among others.)

For centuries the Bible was not written but was transmitted orally from father to son. The editing of the text came even later. Moreover, the spelling changed over time from a spelling which did not mark vowels at all to one which marked many of them. This resulted in different versions of spellings in the canonized Bible (the version used in synagogues, churches and schools). But even after the Bible was written down, the reading still depended on oral tradition. Most of the vowels were not marked until the pointing (*niqquud*) systems were invented by the Masoretes, not earlier than the 6th century AD.

At least three systems of pointing were developed, one of which – the Tiberian – has been accepted in the Bible we use now. Furuli (1995: 37) argues that 'all they [the Masoretes] wanted was to find vowel points which as faithfully as possible would represent the vowels they heard in the synagogues', and therefore, Furuli (1999: 99) suggests that the difference between *wayyiqtol* and *wyiqtol* was invented by the Masoretes. Following McCarthy (1982: 14f.), I adopt the view of Orlinsky (1966) – as cited by McCarthy – that 'the medieval scholars from first to last were essentially preservers and recorders of the pronunciation of Hebrew as they heard it'. (See also Waltke & O'Connor (1990: 632) for a similar claim, supported by findings from Qumranic texts.) Thus, I regard the different pointing of the *waw* in *wayyiqtol* and *wyiqtol* as distinguishing between their meanings. In a discussion via the Internet, a comparison between (5) and (6) was drawn to illustrate the different uses of the two forms.[12]

(5) wayyoomer yhoošuʕ ʔel bnee yiśraaʔeel … haaḇuu
say-WAYYIQTOL Joshua to sons(of) Israel give-IMPER
laaḵem šloošaa ʔânaašiim laššaaḇeṭ **wʔešlaaḥeem**
to-you three people to-the-tribe I-send-them-WYIQTOL

[12] The English version cited in this paper is the NJPS translation (*Tanakh. The holy scriptures: the new JPS translation according to the traditional Hebrew text*. Philadelphia & Jerusalem: The Jewish Publication Society, 1985). Occasionally, the translation has been adapted to bring out a point which is of importance to the argument.

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wyaaquumuu **wyiṯhallḵuu** **b̲aaʔaareṣ**
they-rise-WYIQTOL they-walk-around-WYIQTOL in-the-land
wyiḵtb̲uu **ʔoot̲aah** **lpii** **naḥâlaat̲aam**
they-write-WYIQTOL it according-to apportionment-their
wyaab̲ooʔuu **ʔeelaay**
they-come-WYIQTOL to-me
'Joshua said to the Israelites … Appoint three men of each tribe; I WILL SEND THEM OUT, THEY WILL GO THROUGH THE COUNTRY AND WRITE DOWN A DESCRIPTION OF IT FOR PURPOSES OF APPORTIONMENT, AND THEN COME BACK TO ME.' (Josh 18: 3–4)

(6) wayyeelḵuu haaʔânaašiim wayyaʕab̲ruu b̲aaʔaareṣ
go-WAYYIQTOL the-people pass-WAYYIQTOL in-the-land
wayyiḵtb̲uuhaa leʕaariim lšib̲ʕaa ḥâlaaqiim ʕal seep̄er
write-WAYYIQTOL-it to-cities to-seven parts on book
wayyaab̲ooʔuu ʔel yhoošuʕ ʔel hammaḥâne šiloo
come-WAYYIQTOL to Joshua to the-camp Shilo
'So the men went and traversed the land; they described it in a document, town by town, in seven parts, and they returned to Joshua in the camp Shiloh.' (Josh 18: 9)

All the boldfaced clauses in Joshua's speech in (5) report what the appointed men will do in the future, hence the *wyiqtol* form of their verbs. Later in the chapter, we are told that Joshua's orders were carried out. To report this information, the narrator uses *wayyiqtol* verbs, as shown in (6).

As claimed above, the verbal component both in *wyiqtol* and *wayyiqtol* consists of a verb form built on *yiqtol*. In section 2, I argued that *yiqtol* is a modal form involving quantification over possible worlds. This is in accord with the text in (5), in which the *wyiqtol* clauses are understood to refer to the future. But how do we explain the fact that the clauses in (6) do not express modality? My contention is that *wayyiqtol* has an infix located between its verbal base and the morpheme *w*. The surface structure of the form suggests that this infix consists of two morae, the vowel /a/ and the gemination, which surface according to the person prefix: *ay*, *at*, *an*, or *aa*. As will be shown in section 3.2 below, it is not clear whether the surface structure reflects the true nature of this morpheme. As mentioned previously, I have been using the label *ay* to represent it for mnemonic reasons only.[13] But whatever morphology this morpheme has, I argue that it is responsible for turning the meaning of the clauses in (6) into non-modal, by anchoring the event depicted to a unique world. The meaning of *ay* will be discussed in section 4.

[13] As noted by a *JL* referee, the exact morphology of this morpheme does not have a bearing on the semantic claims I am making in this article.

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3.2 *The morphology of* ay

As noted above, the morpho-phonological nature of *ay*, which is responsible for the non-modal nature of *wayyiqtol*, is not clear. One possible hypothesis is that the morpheme is *ay* not only in the surface but also in the underlying structure. However, I cannot find any independent support for this hypothesis. Another possibility is that the doubling of the verb prefix is the actual morpheme, which I label *ay*, and the other morpheme is *wa*.[14] In section 5, I will show that the prefix *w* in *wyiqtol* and *wayyiqtol* has the same meaning in both forms, and therefore I suggest that the vowel may not be part of the first morpheme. But how, then, is the vowel in *ay* to be derived?

There might be a phonological explanation for the vowel /a/ in *wayyiqtol*. It is possible that the vowel does not participate in forming the morpheme *ay* and is merely needed for phonological reasons. McCarthy (1982: 11, 33) claims that Hebrew does not permit tautosyllabic consonant clusters (except in some special word-final cases). If we conclude that the gemination alone is what forms the morpheme, then combining the morpheme *w*, the gemination, and the verbal base would yield the impossible form **wyyiqtol*, consisting of a tri-consonantal cluster at its onset. Thus, it is possible that the vowel /a/ is merely an epenthesis to resyllabify this cluster.[15]

I favour the thesis that the doubling of the prefix is the morpheme responsible for anchoring the event to the world. This thesis finds support from a comparison with the morphology of the definite article in Hebrew. We will see, in section 4.3, that the semantics of *ay* is analogous to the semantics of the definite article in language. The vowels of the definite article *h* in Hebrew may suggest that we are actually dealing with the same phenomenon.

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[14] Indeed, DeCaen (1995) identifies a morpheme *wa* in *wayyiqtol*, characterizing it as a simple conjunction and a morpheme consisting of a single mora /μ/, represented by the gemination. Note, however, that he describes this morpheme in syntactic rather than semantic terms.

[15] (a) Idan Landau (p.c.) suggests that it is the other way around. The gemination in *wayyiqtol* is phonological, and the definiteness is conveyed by the vowel /a/.
(b) Edit Doron (p.c.) raises the question of why we do not find in the biblical text verbs in **hayyiqtol*, where the /h/, or another consonant, is a vowel carrier (cf. discussion of the definite article in Hebrew), i.e. clauses anchoring the situation in Wo without adding /w/. My assumption, still to be investigated, is as follows. Lambdin (1971: 164f.), followed by Waltke & O'Connor (1990), observes that, in addition to the conjunction *w*, there might be a *w* at the beginning of a clause indicating the beginning or the completion of an episode. I believe that this generalization is too weak. As pointed out to me by Yehuda Falk (p.c.), it seems that every matrix clause has to open with some *waw*. (However, this too may be a little inaccurate, as examples such as (46) below have matrix clauses without a *waw*. Maybe the conjunction 'therefore' in (46) is responsible for the lack of *waw*. Note also that direct speech may never start with a *waw*, which should be explained.) It is well-recognized that *wayyiqtol* is a clause-initial form (Bauer 1910). Therefore, verbs in this form would always have to appear with a *waw* attached to them.

