THE DISCOURSE FUNCTIONS OF THE HEBREW HABITUALS: A CORPUS-BASED STUDY

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1 Introduction

There are three distinct ways to express habituality in Modern Hebrew (henceforth Hebrew):[1]

(1) <u>The Literary Habitual</u>

    Form: *nahag le-* 'used to-'

    E.g.:   *moše*   **nahag**   **la**-*lexet*   *la-yam*.

               Moshe   **used.3SG.M**   **to**-go   to.the-sea.SG.M

               'Moshe used to go to the beach.'

(2) <u>The Periphrastic Habitual</u>

    Form: *haya + beinoni* 'was + participle'

    E.g.:   *moše*   **haya**   **holex**   *la-yam*.

               Moshe   **was.3SG.M**   **go.PART.3SG.M**   to.the-sea.SG.M

               'Moshe [would/used to] go to the beach.'

(3) <u>The Simple Habitual</u>

    Form: The simple past *qatal* inflection, usually with a habitual time expression

    E.g.:   *moše*   **halax**   *la- yam*   *kol*   *šabat*.

               Moshe   **went.3SG.M**   to.the-sea.SG.M   every   Saturday

               'Moshe [used to/would] go to the beach every Saturday.'

This paper will focus on the two colloquial forms: The Simple Habitual and the Periphrastic Habitual. Previous literature regarding the Hebrew Habituals has revealed their aspectual and modal differences. The Simple Habitual is not necessarily actualized (i.e., does not necessarily

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[1] In this article I will refer to both constructions and their semantic meaning. Names of constructions will appear in capital letters (e.g., Simple Habitual, Habituals), while names of semantic categories will appear in lowercase letters (e.g., the past habitual).

refer to a realis event), nor is it exclusive to the past (i.e., the denoted habit can still occur at the time of speech). In comparison, the Periphrastic Habitual is necessarily actualized and limited to the past (Rosén, 1977; Doron, 2006; Boneh and Doron, 2008, 2010; among others).

No study so far has aimed at revealing the predictive factors for speakers' choice of one habitual over the other. This study is the first corpus-based study conducted on the Hebrew Habituals. It aims to reveal how the Simple and the Periphrastic Habituals interact in discourse. This will be done by examining the link between the semantic (conceptual) meaning of the Habituals and their communicative (discourse) meanings.

The corpus results show that when the Simple and Periphrastic Habituals are used sequentially in discourse, the Simple Habitual serves to mark the beginning of a **new episode** of discourse, which introduces a new subject, a tense/aspect shift, and sometimes a new place. Periphrastic Habituals, on the other hand, are used to refer to habitual events which make up the episodic habit expressed by the Simple Habitual. This **eventive habit** is used to **elaborate** on the episodic habit introduced by the Simple Habitual. These discourse functions explain the **dispositional** property of the Simple Habitual, as well as the **imperfective** interpretation of the Periphrastic Habitual.

In this introduction, I will begin by reviewing and elaborating on the current literature on the Hebrew Habituals (§1.1), continue with presenting the research questions the current study deals with (§1.2), and finish with presenting the theoretical framework that will guide this research (§1.3). §2 will present the corpus analysis and its results. In §3, I will argue for the discourse functions of the Habituals. Conclusions and final remarks will be presented in §4.

1.1   Introduction to the Hebrew Habituals

In this paper, I adopt Comrie's (1976) definition of the past habitual (henceforth 'habitual') as a situation which occurs customarily on different occasions and is used to characterize a period of time in the (often) remote past. Hebrew, like English, Spanish, and other languages, has more than one form to express habituality. In this study, I will focus on two of the colloquial habitual forms: The Periphrastic Habitual (composed of *haya* 'was' + participle) and the Simple Habitual (expressed by the *qatal* inflection). The following are examples of the two Habituals, taken from Boneh and Doron (2008:(1a)-(1b)):

(4)   The Simple Habitual

yael   **nas'a**   *la-*   *avoda*   *ba-*   *otobus.*
Yael   **drove.3SG.F**   to.the-work.SG.F   in.the-bus.SG.M
'Yael **went** to work by bus.'

(5)   The Periphrastic Habitual

yael   **hayta**   **nosa'at**   *la-*   *avoda*   *ba-*   *otobus.*
Yael   **was.3SG.F**   **go.PART.SG.F**   to.the-work.SG.F   in.the-bus.SG.M
'Yael **used to go** to work by bus.'