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The definite article *h* is attached in Hebrew to the noun (or the adjective) it modifies. Like the *waw* in *wayyiqtol*, it is accompanied by the short vowel *a* (*patah*) followed by a *dagesh* geminating the first consonant of the noun. Examples include *hattanniin* 'the alligator' (Isa 27: 1), *hayyeled* 'the child' (1Kgs 3: 25), and *hannaabii* 'the prophet' (Deut 13: 4). When the noun starts with the consonant /ʔ/, the article has a long vowel, *qamas*, e.g. *haaʔaares* 'the earth' (Gen 1: 1). In the case of /y/ with a shwa, the article has the short *patah* without gemination, e.g. *haylaadiim* 'the children' (Ex 1: 17).[16]

Ullendorff (1965) discusses the definite article in Arabic in comparison with Hebrew and other Semitic languages, and lists the four different ways the definite article appears in Classical Arabic (p. 631): *ʔal*, as in *ʔal baytu* 'the house'; *l*, as in *fi l-bayti* 'in the house'; *ʔa* plus first consonant of the following noun, as in *ʔar-rajulu* 'the man'; and a doubling of the first consonant of the noun, as in *dahaba r-rajulu* 'the man left'. With reference to the situation in the spoken literary language and a few of the modern dialects, Ullendorff concludes that only laryngeals or pharyngeals and the semivowels /w/ and /y/ do not undergo gemination. This leads him to the conclusion that it is not the /l/ or the /ʔ/ that constitutes the original marking of definiteness in Arabic; rather, 'it is in fact the doubling or lengthening of the initial consonant of a noun which connotes "determination"' (p. 634). Moreover, he shows that in Proto-Arabic, the definite article was usually the consonant /h/, as in Hebrew and other Canaanite languages, and in a few rare cases it was the *hamza ʔ*. Therefore, he suggests, both /ʔ/ and /h/ 'merely serve as a graphic device or vowel carrier' (p. 636). He finds evidence for his thesis in Phoenician and Moabite, both of which use /ʔ/ with doubling for definiteness, and in Hebrew, which uses *h*(*a*) with doubling. Galit Sassoon (p.c.) draws my attention to a phenomenon in Hebrew which may lend support to Ullendorff's account. When the prepositions *b* 'in', *k* 'as', and *l* 'to, for' are added to indefinite nouns in Hebrew, they have the vowel shwa. If they are added to a definite noun, the consonant /h/ is absent and the preposition gets the vowel and gemination of the definite article, as in *bbayit* 'in a house' vs. *babbayit* 'in the house'; *kzayit* 'as an olive' vs. *kazzayit* 'as the olive'; *lyeled* 'to a child' vs. *layyeled* 'to the child'.[17]

[16] I have illustrated the appearance of the definite article with nouns beginning with the consonants /y,t,n,ʔ/ only, as is relevant to *wayyiqtol*. The definite article may, of course, be attached to nouns (or adjectives) beginning with other consonants; see Gesenius (1909: section 35), Waltke & O'Connor (1990: section 13.3), Joüon-Muraoka (1993: section 35), and others for a more detailed account.

[17] Naomi Shir (p.c.) observes that when the preposition *m* 'from' is added to a definite noun, the definite article *h* also appears. But this is not a counterexample. This preposition is always vocalized by a vowel /i/ or /e/ (rather than a shwa), and therefore when added to a definite noun the consonant /h/ appears, too (without the /h/ the result would be two sequential vowels, impossible for phonological reasons), thus, *mibbayit* 'from a house' and *mehabbayit* 'from the house'. However, while it is easy to explain why the /h/ appears with the preposition *m*, I could not find an explanation for a phenomenon observed

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To conclude the current discussion, the exact phono-morphological nature of the morpheme – labelled *ay* throughout this paper – is not clear and needs to be investigated further.

4. THE MORPHEME *AY* (II)

In this section, I will propose that there is an analogy between the verbal and the nominal domain. I will show that the morpheme *ay* in the verb functions in the same way as the definite article. First, I will provide a discussion of the semantics of definite descriptions and the definite article (sections 4.1 and 4.2); then I will show that the semantics of *wayyiqtol* is analogous to that of definite descriptions, and that the semantics of *ay* is analogous to that of the definite article (section 4.3). Comparing the morpheme *ay* with the Arabic *qaaʕed* in section 4.4, I will show that anchoring the world is not an idiosyncratic property of BH. The last section, 4.5, will show that *ay* is not the only morpheme anchoring the world in BH.

4.1 *Definite descriptions*

Many analyses have been suggested in the semantic literature for definite NPs.[18]

4.1.1 *Existence and uniqueness*

Russell (1905) claims that the use of a definite NP entails existence and uniqueness of the referent in the universe of discourse.[19] For example, the celebrated sentence *The king of France is bald* asserts, among other things, that there is one and only one king of France. Others – Strawson (1950), for example – argue that existence and uniqueness are not assertions but presuppositions of the definite NP. Whether asserted or presupposed, it is widely accepted that both existence and uniqueness are part of the meaning of definites.

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by Edit Doron (p.c.). She questions why the consonant /h/ appears when the conjunction *w* 'and' is added to a definite noun, as in *whayyeleḏ* 'and the child' (not **wayyeleḏ*).

[18] Since the work of Russell (1905) and its modification by Strawson (1950), the notion of definiteness has become central in linguistics and philosophy, with many theories tackling the subject. Here I will discuss only the points relevant to the topic of this section. Readers interested in more detail are referred to the excellent overview provided by Lyons (1999) and the references therein.

[19] Recent studies replace the concept of universe of discourse by the concept of context (set). I will use both concepts informally. For discussion and formal definition of context and context set, see Giorgi & Pianesi (1997) and Chierchia & McConnell-Ginet (2000).

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It has been observed, however, that in natural language we may use a definite NP even though there is more than one object in the universe of discourse.[20] Consider the following examples discussed in Lyons (1999: 14):

(7) [In a room with three doors, one of which is open.]
Close **the door**, please.
(8) [In a hallway where all four doors are closed. The speaker is dressed in a coat and hat and has a suitcase in each hand.]
Open **the door**, please.
(9) [Two academics.]
A: How did the seminar go?
B: Fine. **The student** gave an excellent presentation.

As Lyons notes, the definite NPs in (7) and (8) are used felicitously although there is more than one door in the house, and the definite NP in (9) is also felicitous although there is more than one student in the class.

4.1.2 *Familiarity and saliency*

Following Christophersen (1939), most scholars explain the examples in (7)–(9) in pragmatic terms of familiarity and saliency. The speaker uses a definite NP to refer to certain individuals if, in a given context, they are familiar or salient to both speaker and hearer. Heim (1982, 1983) shows that this can be given a logical analysis, developing the concept of discourse referents proposed earlier in Karttunen (1968a, 1976).

Karttunen uses the new notion of DISCOURSE REFERENCE, replacing the traditional notion of REFERENCE, to account for both the text in (10) and the text in (11):

(10) Bill has a car. It is black./The car is black.
(11) Everybody found a cat and kept it.

Karttunen (1976: 366) shows that the example in (10) can be handled by the traditional analysis. The NP *a car* in (10) implies the existence of a specific car that can be talked about again by referring to it with a pronoun or another kind of definite NP. However, the sentence in (11), analysed in Heim (1983), is problematic for the traditional account. As Heim notes, *a cat* does not refer. Yet the definite pronoun *it* is able to refer back anaphorically to *a cat*. Karttunen's explanation is that *a cat* in (11), though not referring, introduces a discourse referent, which can then act as an antecedent for *it*. Heim takes

[20] Another problem concerning Russell's analysis, or its modification following the lead of Strawson, is definite NPs with plural or mass nouns, such as 'the kings' or 'the mud'. Different attempts have been made to solve this problem, but this need not concern us here. Furthermore, note that the problem of definite plural NPs does not arise at all within the account of Platteau (1979) adopted in this study.

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up and develops this concept of discourse reference, using the metaphor of a 'file'.

Heim proposes a semantic theory which she calls FILE-CHANGE SEMANTICS, where FILES are constructed by rule from the syntactic analysis of sentences. These are cumulative structures constructed from the information in each sentence. The idea is that understanding a discourse is like keeping a file in which each discourse referent is represented by a numbered file card. When a new discourse referent is introduced into the conversation, a new card is added to the file, and whatever is said about this discourse referent is entered on this card. If the same discourse referent is mentioned again, whatever new is said is added to the same card. Definites and indefinites are claimed to affect the growth of the file in different ways, according to the FAMILIARITY-NOVELTY CONDITION. All indefinites in a sentence must be novel in the sense that they introduce into the domain of discourse referents that were not previously in the discourse. All definites must be familiar in the sense that the discourse referents they are mapped onto must have been previously introduced into the discourse. Anaphoric reference involves a referent that is familiar from its antecedent, as in the case of the pronoun *it* in both (10) and (11) and the definite description *the car* in (10). In the case of deictic reference, Heim claims, '[I]t has attained familiarity by being pointed at, being perceptually prominent, or being otherwise salient' (p. 309). To explain this further, she quotes Karttunen (1968b: 6):

> Anything in the immediate environment of the speaker and hearer towards which their attention is directed becomes a discourse referent whether it has been explicitly mentioned or not. (Heim 1982: 405, fn. 9)

Accordingly, the use of the definite NPs in (7)–(9) above may be explained as referring deictically to the most salient individuals in their respective contexts.

4.2 *The definite article*

The question that arises is how the definite article contributes to the meaning of the definite NP. Heim does not seem to attribute any semantic content to the definite (or the indefinite) article; the rules of semantic interpretation simply ignore it. Its role is to mark NPs as definite, for the appropriateness condition of FAMILIARITY. Heim & Kratzer (1998) regard it as an operator, following the ideas presented in Frege (1990 [1892]).

Frege (1990 [1892]: 97f.) describes how a definite NP, such as 'the negative square root of 4', is formed:

> We have a case in which out of a concept-expression a compound proper name is formed with the help of the definite article in the singular, which is at any rate permissible when one and only one object falls under the concept.

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Following Frege in this syntactic and semantic analysis, Heim & Kratzer (1998: 74) propose that the determiner *the* denotes a (partial) function from expressions whose meaning is of type ⟨e,t⟩ to expressions whose meaning is of type ⟨e⟩. More precisely, when it applies, the definite article yields a definite NP that denotes one unique individual. For example, when it applies to *king*, the determiner yields the expression *the king*, denoting one unique king. Accordingly, Heim & Kratzer make the generalizations in (12) and (13) below (their (1) on p. 74 and (4) on p. 75, respectively).

(12) For any $f \in D\langle e,t\rangle$ such that there is exactly one x for which $f(x) = 1$, $[[\text{the}]](f) =$ the unique x for which $f(x) = 1$.
(13) The domain of [[the]] contains just those functions $f \in D\langle e,t\rangle$ which satisfy the condition that there is exactly one x for which $f(x) = 1$.

Putting (12) and (13) together, they define the lexical entry of the definite article, as in (14a) below (their (5) on p. 75), or in a more logical notation, using the iota operator, as in (14b) (their fn. 14 on pp. 84f.). (Note that they abstract away from context-dependency, since they, too, use the notion in an informal way; cf. fn. 19 above.)

(14) $[[\text{the}]] =$
(a) $\lambda f\colon f \in D\langle e,t\rangle$ and there is exactly one x such that $f(x) = 1$. The unique y such that $f(y) = 1$.
(b) $\lambda f\colon f \in D\langle e,t\rangle \,\&\, \exists!x[f(x) = 1]\cdot\iota y[f(y) = 1]$.

Platteau's (1979) analysis assumes that what the definite article yields when applied is not an individual but a set. Platteau claims that 'determiners could be considered as functions that pick out a certain element or certain elements from a certain set' (p. 114). The purpose of such a function is to form a set of references, or, in Platteau's words, 'to divide a set into two subsets, one containing the elements to which the speaker wishes to refer, and another one containing the complement of the first subset' (p. 115). Compare the noun phrase in (15a) with those in (15b–c):

(15) (a) Students work hard.
(b) The students work hard.
(c) The student works hard.

The NP *students* in (15a) quantifies over individuals, attributing the property of working hard to every person who happens to be a student (including those people who were students in the past or will be in the future). In (15b), the definite article picks out a subset of the set of students, forming a referent set, say, the set of students now enrolled in the biblical Hebrew course, asserting that its members work hard. The subset picked out by the definite article in (15c) is a singleton containing one member only.

The idea that the definite article yields a set is part of Winter's (2001) analysis. Winter treats definites as basically predicate-denoting, where 'the

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definite article only modifies the noun denotation' (p. 153). Accordingly, unlike Heim & Kratzer, Winter defines a definite NP as one that denotes not the unique individual x for which f(x) = 1, but the singleton set {x} which contains x. Winter does not take a stand whether existence and uniqueness are asserted or presupposed, and accordingly suggests two definitions for the definite article. Following the reasoning of Heim & Kratzer, I adopt the presuppositional condition that a definite article can apply to one and only one (x). However, to account for cases such as (7)–(9) discussed previously, I moreover assume that (x) is unique in the sense that it has to be the most familiar-salient object in the discourse it appears in. In other words, uniqueness in this sense is now part of the domain of the definite operator (rather than its value). Now consider Winter's (p. 153) definition in (16), adapted to the notation of Heim & Kratzer and modified to include familiarity as part of the domain.

(16) $[[\text{the}]] = \lambda f\colon f \in D\langle e,t\rangle \,\&\, \iota x[f(x) = 1]\cdot f$

Since the definite article applies to expressions such as *king*, i.e. (common) nouns, (16) retains the condition stated by Heim & Kratzer that the domain consists of expressions whose meaning is of type ⟨e,t⟩. But, as previously stated, that there is a unique (or familiar) entity such that it is a king is now part of the domain. Crucially, the value of the function, i.e. what the definite article yields when it applies, is another function of the same type ⟨e,t⟩ as the function in the domain. For example, *the king* is now seen as a predicate, or a function, which is a modification of the predicate *king*. This entails that *the king* is a subset of the set *king*, which is in accord with the informal account of Platteau as mentioned above. We can modify the definition in (16) to include this information, as in (17).

(17) $[[\text{the}]] = \supseteq\lambda f\colon f \in D\langle e,t\rangle \,\&\, \iota x[f(x) = 1]\cdot f$

4.3 *The semantics of* ay

Assuming Heim's (1982) analysis of definiteness, I argue that *yiqtol* clauses correspond to indefinite NPs while *wayyiqtol* clauses correspond to definite NPs.

As discussed in section 2, a *yiqtol* clause is modal; it expresses a proposition p, which can be paraphrased as saying: 'In every/some possible world (accessible to Wo) p is true'. Since 'possible world' is in the scope of 'every' or 'some', it is interpreted as a variable bound by the universal/existential quantifier, and therefore does not refer but can introduce a new referent into the discourse.

In contrast, when using a *wayyiqtol* clause, the speaker refers to a unique world in which the proposition expressed by the clause is asserted to be true. The world most familiar to speakers, which is also the most salient and

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perceptually prominent, is the actual one, intuitively speaking. Thus it is reasonable to say that when using a *wayyiqtol* clause, the speaker usually picks out the actual world as a deictically familiar world, anchoring the reported event to it.[21] The parallel nature of definite NPs and *wayyiqtol* clauses suggests that the definite article and the *ay* morpheme denote the same operation.[22]

I regard *ay* as a function that takes a proposition (expressed by *yiqtol* clauses) as its argument and, moreover, applies only if there is a unique salient world in the context in which that proposition is true. Since propositions are expressions whose meaning is of type ⟨s,t⟩, we may conclude that the domain of [[*ay*]] contains just those functions, $f \in D\langle s,t\rangle$. These functions satisfy the condition that there is a unique world w to which the function applies. Following Winter's (2001) analysis of the definite article, I suggest that *ay* modifies the proposition denotation by introducing the appropriate uniqueness presupposition. Accordingly, the value of the function is a singleton set {p} containing one proposition p, which is a subset of the domain set. Putting all this together, the denotation of the *ay* morpheme looks very much like the denotation of the definite article suggested in (17). The lexical entry for *ay* may now be given as follows:

(18) $[[ay]] = \supseteq\lambda f: f \in D\langle s,t\rangle \;\&\; \iota w[f(w) = 1]\cdot f$

To appreciate the definition in (18), let us reconsider example (2), as discussed in section 2. Sentence (2) may be paraphrased as follows: 'In every possible world accessible to Wo, Mary has climbed Mount Toby'. The proposition 'Mary has climbed Mount Toby', which can be represented

[21] The idea of accounting for verb forms in terms of definiteness has been proposed before. For example, Tsoulas (1994) suggests the following parallels (his (48) and (49)):

(i) (a) John left.
(b) The woman in the garden
(ii) (a) John decided to sing.
(b) A man in the garden

According to Tsoulas, just as (ib) refers to a unique, particular woman in the garden, (ia) refers to a particular point in time at which the described event occurs. Correspondingly, the indefinite NP in (iib) does not refer to any particular individual, and the infinitive in (iia) does not refer to a particular time. Tsoulas proposes that subjunctive and infinitive clauses in French are indefinites. However, Giorgi & Pianesi (1997: 204) show this analysis to be inadequate for Italian. They show that the subjunctive may appear in Italian with adverbs such as 'tomorrow', which makes their time definite.

I believe Tsoulas is on the right track. However, the property of definiteness, I suggest, is not temporal, but rather concerns possible worlds. Accordingly, I suggest that the indicative is definite with respect to Wo but the subjunctive and the infinitive are indefinite because they do not refer to any particular possible world(s).

[22] I am deeply indebted to Edit Doron for her help with this discussion. Needless to say, any inaccuracy is my responsibility.

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by p, can be described as being true in w′, w″, Wo, and so forth. We can form a set, call it A, of propositions, each true in one of the worlds. We can form subsets of that set, B = {p′, p″}, consisting of two members: the proposition in w′ and w″, or a singleton, C = {p‴}, consisting of one member: the proposition in w‴. Both B and C are subsets of A. Once we apply *ay* to set A, we single out a unique world, usually Wo, requiring the proposition to be true in it (but leaving it open for other possible worlds whether or not the proposition is true in them). This yields a singleton set {p} containing the proposition in Wo, which is a subset of A.

Note that the definition in (18) does not require that Wo be the unique world picked out by *ay*. As argued above, Wo is picked out because it is the most salient world for speakers in most cases. But in certain contexts, other worlds may be the unique salient ones. The analysis suggested here predicts that when a world other than Wo is the salient one in a given context, *ay* would pick it out, and the verbs in the clauses recounting the events in that world would be in the form *wayyiqtol*. This prediction is borne out by examples such as (19) and, later, (20).