Rosén (1977, 1985) notes that the Simple Habitual (4) is ambiguous, i.e., it can be interpreted as punctual (in which case Yael went to work by bus on a particular occasion) or as habitual (in which case Yael was accustomed to going to work by bus during a certain period of time). The Periphrastic Habitual in (5), on the other hand, is restricted to the habitual interpretation, i.e., it has no punctual interpretation whatsoever.

In line with the traditional view of habituality (e.g., Comrie, 1976; Bybee, Perkins, and Pagliuca, 1994), Boneh and Doron (2008) view the Periphrastic Habitual as an **imperfective** event.[2] As evidence, they provide an example in which it overlaps with another (punctual) event:

(6)   *kše- higati   la-   arec   yael **hayta   nosa'at***
         when-arrived.1SG   to.the-country.SG.F   Yael **was.3SG.F   go.PART.SG.F**

         la-   avoda   ba- otobus,
         to.the-work.SG.F   in.the-bus.SG.M
         'When I arrived in Israel, Yael **used to go** to work by bus.'
                                                        (Boneh and Doron, 2008:(16b))

In example (6), Yael's habit of going to work by bus was already taking place by the time the speaker arrived in Israel. In other words, the speaker's arrival in the country takes place at a certain point within the **period of time** during which Yael went to work by bus. In comparison, the Simple Habitual is ambiguous between two readings, an overlap reading and a consecutive reading:

(7)   *kše- higati   la-   arec   yael **nas'a**   la- avoda*
         when-arrived.1SG   to.the.country.SG.F   Yael **went.3SG.F**   to.the-work.SG.F

         ba- otobus.
         in.the-bus.SG.M
         'When I arrived in Israel, Yael **went** to work by bus.'
                                                        (Boneh and Doron, 2008:(16a))

In (7), there is an additional possible reading in which Yael went to work by bus after the speaker arrived in Israel. Thus, the Periphrastic Habitual is more imperfective than the Simple Habitual because it has only an overlap reading.

However, Boneh and Doron (2010) rightly assert that the aspectual property of imperfectivity is not sufficient to account for the full semantic meaning of the Periphrastic Habitual. In particular, the perfective/imperfective distinction cannot account for two crucial properties of the Hebrew Habituals: *actualization* and *relevance to time of speech***.**

Actualization pertains to whether the denoted event occurred or did not occur. While the Simple Habitual is **not necessarily actualized**, the Periphrastic Habitual is**.** The following examples, taken from Boneh and Doron (2008), demonstrate this difference:

(8)   a.   *dani   **limed**   ba- universita*.
           Danny **taught.3SG.M**   in.the-university.SG.F
           'Danny **taught** at the university.'   (Boneh and Doron, 2008:(16a))

      b.   *dani   **haya   melamed**   ba- universita*.
           Danny **was.3SG.M   teach.PART.SG.M**   in.the-university.SG.F
           'Danny **used to teach** at the university.'   (Boneh and Doron, 2008:(16b))

According to Boneh and Doron (2008), there is a marked interpretation in (8a) in which Danny was a professor at the university but did not actually teach due to a lack of registered students. In (8b), Danny is understood to have taught actual courses at the university – he was not necessarily a professor, but he surely did teach something at the university. Boneh and Doron (2008, 2010)

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[2] Following Comrie (1976), imperfectivity is defined in this paper as a durative event, i.e., an event which takes place during a certain period of time and can overlap with other events. Perfectivity is defined by Croft (2012) as a temporally-bounded event, i.e., an event which ended before the time of speech. A perfective event is usually viewed as a whole, while an imperfective event is viewed with regard to its "internal structure" (Smith, 1997).

support their claim with example (9). The (possible) context for this example is a situation in which the speaker details the responsibilities that were assigned to each worker in a post office.

(9)   *meri*   **tipla**   *ba-*   *do'ar*   *me-*   *antarktika*.
        Mary   **handled.3SG.F**   in.the-mail.SG.M   from-Antarctica
        'Mary **handled** the mail from Antarctica.'   (Boneh and Doron, 2010:(46a))

Based on the abovementioned context, *tipla* 'handled' is understood not as an actualized habit, but as a habit which primarily **characterizes** the subject. Under such an interpretation, sentence (9) could be true even if Mary never received a single letter from Antarctica. This habitual function will be referred to as *dispositional*.