(19) waysappeer śar hammašqim ʔet ḥâloomoo lyooseēp
tell-WAYYIQTOL minister(of) the-beverages ACC dream-his to-Joseph
wayyoomeer loo baḥâloomii whinnee geēpen lp̄aanaay
say-WAYYIQTOL to-him in-dream-my behold vine to-face-my
uuḇaggeēpen šloošaa śaariiğiim whii ḵp̄ooraḥaṯ
and-in-the-vine three branches and-she as-budded
ʕalṯaa niṣṣaah hiḇšiiluu ʔašklooṯehaa ʕânaaḇiim
grow-up-QATAL blossoms-her ripe-QATAL clusters-her grapes
wḵoos parʕoo byaaḏii **waaʔeqqaḥ ʔeṯ haaʕânaaḇiim**
and-cup(of) Pharaoh in-hand-my take-WAYYIQTOL ACC the-grapes
waaʔeśḥaṭ ʔootaam ʔel kos parʕoo waaʔetteen
press-WAYYIQTOL them to cup(of) Pharaoh give-WAYYIQTOL
ʔeṯ hakkoos ʕal kaēp parʕoo wayyoomer loo yooseēp
ACC the-cup on palm-of Pharaoh say-WAYYIQTOL to-him Joseph
'Then the chief cupbearer told his dream to Joseph. He said to him, "In my dream, there was a vine in front of me. On the vine were three branches. It had barely budded, when out came its blossoms and its clusters ripened into grapes. Pharaoh's cup was in my hand, and I TOOK THE GRAPES, PRESSED THEM INTO PHARAOH'S CUP, AND PLACED THE CUP IN PHARAOH'S HAND". Joseph said to him, …' (Gen 40: 9–12)

As stated in the first two clauses of this excerpt, the discourse in (19) consists of a dream that the chief cupbearer is recounting. He begins by setting up the background of the dream. Then he recounts the events, with *wayyiqtol* clauses, as expected. Clearly, the dream is not the actual world, but since it is the unique salient world in this discourse, it is picked out by the *ay* morpheme. This analysis finds support in Giorgi & Pianesi

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(1997: section 5.1.6). In analyzing the choice of the verb form in Romance languages, they state that when the reference is to the actual world, the indicative mood is chosen in complement clauses, but when the reference is to other possible worlds, the subjunctive is chosen. Thus, complements of verbs such as 'hopes' and 'wishes' get the subjunctive because the world of somebody's hopes and wishes is not the actual one. However, they note that although dreams are clearly not the actual world, Romance languages use the indicative rather than the subjunctive in complement clauses of 'dream' verbs. To account for this, Giorgi & Pianesi stipulate that the word 'dream' creates a context similar to that created by an assertive verb (p. 221). Having shown that a dream refers to a unique world, we can now explain this stipulation. A relevant example is the text in (20), which is an excerpt from what is usually referred to as the *Jotham parable*.

(20) wayyaggiḏuu lyoo̱ṯaam wayyeelek̲ wayyaʕâmoo̱ḏ
tell-WAYYIQTOL to-Jotham go-WAYYIQTOL stand-WAYYIQTOL
brooš har grizziim wayyiśśaa qooloo
in-head(of) mountain(of) Gerizim lift-WAYYIQTOL voice-his
wayyiqraa wayyoomer laahem šimʕuu ʔeelay
call-WAYYIQTOL say-WAYYIQTOL to-them listen-IMPER to-me
baʕâley šk̲em wyišmaʕ ʔâleek̲em ʔêloohiim haaloo̱k̲
citizens(of) Shechem listen-WYIQTOL to-you God go-INF
haalk̲uu haaʕeeṣiim limšooḥ ʕâleehem melek̲ **Wayyoomruu**
go-QATAL the-trees to-anoint on-them king say-WAYYIQTOL
lazzayiṯ molk̲aa ʕaaleenuu **wayyoomer**
to-the-olive reign-IMPER on-us say-WAYYIQTOL
laahem hazzayiṯ … **wayyoomruu haaʕeeṣiim lattʔeenaa** …
to-them the-olive say-WAYYIQTOL the-trees to-the-fig
'When Jotham was informed, he went and stood on top of Mount Gerizim and called out to them in a loud voice. Citizens of Shechem!, he cried, listen to me, that God may listen to you.

Once the trees went to anoint a king over themselves. **They said to the olive tree**, Reign over us. But **the olive tree replied**, … So **the trees said to the fig tree** …' (Judg 9: 7–10)

This parable, which consists of verses 8–15, is set up as the unique world in Jotham's speech. Thus, all the verbs (of saying) recounting what 'happened' in that world where trees talk are in *wayyiqtol*.[23]

[23] Only the first clause of the parable contains another verb form, consisting of an infinitive absolute and a *qatal* verb. Because the function of the infinitive absolute is unclear, as noted in fn. 4, I leave this unexplained.

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4.4 *The morpheme* qaaʕed *in modern Arabic dialects*

Identifying a morpheme *ay* in BH and analyzing it as a world-anchoring constituent may be relevant to some of the modern dialects of Arabic.

Linguists see the aspect system in Classical Arabic as a binary opposition between the suffixed *qatala* and the prefixed *yaqtulu* conjugations. As described in Kaye (1987), the prefix form, labelled PERFECT, is usually used to express situations in the past but may sometimes refer to the present or the future. The prefixed form, labelled IMPERFECT, seems to parallel the Hebrew *yiqtol* not only in form but also in function, as it is used to express modal propositions, such as future, habituals, generic truth, general past, and so forth.

The modern Arabic dialects have developed a large variety of prefixes used with the imperfect to disambiguate the clause in question and elicit certain meanings (see Stewart 1998 for a survey). Caubet (1991) discusses a special particle developed by some of the dialects to create the opposition she understands as concomitance versus non-concomitance with the time of utterance. For example, in Tunisian Arabic, Caubet shows that a particle *qaaʕed* 'sitting', formally an active participle, may be prefixed to a verb in the imperfect to indicate that the reported situation is concomitant with the speech time. When speakers want to express some general truth, habitual event, and the like, they would use the imperfect verb without the particle. She illustrates this (p. 213) by comparing (21a) with (21b).

(21) (a) wiin-u? qaaʕed yixdəm
where-him sitting he-work-IMPERFECT
'What is he doing? He is working.'
(b) yixdəm f-fransa
he-work-IMPERFECT in-France
'He works in France.'

Note, however, that the particle *qaaʕed* may be added also to sentences referring to the past. Examples (22) and (23) illustrate.[24]

[24] Dominique Caubet (p.c.), consulting a Tunisian colleague, Abdelwahid Fayala, claims that (22) is not possible in Tunisian Arabic. My data are from native speakers of the Jewish dialect of Tunisian Arabic. It is possible that this particle started its life referring only to the present time (indicating not only the here of Wo but also the now of To) in Tunisian Arabic. Later it developed to cover Wo in the past as well, in the Jewish dialect of Tunisian Arabic. It is also possible that its reference to both past and present developed in some dialects but not in others. This may be illustrated by Egyptian and Palestinian Arabic. Consulting native speakers of Palestinian Arabic (Mohammad Mohammad and Summer Juber), it turns out that (22) is well formed in Palestinian Arabic (with respective differences of vocabulary, phonology, and maybe other linguistic factors). Similarly, consulting native speakers of Egyptian Arabic, notably Ashraf Hosney, I found that the particle *ʔaaʕed* in Egyptian Arabic, parallel to the Tunisian and the Palestinian *qaaʕed*, may be used for past tense, resulting in sentences like (22).

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(22) ʔaməs flxamsa mohammad kaan
yesterday in-five Mohammad he-be-PERFECT
qaaʕed yixdəm
sitting he-work-IMPERFECT
'Yesterday at five o'clock Mohammad was working.'

(23) mohammad kaan yixdəm f-fransa
Mohammad he-be-PERFECT he-work-IMPERFECT in-France
'Mohammad used to work in France.'

Since it has the same uses as the BH *yiqtol*, the imperfect in Arabic should, I believe, be analysed as involving quantification over possible worlds. The differences between (21a) and (21b), and between (22) and (23), suggest that the particle *qaaʕed* in Arabic picks out one specific world, namely Wo, anchoring the situation to it.[25]

4.5 *Other world-anchoring expressions*

It seems that *ay* is not the only particle in BH that can anchor situations to Wo. It has been observed that the expression *ʔaaz* '(and) then' usually appears with a *yiqtol* verb referring to the past. Scholars following the comparative-historical approach point to this fact as evidence that there was a preterit or perfect *yiqtol* in Proto-Hebrew. This phenomenon also has been compared to the Arabic *lam yaqtul* 'he did not kill', which refers to the past although it has the imperfect form *yaqtul*.[26] Hetzron (1969), Lipinski (1997), and others regard this as evidence that Arabic, too, used to have a prefixed perfect form that survived from Proto-Semitic. However, the negative word *la* in Arabic does not refer to the past – when attached to a verb in the imperfect – which suggests that what is responsible for the past meaning is not the verb base but the negative word *lam*. I suggest that the Hebrew *ʔaaz* and the Arabic *lam* are both particles which anchor the situation to Wo.[27]

[25] The perfect in Arabic seems to refer to Wo without resorting to a particle. The question arises, what is the difference between sentences in the imperfect with the particle *qaaʕed* and sentences in the perfect? It seems to me that they display the same difference as the English progressive (e.g. *John was working*) versus the simple past (e.g. *John worked*), respectively, but I leave this hypothesis for future investigation.

[26] Those scholars point also to the expression (*b*)*ṭerem* 'not yet, before', claiming that it refers to a (non) event in the past although it usually appears with a *yiqtol* verb. As noted by a *JL* referee, however, this generalization is empirically invalid. The negative (*b*)*ṭerem* may appear with *yiqtol* referring to the future, or appear with a *qatal* verb referring to the past.

[27] Mohammad (2000) suggests a syntactic analysis of the phenomenon. He claims that negative particles in Arabic must be compatible with the tense feature in the head T(ense). According to Mohammad, the particle *lam* is compatible only with past tense.

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5. Anchoring time in biblical Hebrew

The notion of reference-time is central to the analysis that I suggest here for anchoring time. A brief overview of this notion will be provided in section 5.1. Section 5.2 will deal with the morpheme *w* in *wayyiqtol* and the other *waw*-prefixed verb forms. I will first establish that the *waw* prefixing *wayyiqtol* is not the conjunction *waw*, showing its parallel nature to the Arabic *fa*. Then I will proceed to show that it is an operator whose function is to build a reference-time of the clause it appears in, anchoring the event in time.

5.1 *Reference time*

The notion of reference-time was first introduced by Reichenbach (1947). The theory prevailing at the time was that of Tense-Logic, which analysed tenses in terms of two points: the S(peech)-Time (referred to here also as S) and the E(vent)-Time (or just E) (see Prior 1967). Reichenbach shows, at least for English, that the Tense-Logic analysis is not accurate, claiming that speakers take into account a third point in time, which he labels REFERENCE-TIME (henceforth R-time or just R). The sentence in (24) clearly shows that there are three times involved.

(24) (When Mary arrived/At five p.m.) John had already left.

According to Reichenbach, in past-perfect sentences such as (24), the E-time of John's leaving precedes not only the S-time, but also the R-time, which is the time determined by the adverbial, which I put in brackets here.

Kamp & Rohrer (1983) show how the notion of R-time helps to explain the choice of verb form in French. Using the framework of DISCOURSE REPRESENTATION THEORY (DRT), developed by Kamp (Kamp 1981; Kamp & Reyle 1993), Kamp & Rohrer argue that sentences in the *passé-simple* introduce R-times into the discourse while sentences in the *imparfait* do not.[28] The *imparfait* makes use of the R already introduced into the discourse either by a previous *passé-simple* sentence or by an adverb. They show how this explains the difference between (25a) and (25b) (PS stands for *passé-simple* and IMP for *imparfait*).

(25) (a) Quand Pierre entra Marie téléphona.
when Pierre enter-PS Marie telephone-PS
'When Pierre came in Marie made a telephone call.'
(b) Quand Pierre entra Marie téléphonait.
when Pierre enter-PS Marie telephone-IMP
'When Pierre came in Marie was on the phone.'

[28] DRT is very similar to Heim's file-change semantics, described in section 4.1.2 above. Heim's FILES correspond to DISCOURSE REPRESENTATION STRUCTURES in DRT, and her FILE CARDS correspond to REFERENCE MARKERS.

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Both clauses in (25a) have a PS verb, and therefore both introduce an R-time, resulting in a sequence of events. In (25b), on the other hand, only the first clause is in the PS, introducing an R-time. The second clause is in the *imparfait*, and therefore does not introduce a new R-time into the discourse. It uses the R-time of the first clause for its own temporal interpretation. This is why we understand the situation depicted in the second clause to overlap in time with the situation reported in the first one. I suggest calling the *passé-simple* in French an R-building form, as opposed to the 'parasitic' *imparfait*, which depends on an explicit adverb or a neighbouring clause for its temporal interpretation.

Note that the verb forms in English may also be classified in this way. (I deliberately avoid the term 'tense' as, in some cases, we may be dealing with aspect rather than tense.) Consider the difference in meaning between the following sentences (from Mittwoch 1988):

(26) (a) When I came in she made fresh coffee.
(b) When I came in she was making fresh coffee.

The situations reported by simple sentences in (26a) are understood to follow each other, while in (26b), the situation reported by the progressive sentence is understood to overlap with the event depicted in the simple sentence. In other words, while the simple past clauses introduce new reference-times, the progressive uses the referent of the previous clause.[29] Note, however, that simple-past sentences in English do not always build a new R-time; compare (27a) and (27b).

(27) (a) Mary entered the room. She turned the light on.
(b) Mary drove to Jerusalem. It was a lovely sunny day.

Both sentences in (27a) are in the simple past and both seem, indeed, to introduce R-times into the discourse, as attested by the sequence they produce. In (27b), both sentences are also in the simple past, but only the first sentence builds an R-time; the second sentence uses the R-time introduced by the first one for its temporal interpretation.[30]

[29] Note that we will get the same result with two matrix sentences for each case:

(i) (a) I came in. She made fresh coffee.
(b) I came in. She was making fresh coffee.

This applies also to French examples.

[30] Hinrichs (1986 [1982]), followed by Partee (1984), explains this in terms of aktionsarten: only event clauses introduce new R-times. However, as shown by Partee herself, events may also use an R-time introduced by another clause, e.g. in sentences where there are two different agents, as in *John drove to Jerusalem and Mary drove to Eilat*.

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5.2 *The waw morpheme: building reference-time in biblical Hebrew*

Many theories have been suggested to account for the nature of the *waw* occurring in *wayyiqtol* and the other *waw*-prefixed verb forms.[31] One account, represented by Driver (1874), regards *waw* as identical to the conjunctive *waw*, corresponding to English 'and'. According to Driver, the *waw* functions to connect the time of the current situation with the time of the situation depicted in the previous clause. Rejecting Driver's theory, Bauer (1910) claims that there are eleven books in the Bible which open with a *wayyiqtol* verb. The recent studies of Washburn (1994) and Hatav (1997) show, moreover, that *wayyiqtol* clauses may occur also in isolation or at the beginning of a new narrative discourse.

Joüon-Muraoka (1993: section 115) argues that there are two kinds of *waw* in BH: one functions to coordinate phrases and the other one, which he labels ENERGETIC *waw*, functions to add meanings such as purpose, consecution (sic!), and succession, parallel to the Arabic *wa* and *fa*, respectively.[32] A similar account of Arabic *fa* is found in Lipinski (1997: 518), who claims that '*fa*- implies that the second action results from the first one or follows after it'. This analysis seems to presuppose that *fa* in Arabic and *wayyiqtol* in BH may not appear in clauses in isolation or at the beginning of a discourse. However, we have already noted that this is not true for *wayyiqtol*. The analysis seems to be equally inadequate for Arabic *fa*. Lipinski himself (section 56.8 on p. 521) shows that a main clause and a subordinate clause may both appear with *fa* in Arabic. Further support can be found in the Arabic translation of the Hebrew Bible. As evidence for his claim that the *waw* in *wayyiqtol* (as well as in the other *waw*-prefixed verb forms) parallels *fa*, Joüon claims, ignoring some exceptions, that it is translated by *fa* in Arabic. Checking the translation of *wayyiqtol* clauses that are not preceded by other clauses reveals that they, too, are translated by *fa* clauses in Arabic.[33] We may conclude, therefore, that the *w* attached to verbs in BH, like the parallel *fa* in Arabic, does not necessarily indicate some relationship with a previous clause. Instead, I suggest, it functions to build the reference-time. That the *w* is responsible for introducing R-times into the discourse will further be demonstrated by comparing the *waw*-prefixed with the free-standing forms, notably *qatal* and *yiqtol*. The free-standing forms will be characterized as 'parasitic': they need to borrow an R-time from the context for their temporal interpretation. Section 5.2.1 will compare the non-modal forms *wayyiqtol* and *qatal*, and section 5.2.2 will compare the modal form *yiqtol* with *wqatal* and *wyiqtol*.

[31] McFall (1982: 217f.) surveys fifteen hypotheses accounting for the *waw* and its vocalization in the form *wayyiqtol*.

[32] As suggested in fn. 15(b) above, there might be at least one more kind of *w* in BH.

[33] I thank George Williams for checking the Arabic translation for me.

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5.2.1 *The non-modal forms:* wayyiqtol *vs.* qatal

Unlike the simple past in English, which may or may not build an R-time, as previously shown, I claim that *wayyiqtol* in BH necessarily builds an R-time by having the morpheme *w* as its prefix. (It should be mentioned here, however, that my statistical findings in Hatav 1997: 57, Table 2.1, show that 6% of *wayyiqtol* occurrences cannot be interpreted as sequential, i.e. as forming a new R-time.)[34] This may be illustrated by example (6), as previously discussed. Consider also (28).

(28) wayyeeṣee yaʕâqoob̲ mibbʔeer šaab̲aʕ wayyeelek̲
leave-WAYYIQTOL Jacob from-Beer Sheba go-WAYYIQTOL
ḥaaraanaa wayyiṗgaʕ bammaaqoom wayyaalen šaam …
Haran-to touch-WAYYIQTOL in-the-place stay-WAYYIQTOL there
'Jacob left Beer-Sheba, and set out for Haran. He came upon a certain place and stopped for the night …' (Gen 28: 10–11)

The reference times introduced by the *wayyiqtol* verbs in (6) and (28) are not specified, but are understood as, in general, some time after the previous events took place. In (29), the R-time is specified as 'at the end of the three days'.