Both Habituals refer to past tense. However, the relevance of the past event to the time of speech differs between the Simple and the Periphrastic Habitual. The past habit expressed by the Simple Habitual is not necessarily limited to the past. In fact, the habit can still hold at the time of speech. In (8a), it is possible that Danny is still teaching at the university, and in (9), Mary can still handle the mail from Antarctica. All the speaker intends to convey by using the Simple Habitual is that the habit took place in the past.

The Periphrastic Habitual, on the contrary, necessarily ends before time of speech. Thus, Yael's habit of going to work by bus (6), and Danny's habit of teaching at the university (8b), cannot be understood as occurring at the time of speech. This is further exemplified by the incompatibility of the Periphrastic Habitual with adverbs that include the time of speech:

(10)   *#mi-*   *šnat*   *1981*   *hu*   **haya**   **me'ašen**   *golwaz*.
         since-year.SG.F   1981   he   **was.3SG.M**   **smoke.PART.SG.M**   Gauloises
         '#Since 1981, he **used to smoke** Gauloises.'   (Boneh and Doron, 2008:(14a))

The adverb *mi-šnat* 'since' expresses the point at which the habit begins. The lack of an explicit end-point in (10) implies that the event still holds at time of speech. However, this sentence creates a pragmatic anomaly. The anomaly is caused by the incompatibility of 'since' with the Periphrastic Habitual. Thus, we can deduce that the Periphrastic Habitual must assume an end-point. Example (11) shows that, when we use an adverb that expresses an end-point (*ad* 'until'), the sentence is acceptable:

(11)   *'ad*   *šnat*   *1987*   *hu*   **haya**   **me'ašen**   *golwaz*.
         until   year.SG.F   1987   he   **was.3SG.M**   **smoke.PART.SG.M**   Gauloises
         'Until 1987, he **used to smoke** Gauloises.'   (Boneh and Doron, 2008:(14b))

Based on this information, one can conclude that the Periphrastic Habitual encodes perfectivity. However, Boneh and Doron (2010) show that this is not the case. The perfective interpretation in the following example is cancelled with the expression 'already then':

(12)   *be-1990*   *le-ruti*   *haya*   *oto*,   *aval*   *kvar*   *az*   *hi*   **hayta**
         in-1990   to-Ruti   was.3SG.M   car.SG.M   but   already   then   she   **was.3SG.F**
         nosa'at   *la-*   *avoda*   *ba-*   *otobus*.
         drive.PART.SG.F   to.the-work.SG.F   in.the-bus.SG.M
         'Ruti had a car in 1990, but already back then she **would go** to work by bus.'
                                                                                      (Boneh and Doron, 2010:(17a))

In the above example, the periphrastic habit 'would go to work by bus' necessarily occurs at the time of speech, since it is followed by 'already then'. Boneh and Doron (2010) conclude that

the *perfective interpretation* is cancelled, and thus it is not part of the (encoded) semantic meaning of the Periphrastic Habitual, but rather a pragmatic inference, or more specifically a conversational implicature (Grice, 1975).[3]

According to the classic Gricean meaning of the term, this is indeed an *implicature*. However, following Ariel (2016), I would like to restrict the meaning of a conversational implicature to an *implicated conclusion* (see below). I claim that the perfective interpretation of the Periphrastic Habitual in (12) is thus an *implicated premise*. The difference between an implicated conclusion and an implicated premise is crucial not only for understanding the discourse profiles of the Habituals, but also for revealing their encoded semantic meaning. I will elaborate on this point in §3. For now, let us examine the difference between the two inferences.

A conversational implicature is part of the intended meaning of the utterance. It is thus an *implicated conclusion* that the speaker intends the addressee to infer (Ariel, 2016). Crucially, a conversational implicature can be cancelled (Grice, 1975), and when it is, it must be done explicitly with words such as 'not' or 'if' (Ariel, 2008:29), or with a paraphrased contradiction. Both methods of cancellation usually come after the utterance. However, when a contradiction does not cancel the inference, but rather triggers pragmatic anomaly with the preceding utterance, we can deduce that the pragmatic inference is not a conversational implicature but a background assumption.

A background assumption (a term introduced by Searle, 1980) is an implicit interpretation which the speaker does not necessarily intend to communicate. Thus, the speaker is unlikely to entertain the interpretation or stay committed to it. Therefore, background assumptions, unlike conversational implicatures, are not intended by the speaker but rather assumed by them. For this reason, they are called *implicated premises* (Ariel, 2016). An implicated premise cannot be cancelled in the same way an implicated conclusion can be cancelled. Since premises are not intended by the speaker, the only way to cancel them is implicitly, before the relevant utterance (e.g., with expressions such as 'in fact', 'even then', 'actually', etc.).