(29) wayhii miqṣee šloošet̲ yaamiim wayyaʕab̲ruu
be-WAYYIQTOL from-end(of) three(of) days pass-WAYYIQTOL
haššooṭriim bqereb̲ hammaḥâne
the-officials inside the-camp
'Three days later, the officials went through the camp.' (Josh 3: 2)

While it is optional for a *wayyiqtol* clause to have an adverb, an adverb may be required for clauses with verbs in the free-standing *qatal*.

(30) wayhii ʔaḥar haddb̲aariim haaʔeelle whaaʔêloohiim
be-WAYYIQTOL after the-things the-these and-the-God
nissaa ʔet̲ ʔab̲raahaam
test-QATAL ACC Abraham
'Some time afterward, God put Abraham to the test.' (Gen 22: 1)

(31) bišnat̲ šeeš meeʔoot̲ šaanaa lḥayyeey nooḥ baḥood̲eš
in-year(of) six hundreds year to-life(of) Noah in-the-month
haššeenii bšib̲ʕaa ʕaaśaar yoom laḥood̲eš bayyoom hazze
the-second in-seven ten day to-the-month in-the-day the-this

[34] A similar percentage of counterexamples (6.5%) is found for the modal form *wqatal*.
Naomi Shir (p.c.) suggests that the *waw* in these cases is a simple conjunction (cf. Waltke & O'Connor 1990: section 32.3). This hypothesis may be reasonable, but it is also circular (whenever we do not understand a *wayyiqtol*/*wqatal* clause to be building a new R, we explain its *w* as a conjunction).

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niḇqʕuu kol maʕynoo͟t thoom rabbaa waʔârubboo͟t
burse-QATAL all springs deep great and-floodgates(of)
haššaamayim niṯtaaḥuu
the-sky open-QATAL
'In the six hundredth year of Noah's life, in the second month, on the seventeenth day, on that day all the fountains of the great deep burst apart, and the floodgates of the sky broke open.' (Gen 7: 11)

The adverbs in (30) and (31) provide the *qatal* clauses with their respective R-time. When there is no explicit adverb, the *qatal* clause will borrow its R-time from a neighbouring clause, usually the preceding one. In such cases it may be interpreted as expressing a situation simultaneous with the situation expressed by the previous clause, (32), or anterior to it, (33).

(32) wayyiqraa ʔêloohiim laaʔoor yoom **wlaḥoošek̲**
call-WAYYIQTOL God to-the-light day and-to-the-darkness
qaaraa laaylaa
call-QATAL night
'God called the light Day, AND THE DARKNESS HE CALLED NIGHT.' (Gen 1: 5)

(33) wayyaaqom yaʕâqoo͟b wayyiśśaa ʔe͟t baanaaw wʔe͟t
rise-WAYYIQTOL Jacob set-WAYYIQTOL ACC sons-his and-ACC
naašaaw ʕal haggmalliim wayyinhag ʔe͟t kol miqneehuu
wives-his on the-camels lead-WAYYIQTOL acc all(of) cattle-his
wʔe͟t kol rk̲uušoo ʔâšer **raak̲aaš** … **wlaaḇaan**
and-ACC all(of) property-his that acquire-QATAL and-Laban
haalak̲ liḡzooz ʔe͟t ṣoonoo …
go-QATAL to-shear-INF ACC flock-his
'Jacob set his sons and his wives on camels, and drove off all the herds and livestock WHICH HE HAD ACQUIRED … AND LABAN HAD GONE TO SHEAR HIS SHEEP …' (Gen 31: 17–19)

A *qatal* clause may also use the S-time as its R-time:

(34) … wayyoomer qaḥ naa ʔe͟t bink̲aa ʔe͟t
say-WAYYIQTOL take-IMPER please ACC son-your ACC
yḥiid̲k̲aa ʔâšer **ʔaahaḇtaa**
unique-your that you-love-QATAL
'… (He) said, Take your son, your only one WHOM YOU LOVE.' (Gen 22: 2)

In contrast with *qatal*, a *wayyiqtol* clause cannot use the S-time as its R-time since it always builds a new R-time. The contrast is nicely illustrated by the pair in (35) and (36), analysed in Joosten (1997: 61).

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(35) wayyillaaḥem yooʔaaḇ brabbaṯ bnee ʕammoon
fight-WAYYIQTOL Joab in-Rabbah(of) sons(of) Ammon
wayyilkooḏ ʔeṯ ʕiir hammluuḵaa
capture-WAYYIQTOL ACC city(of) the-royalty
'Joab attacked Rabbah of Ammon and captured the royal city.' (2Sam 12: 26)

(36) wayyišlaḥ yooʔaaḇ malʔaaḵiim ʔel daawiḏ
send-WAYYIQTOL Joab messangers to David
wayyoomer nilḥamtii ḇrabbaa gam laaḵaḏtii ʔeṯ
say-WAYYIQTOL fight-QATAL in-Rabbah also capture-QATAL ACC
ʕiir hammaayim
city(of) the-water
'Joab sent messengers to David and said: I have attacked Rabbah and I have already captured the water city.' (2Sam 12: 27)

Joosten argues that the events reported in (35) are characterized as belonging to the past, while the events in (36) 'are characterized as relating directly to the time of speaking, i.e. the time of Joab and his King' (p. 61). In other words, the R-time of the *qatal* clauses in (36) is identical to the S-time, as opposed to the R-time of the *wayyiqtol* clauses in (35). Joosten's analysis finds support in the NJPS translation (cf. fn. 12), given above. While the clauses in (35) are translated by the simple past in English, the clauses in (36) are translated by the present perfect.

However, my statistical findings in Hatav (1997: 57, table 2.1) show that about 1% of *qatal* clauses are sequential. In some of those occurrences the conjunction *wʔaḥar* 'and afterwards' is attached to the verb, which suggests that it is not the verb but the conjunction that builds a new R-time. For other occurrences I identify two main kinds of contexts in which they occur: the setting of a narrative discourse and an opening of a direct discourse.

Whenever a *qatal* verb appears in what I identified as a setting, it does not represent a new situation, but repeats an old one:

(37) **wyooseep̄ huuraḏ miṣraaymaa**
and-Joseph be-brought-down-QATAL Egypt-to
wayyiqneehuu pooṭiip̄ar … miyyaḏ
buy-WAYYIQTOL-him Potiphar from-hand-of
hayyišmʕeeliim ʔâšer hooriiḏuuhuu šaammaa
the-Ismaelites that bring-down-QATAL-him there-to
'WHEN JOSEPH WAS TAKEN DOWN TO EGYPT, a certain Egyptian, Potiphar, … bought him from the Ishmaelites who had brought him there.' (Gen 39: 1)

The fact reported in the first (highlighted) clause of Gen Chapter 39 was reported before, in (37: 28). This may suggest that the *qatal* clause in our

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illustration does not build a new R-time, but refers to that established in chapter 37. However, consider the following case:

(38) whaaʔaaḏaam yaaḏaʕ ʔeṯ ḥawwaa ʔištoo
and-the-man know-QATAL ACC Eve wife-his
wattahar watteeleḏ ʔeṯ qayin …
conceive-WAYYIQTOL bear-WAYYIQTOL ACC Cain
'Now the man knew his wife Eve, and she conceived and bore Cain …'
(Gen 4: 1)

The event of Adam's knowing Eve had not been told before chapter 4, but nevertheless the verb reporting it is in *qatal*. The Medieval commentators Rashi and Ibn-Ezra claim that the sexual act took place BEFORE the exile from the Garden of Eden, which is reported in the last clause of the previous chapter. Rashi even emphasizes that had the action of Adam knowing Eve occurred after the exile, a *wayyiqtol* form would have been used. If so, the *qatal* clause does not introduce a new R-time into the discourse, but uses the one introduced by the preceding clause (cf. example (33) above).

Niccacci (1990) claims that sequential clauses within a direct discourse would appear with the verbs in *qatal*. In Hatav (1997: 181f.), I show Niccacci's claim to be too sweeping since only the first clause in a sequence of direct discourse may not appear in *wayyiqtol*. Moreover, this usually happens only if that clause is at the opening of a direct discourse (ignoring exceptions such as (20) above). Compare the example given in (19) above with example (39) below. In (19), the first clause in the story told by the chief cupbearer is part of a description. The sequence starts later and, as expected, all its clauses appear in *wayyiqtol*. In (39), on the other hand, the first clause of the narrative within the direct speech is also the first clause of that direct speech, and therefore its verb is in *qatal*.

(39) wayyoomer hannaʕar hammaggiiḏ loo **niqroo**
say-WAYYIQTOL the-lad the-tell-QOTEL to-him happen-INF
niqreeṯii **bhar** **haggilbooʕ** whinnee šaaʔuul …
happen-QATAL mountain-of the-Gilboa and-behold Saul
wayyiṗen ʔaḥâraaw wayyirʔeenii wayyiqraa ʔeelay …
turn-WAYYIQTOL behind-him see-WAYYIQTOL call-WAYYIQTOL to-me
'The young man who brought him the news answered, I happened to be at Mount Gilboa, and I saw Saul … He looked around and saw me, and he called to me …' (2Sam 1: 6–7)

In Hatav (1997: 186), I explained the appearance of a *qatal* clause in the first sequential clause of (39) in pragmatic terms, claiming that it marks the transition from the main to a subordinate narrative. However, this still leaves open the question of how we can have a non-R-time-building form opening a sequence. Note, however, that it is usually the case that a sequential *qatal* clause within a direct discourse is preceded by a verb in the infinitive

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absolute. Is it possible that the infinitive is responsible for the introduction of the R-time? (Cf. fn. 4 above.)

The inability of *qatal* clauses to build their own R-time is further manifested by their appearance in modal contexts. Being a non-modal form, *qatal* cannot quantify over possible worlds, but lacking the *ay* morpheme it is also not able to anchor the situation to Wo. Yet *qatal* appears both in modal and non-modal contexts. I suggest that *qatal* is parasitic not only with respect to its R-time but also with respect to the world. In (32)–(33) above, for example, the *qatal* clauses are anchored to Wo because their antecedents are *wayyiqtol* clauses. In the following case, the *qatal* clause is interpreted as modal because its antecedent is a *yiqtol* clause:

(40) bišnaṯ hayyoobeel yaašuub haśśaade laʔâšer qaanaahu
in-year(of) the-Jubilee return-YIQTOL the-field to-that buy-QATAL-it
meʔittoo
from- him
'In the year of the Jubilee the land shall revert to the man from whom he had bought it …' (Lev 27: 24)

A *JL* referee provides the following example, where a *qatal* clause is preceded by a *yiqtol* one, but is still not understood to be modal:

(41) wayyoomer yooseep̄ ʔel ʔeḥaaw ʔaanoḵii meeṯ
say-WAYYIQTOL Joseph to brothers-his I die
weeʔloohiim paaqood yipqood ʔeṯkem
and-God visit-INF visit-YIQTOL you
wheʕelaa ʔeṯkem min haaʔaareṣ hazzooṯ ʔel haaʔaareṣ
bring-up-WQATAL you from the-land the-this to the-land
ʔâšer nišbaʕ lʔaḇraahaam lyiṣḥaaq uulyaʕâqoob
that promise-QATAL to-Abraham to-Isaac and-to-Jacob
'Joseph said to his brothers, I am about to die. God will surely take notice of you and bring you up from this land to the land THAT HE PROMISED ON OATH TO ABRAHAM, TO ISAAC, AND TO JACOB.' (Gen 50: 24)

The verb in the relative clause, translated as 'promised', is *qatal* after two modals (one *yiqtol* and one *wqatal*) in the main clause, but it is not interpreted as modal. The referee suggests that it could be argued that the DP (or NP) 'the land that …' is scoped out of its position in this sentence. I would like to adopt this explanation, and add that a temporal 'antecedent' of a *qatal* is not necessarily a preceding clause. The conditions might be similar to nominal anaphora.

Quantification over possible worlds may be obtained for *qatal* also by a modal particle, such as the conditional word 'if'. Example (42) illustrates.

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(42) wayyoomer yhuud̲aa ʔel yiśraaʔeel ʔaab̲iiw šilḥaa
say-WAYYIQTOL Judah to Israel father-his send-IMPER
hannaʕar ʔittii … **ʔim loo hâb̲iiʔoot̲iiw ʔeeleḵaa**
the-lad with-me if NEG bring-QATAL-him to-you
whiṣṣaḡtiiw lp̄aaneḵaa wḥaaṭaaṭ̲ii lḵaa kol
present-WQATAL-him in-front-of-you sin-WQATAL to-you all(of)
hayyaamiim
the-days
'Judah said to his father, Send the boy with me. … IF I DO NOT BRING HIM BACK and restore him to you, you shall hold me guilty all my life.' (Gen 43: 8–9)

The protasis (the first part) of the conditional in (42) quantifies over possible worlds, restricting them to the worlds in which Judah, the speaker, does not bring his brother back. Although its verb is in the form *qatal*, which is incapable of quantifying over possible worlds, the protasis is still modal.[35] In this case, too, I suggest that the S-time is used as the R-time (cf. the present tense in the protasis of English conditionals).

5.2.2 *The modal forms:* yiqtol *vs.* wqatal *and* wyiqtol

If, indeed, the morpheme *w* is responsible for building the R-time in *wayyiqtol*, we would predict that all the other verb forms with the prefix *waw*, notably the modals *wyiqtol* and *wqatal*, should also be R-time builders. We should also be able to show that the free-standing modal *yiqtol* cannot build an R-time.

In section 2.1 above we considered the form *wyiqtol* to be straightforwardly composed of two morphemes: the verbal base *yiqtol* and the morpheme *waw*. The data suggest that our analysis is adequate, and that *wyiqtol* clauses depict (sequential) modal situations (see example (5) above). It is not clear, however, how to analyse the form *wqatal*.

Through the period from the Middle Ages until the nineteenth century, the common belief was that *wqatal* has *qatal* as its basic form. However, as we have seen, *qatal* is a non-modal form (or at least neutral with respect to modality). Adopting such an approach would necessitate explaining how the form *wqatal* acquires its modal nature. (Note that there are occurrences of *wqatal* which are not interpreted as modals. Those cases may be analysed as *w* + *qatal*, but see fn. 34 above.)

McFall (1982) reports Hebraists who argue that the form following the *waw* in *wqatal* is different from the 'free' *qatal* form. They find support for

[35] It is usually the case that the protasis has a *yiqtol* verb. For a hypothesis on how to account for the difference between a conditional with a *yiqtol* versus a *qatal* protasis, see Hatav (1997: 158f., example (102)).

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their claim in the difference of the tone position in the first- and the second-person masculine singular. In *qatal* it is on the final vowel, whereas in *wqatal* it is on the penultimate vowel. However, McFall argues that the tone position is not phonematic (semantic) but has syntactic significance. If we regarded the tone as phonematic, contrary to McFall's argument, or if we argued that there is some other feature distinguishing the verbal base of *wqatal* from *qatal*, we would have to explain why that form never appears by itself in the Hebrew Bible, and what it would mean if it did appear.[36]

Ignoring the problem concerning its verbal base, *wqatal* is a modal form prefixed by *w*, and I will show, therefore, that its clauses build new R-times in modal contexts, similar to *wyiqtol*. In what follows I will discuss both forms together, as opposed to the free-standing modal form *yiqtol*.

As mentioned above, example (5) demonstrates that *wyiqtol* clauses do, indeed, build their own R-time. Although there is no adverb or any other expression to provide them with a reference-time, the clauses in (5) together comprise a sequence of events which are to take place in the future. In contrast, the free-standing *yiqtol* form needs an explicit R-time for the temporal interpretation of its clauses. As in the case of *qatal*, the R-time may be provided by an adverb, such as 'in the year of the Jubilee' in (40) above, 'in three days' in (43) below, or 'formerly' in (44); by a neighbouring clause, as in (45); or by the S-time, as in (46).

(43) bʕood šloošet yaamiim yiśśaa pārʕoo ʔet roošekaa …
in-more three(of) days lift-YIQTOL Pharaoh ACC head-yours
'In three days Pharaoh will raise you. …' (Gen. 40: 13)

(44) kii lannabii hayyoom yiqqaaree lpaaniim haarooʔe
because to-the-prophet the-day be-called-YIQTOL formerly
the-seer
'For a prophet of today WAS FORMERLY CALLED A SEER.' (1Sam 9: 9)

If an adverb is missing from a *yiqtol* clause, another modal clause may serve as its temporal antecedent, e.g. a clause in *wqatal*, as illustrated in (45).

(45) … whaarguu ʔootii wʔootaak yḥayyuu
kill-WQATAL me and-you let-live-YIQTOL
'… They will kill me and let you live.' (Gen 12: 12)

In (45), Abraham tells Sarah about the possible course of events that he fears, in which the Egyptians will kill him but let her live. The possible situation of letting her live is to take place when the possible killing of Abraham happens. In other words, the R-time built by the *wqatal* clause reporting the possible killing also serves the following *yiqtol* clause. If there is no adverb or

[36] Another puzzle is why there exist two *waw*-prefixed modal forms, *wyiqtol* and *wqatal*. The semantic difference between them is not clear to me.

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wqatal clause to provide the R-time for the *yiqtol* clause, the S-time is understood to serve as its R-time, as demonstrated in (46).

(46) ʕal keen yaʕâzoḇ ʔiiš ʔeṯ ʔaaḇiiw wʔeṯ ʔimmoo
therefore leave-YIQTOL man ACC father-his and-ACC mother-his
wḏaaḇaq bʔištoo whaayuu lḇaaśaar ʔeḥaaḏ.
stick-WQATAL in-wife-his become-WQATAL to-flesh one
'Hence a man leaves his father and mother and clings to his wife, so that they become one flesh.' (Gen 2: 24)

The clauses in (46) report a habit of people. Since the habit holds at all times, including the narrator's time, the S-time is understood to serve as the R-time of the habit, locating it in present time. Because it does not build a new R-time, the verb in the first clause is in the free form *yiqtol*. However, the second and the third clauses, which also express habits in the present, have verbs in *wqatal*. Since we understand the habitual events expressed by the *wqatal* clauses to hold in present time, it may follow that the S-time serves as the reference-time of the sequence. In that case, how do the *wqatal* clauses build new R-times? If, instead, we conclude that these clauses do not introduce their own R, resulting in a counterexample to the hypothesis advocated here, how can we account for the fact that they build a sequence together? The solution may lie in the fact that the new R-times introduced by the *wqatal* clauses are built not necessarily on Wo but on some other possible world. This thesis might find support in examples such as (47).