The phrase 'already then' in example (12) is not an explicit cancelling device, but rather an **implicit** cancelling device. Karttunen (1973) referred to such presupposition-cancelling devices as "plugs*"*, as they **block** the formation of subsequent presuppositions. In our example, 'already then' is a plug which blocks the perfective interpretation.

However, this is not to say that the perfective interpretation cannot be a conversational implicature. In the following example, a speaker who utters (13a) can possibly utter (13b), which contradicts the perfective interpretation. This cancellation test shows that the perfective interpretation can also be a conversational implicature.

(13) a. *be-1990 ruti **hayta** **nosa'at** la- avoda ba- otobus.*
            in-1990 Ruti **was.3SG.F** **go.PART.SG.F** to.the-work.SG.F in.the-bus.SG.M
            'In 1990, Ruti **used to go** to work by bus.'

        b. *hi ada'in nosa'at la- avoda ba- otobus.*
            she still go.PRESP.SG.F to.the-work.SG.F in.the-bus.SG.M
            'She still goes to work by bus.'

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[3] I will use the term *perfective interpretation* to refer to the inference that the expressed habit ended before the time of speech. Boneh and Doron (2010) refer to it as a "disjointness implicature". However, since I claim it is not necessarily an implicature, I use the general term *interpretation*. Moreover, as mentioned earlier, the term *perfective* is used in a narrow sense of ending before time of speech. The additional connotations of perfectivity (i.e., a punctual event which is viewed as a whole) are excluded from this definition.

The perfective interpretation of the Simple Habitual, on the other hand, is neither a conversational implicature nor a background assumption. I claim that the speaker who utters the Simple Habitual does not intend the listener to infer or take into consideration the end-point of the habit, since the end-point is irrelevant to the given context. If an addressee infers that the habit denoted by the Simple Habitual ended before the time of speech, their inference is a **truth-compatible inference** (Ariel, 2016). The following table summarizes the differences between the two Habituals:

	SIMPLE HABITUAL	PERIPHRASTIC HABITUAL
FORM	*qatal* inflection	*haya* + participle
SEMANTIC MEANING	a situation which occurs customarily on different occasions, and is used to characterize a period of time in the past	
ACTUALIZATION	undetermined	actualized
ASPECT	undetermined	durative
MODALITY	dispositional	undetermined
THE FACTUAL STATUS OF THE PERFECTIVE INTERPRETATION	truth-compatible inference	implicated conclusion, or implicated premise

Table 1. Summary of the Hebrew Habituals

1.2   Research Questions

The purpose of this paper is to reveal the discourse functions of the two Habituals. The idea is that once we reveal their function in the discourse, we will be able to understand their semantic differences in greater detail. This will allow us to make predictions as to when a speaker opts for one habitual over the other. The following are the research questions that will guide this paper:

1. Which discoursal factors predict the use of one habitual over the other? I.e., what is the discourse function of each of the Habituals?

2. What determines the factual status of the perfective interpretation?

3. Why can the Simple Habitual trigger dispositional readings (as in example (9)), while the Periphrastic Habitual cannot?

1.3   Theoretical Framework

This study is conducted within a discourse-oriented framework. In particular, this means that I will observe the discourse profiles of each of the Habituals in order to understand the formation of their grammatical uses. The idea is that salient discourse patterns that are highly accessible to us and more easily available for use are the ones that shape the grammaticalization of their parts (Ariel, 2008).

In order to do so, I will use a corpus-based approach. The purpose is to deduce the semantic and discourse properties of the Habituals based on real-world data. The advantage of this approach is that it confronts the researcher with uses not considered before. It can also challenge the acceptability judgments of the researcher: Utterances that sound bad for the researcher could be naturally uttered by another speaker.

Moreover, I will employ a functional-cognitive view of semantic representations. This view, inspired by Hengeveld and Mackenzie's (2008) Functional Discourse Grammar, sheds light on the hierarchical and conceptual nature of semantics. The notions that will be relevant for us are *proposition*, *episode*, and *event*. These three semantic categories are hierarchically organized with relation to each other: A proposition may contain an episode, which contains one or more events.

A proposition is the part of the clause which expresses the idea the speaker intends to convey. This idea remains constant regardless of other pragmatic or discourse considerations. Some propositions contain an event without an explicit episode. In such propositions it is most likely the case that the episode is inferred from the discourse.

An episode is defined as the part of discourse which frames the subsequent events.[4] This framing is usually done by introducing a new subject, a shift in tense/aspect and sometimes a new place (cf. Givón, 2015:163). The episode is thus not an accessible piece of information (see Ariel's 1991 discussion of accessibility). An event is the description of a particular situation which the speaker refers to. The event contains actions (expressed by verbs), objects (expressed by nouns), and sometimes modifiers (expressed by adjectives, adverbs, etc.). To exemplify, let us consider the following quote:[5]
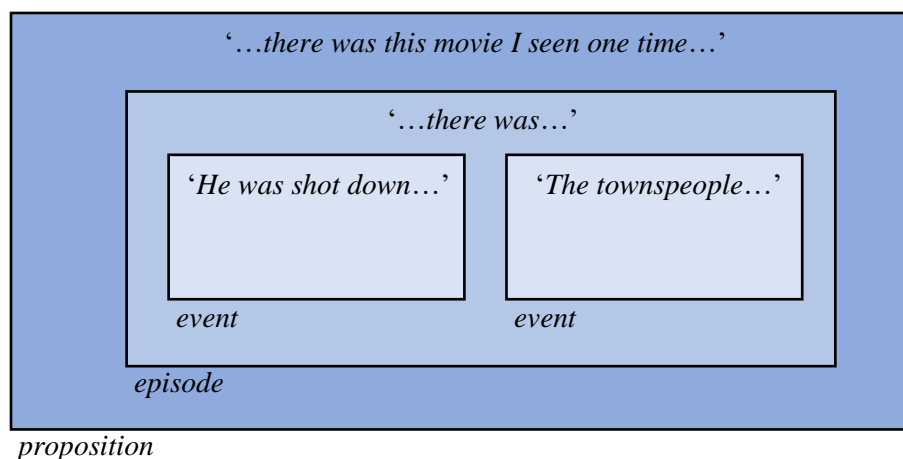
(14) a. *Well, there was this movie I seen one time*
   b. *about a man riding 'cross the desert and it starred Gregory Peck.*
   c. *He was shot down by a hungry kid trying to make a name for himself.*
   d. *The townspeople wanted to crush that kid down and string him up by the neck.*

In the above example, sentence (a) and its continuation in (b) are the **episode**: This is the part which presents new participants ('I', 'this movie', 'a man riding…'), and a new tense ('there was') to the song. Sentence (c) corresponds to the **event**: It presents a particular scene from the movie. It does not introduce a new subject (the pronominal pronoun 'he' refers to an entity already introduced in the episode), nor does it shift the tense/aspect. (14a-b) correspond to a **proposition** which includes an episode ('…there was…') and events (c) and (d).[6] Figure 1 below is a (simplified) illustration of the relations between these semantic categories.

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[4] Notice that the term *episode* is used differently here than in Boneh and Doron (2008, 2010). While they use the term to refer to a particular occasion within a habit (e.g., in terms of the expression "I used to go to school every day", each time the subject went to school is an "episode"), I use it to refer to the habit as a whole. My use of the term *episode* is supported not only by the functionalist theory, but also by the Oxford Dictionary definition: "an event or a group of events occurring as part of a sequence; an incident or period considered in isolation" (Episode, 2018).

[5] Quote from: Dylan, Bob. 1986. Brownsville girl. On Knocked Out Loaded. New York, US: Columbia Records. Retrieved from https://www.bobdylan.com/songs/brownsville-girl/.

[6] 'Well' in (a) is in fact not part of the (semantic) proposition, but of the (discoursal) utterance.

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┌─────────────────────────────────────────────────────────────┐
│            '…there was this movie I seen one time…'          │
│   ┌─────────────────────────────────────────────────────┐   │
│   │                   '…there was…'                     │   │
│   │  ┌───────────────────────┐  ┌────────────────────┐  │   │
│   │  │ 'He was shot down…'   │  │ 'The townspeople…' │  │   │
│   │  └───────────────────────┘  └────────────────────┘  │   │
│   │       event                     event              │   │
│   │                                                     │   │
│   │   episode                                           │   │
│   └─────────────────────────────────────────────────────┘   │
└─────────────────────────────────────────────────────────────┘
   proposition
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Figure 1. An illustration of semantic categories