(47) wayyaʕan naaḇaal ʔeṯ ʕaḇḏee daawiḏ wayyoomer
answer-WAYYIQTOL Nabal ACC servants(of) David say-WAYYIQTOL
mii ḏaawiḏ uumii ḇeen yišaay hayyoom rabbuu
who David and-who son(of) Jesse the-day be-many-QATAL
ʕâḇaaḏiim hammiṯpaarṣiim ʔiiš mippnee
slaves the-run-away man from-face(of)
ʔâḏoonaaw **wlaaqaḥtii** ʔeṯ laḥmii wʔeṯ meemay wʔeṯ
master-his take-WQATAL ACC bread-my and-ACC water-my and-ACC
ṭiḇḥaaṯii ʔâšer ṭaaḇaḥtii lḡoozzaay **wnaaṯattii**
slaughter-my that slaughter-QATAL to-shearers-my give-WQATAL
laʔânaašiim ʔâšer loo yaaḏaʕtii ʔee mizze heemmaa
to-people that NEG know-QATAL where from they
'Nabal answered David's servants and said, Who is David? And who is the son of Jesse? There have been too many slaves nowadays who run away from their masters. SHOULD I THEN TAKE my bread and water, and the meat that I slaughtered for my shearers, AND GIVE them to men who come from I don't know where?!' (1Sam 25: 10–11)

The clauses with the boldfaced verbs build R-times on some possible worlds, which, according to the speaker (Nabal), exclude Wo. As expected,

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both verbs are in a *waw*-prefixed (modal) form, i.e. in *wqatal*. The question that remains is: how do we understand the generic and the hypothetical events expressed by *wqatal* in (46) and (47), respectively, as referring to the present?

Recent semantic studies show that the difference between states and events is due to a semantic property called the DISTRIBUTIVE PROPERTY (Taylor 1977; Bennett & Partee 1978; Dowty 1979, 1986; Bach 1981; Hinrichs 1985). The distributive property is concerned with the relationship between the situation and any of its subparts. It has been proposed that if a state (or an activity) sentence is true for an interval, then it is true for every subinterval of it. For instance, if John lived in Jerusalem (for ten years), then he lived in Jerusalem during any subinterval of these ten years. In contrast, events are non-distributive. If John drew a circle (say it took him ten minutes), it is not necessarily the case that he drew that circle in every subinterval of those ten minutes. (Rather, he was drawing a circle, or he was busy drawing a circle.) Dowty (1986), Smith (1991), Smith (1997) and others claim that habituals such as 'Mia went to Jerusalem every Friday' are actually states. That is, while each situation of 'going to Jerusalem' is an event, the 'overall' situation of 'going to Jerusalem every Friday' is a state. This double reference may be demonstrated by the fact that the 'overall' situation may also be modified by an adverb, as illustrated in (48).

(48) (a) Last year Mary went to Jerusalem every Friday.
(b) This year Mary goes to Jerusalem every Friday.

Both (48a) and (48b) express a habit of going to Jerusalem on Friday. The difference is between the time during which the habit is stated to occur: 'last year' or 'this year', respectively. If (48a, b) are true, then it is also true that in every subinterval of last year and this year, respectively, for example, in February of last year, Mary used to go to Jerusalem every Friday.

In Hatav (1997: 122), I see this in a more general way, arguing that not only in habituals but also in modalities, in general, there are two different situations to which speakers refer. One situation is, indeed, the (modal) event; the other situation is the non-modal state of 'being necessary/possible A'. The intuition that this is a state is given a formal analysis in Verkuyl (1993). According to Verkuyl, a sentence with an NP whose quantity is not specified will be distributive ('durative', in Verkuyl's terms), as opposed to a non-stative sentence with an NP whose quantity is specified. Thus, while *John ate three apples* is non-distributive, *John ate apples* is distributive because it has a bare plural NP *apples*, whose quantity is not specified. Verkuyl (p. 272) argues that when a sentence applies to a set of possible worlds, it is durative because the number of the possible worlds is not specified. Accordingly, since *must*/*may* sentences apply to sets of possible worlds, we can say that a sentence such as 'Mia must leave' expresses a distributive situation in the

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present, whose R-time is the S-time. (The event of leaving itself, however, will take place in the future.)

Returning to example (46), which triggered the present discussion, the series of generics attributed to people is true in the (extended) present, and therefore its R-time is the speech-time. Each of the events will have its own R-time in its respective possible world. The time of the state may be made clear by the context. In (46), it is understood to be the present due to the *yiqtol* clause, which – by conversational implicature – is understood to be the first (generic) event followed by the other two. That it is also the present time in (47) seems to be inferred from the context. In (5), the *wyiqtol* clauses are understood to refer to the future because they follow the imperative clause, performing a speech act of command. (It is not clear to me whether the imperative refers to the future as part of its semantics or whether this is only one of its felicity conditions.)

Example (49) illustrates *wqatal* clauses expressing habituals in the past.

(49) kii ḥooq lakkoohâniim meeʔeeṯ parʕoo **wʔaaḵluu**
because allotment to-the-priests from Pharaoh eat-WQATAL
ʔeṯ ḥuqqaam ʔâšer naaṯan laahem parʕoo
ACC allotment-their that give-QATAL to-them Pharaoh
'… For the priests had an allotment from Pharaoh, and THEY LIVED OFF the allotment which Pharaoh had made to them.' (Gen 47: 22)

Joosten (1992: 4) analyses this example as illustrating the habitual ('iterative', in his terminology) use of *wqatal*. As mentioned by Joosten, for this example one could possibly adopt the idea that *wqatal* expresses consequence (as would be done by Joüon-Muraoka). To show that this is not the function of *wqatal*, Joosten presents the following example:

(50) wʕeelii zaaqeen mʔood̲ **wšaamaʕ** ʔeṯ kol ʔâšer
and-Eli old very hear-WQATAL ACC all(of) that
yaʕâśuun baanaaw
do-YIQTOL sons-his
'Now Eli was very old. HE HEARD all that his sons were doing …' (1Sam 2: 22)

The time in which the habitual events occur is not specified in these examples. Not specifying the frequency of the habitual event is a possible device for speakers in case they do not know it or choose to ignore it. For example, in (48) above, the time of the habitual event (going to Jerusalem) is specified as every Friday. But in the sentence *John used to visit his grandmother in Jerusalem when he was a child*, the frequency of the habitual event is not specified. As mentioned by Joosten (1992: 4), in the Bible, too, the relevant frequency may be specified by an adverb such as 'year by year', as in (51). (For more examples, see Joosten 1992: fn. 25.)

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(51) wʕaalaa haaʔiiš hahuu meeʕiiroo miyyaamiim
go-up-WQATAL the-man the-he from-town-his from-days
yaamiimaa lhištaḥâwoo̲t wlizbooḥ layhwh s̲baaʔoo̲t
days-to to-worship-INF and-to-sacrifice-INF to-God Hosts
bšiloo
in-Shiloh
'This man used to go up from his town year by year to worship and to offer sacrifice to the Lord of Hosts at Shiloh.' (1Sam 1: 3).

I conclude this section with the generalization that the *waw* in *wayyiqtol* is an R-time builder, locating the situation in a definite (usually specified) time in Wo, while the *waw* in the modal forms builds its R-time in some world(s), which may or may not include Wo.

6. Conclusions

In this article, I have analysed the form *wayyiqtol* as composed of three components: the verbal portion *yiqtol*, the morpheme *ay*, and the morpheme *w*. *Yiqtol* was analysed as a modal form involving quantification over possible worlds. *Ay* was characterized as a morpheme whose function is to pick out from the set of possible worlds the salient one in the context, which is usually the familiar actual world Wo, anchoring the situation to it. *W* was shown to function as a reference-time builder, establishing the time in which the event is to be located.

I began my article by noting the problem that *wayyiqtol* clauses are most naturally understood as describing past events. Because I believe that BH is a tenseless language, whose verb forms do not encode tenses, I argue that *wayyiqtol* does not encode past tense. Its pastness, I claim, derives from the combination of *w* and *ay*. Since future is modal in nature, it involves quantification over possible worlds. Therefore, since the morpheme *ay* anchors the situation to a unique world, *wayyiqtol* cannot be used to depict future events. Clauses reporting situations in the present time do not introduce R-times into the discourse because their R-time is always the deictic S-time. Since *wayyiqtol* has the morpheme *w*, which by definition builds an R-time, *wayyiqtol* would not be used to describe present situations. Thus, w*ayyiqtol* is interpreted as reporting events in the past not because it is a past tense form, but by elimination, because it is a world-anchoring form and an R-time-builder.

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