Additionally, I will rely on Suh's (1992) findings about the English Habituals from a study she conducted with a similar approach. She collected instances of the English Habituals, particularly the *would*, *used to*, and simple past Habituals, and analyzed their interactions with each other within discourse. Her findings show that when *used to* and *would* occur sequentially to organize discourse describing past habitual events, *used to* marks an episode boundary, or sets up a rhetorical frame for a past habitual episode, while *would* and the simple past tense, on the other hand, describe the details of the habit or elaborate on the topic. Let us illustrate with the following piece of discourse:

(15) a. *I'd go barefoot to school.*
     b. *The bad thing was they **used to** laugh at us, the Anglo kids.*
     c. *They **would** laugh because we'd bring tortillas and frijoles to lunch.*
     d. *They would have their nice little compact lunch boxes with cold milk in their*
     e. *thermos and they'd laugh at us because all we had was dried tortillas.*
     f. *Not only **would** they laugh at us, but the kids **would** pick fights.*
     g. *My older brother **used to** do most of the fighting for us and*
     h. *he'd come home with black eyes all the time.*   (Suh, 1992:(2))

Up until line (15a), the speaker has been talking about the poverty of Mexican-Americans. In (15b), he shifts the focus of the discourse by using a cleft utterance ("*the bad thing was…*"), thus putting the current speech in a contrastive context in relation to prior speech. In other words, *used to* in (15b) serves the function of initiating a new episode. In (15c)-(15f), the speaker uses *would* to elaborate on the habit presented in (15b), namely, on the way the Anglo kids treated the Mexican kids. Note that the same subject (*they*) is preserved in all the events expressed by *would*. In (15g), the speaker shifts to another episode with *used to*. He introduces a subject (*my older brother*) into a new scenario. (15h) elaborates on this new habit ('*do most of the fighting for us…*') with *would*.

The current study takes into account the above findings about the English Habituals. I will investigate whether the Hebrew Habituals' pattern is similar to the episode/event or the frame/elaboration distinction which characterizes the English Habituals.

2   Corpus Analysis

2.1   The Data

The data of this study were gathered from the HeTenTen corpus (Jakubíček et al., 2013). This corpus is based on online articles, literature, as well as colloquial texts taken from blogs and forums. The corpus contains nearly 900 million words which were morphologically tagged by Adler (2007) and Noam Ordan. The habitual expressions that will be analyzed here are 93 in number. Of these, 41 are Periphrastic Habituals, and 52 are Simple Habituals.

2.2   Methodology

Each habitual expression was tagged according to 7 parameters:

(a) <u>Construction Type</u>: periphrastic/simple;

(b) <u>Situation Aspect</u>: accomplishment/activity/achievement/state/semelfactive;
Situation aspect (also known as *Aktionsart* or *lexical aspect*) is a property of the clause which details the manner in which events unfold over time. This property does not refer to a particular event, but to the prototypical manner in which the denoted event is understood to unfold (Croft, 2012). Vendler (1957) was the first to categorize situation aspect according to four types: *accomplishment*, *activity*, *achievement*, and *state*. Smith (1997) evaluated each of these situation types according to three parameters: *telicity*, *dynamicity*, and *durativity*. The following list exemplifies the Vendlerian situation types according to Smith's (1997:3) parameters:

  i.   *State*: static, durative (e.g., 'know the answer', 'love Mary');

  ii. *Activity*: dynamic, durative, atelic (e.g., 'laugh', 'stroll in the park');

  iii. *Accomplishment*: dynamic, durative, telic, consisting of process and outcome (e.g., 'build a house', 'walk to school', 'learn Greek');

  iv. *Achievement*: dynamic, telic, instantaneous (e.g., 'win a race', 'reach the top');

  v.   *Semelfactive*: dynamic, atelic, instantaneous (e.g., 'tap', 'knock')[7]

(c) <u>Transitivity</u>: transitive/intransitive;

(d) <u>Discourse Function</u>: episode shift/elaboration/contrast/background;

  i.   *Episode Shift*: The event introduces a new piece of discourse which includes a new subject and a shift in tense/aspect. The episode shift is also used to provide a temporal or propositional frame for subsequent events.

  ii. *Elaboration*: The event details the previously mentioned event. Elaboration is manifested by providing circumstances or details to the discussed topic or event.

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[7] Semelfactives were first introduced by Comrie (1976). This class of situation aspect is ambiguous between an iterative reading and a punctual reading. For instance, 'knock on the door' can be interpreted as either a single knock, or a series of knocks.

iii. *Contrast*: The event is used to present a contrast with the time of speech. In other words, the contrast function triggers a conversational implicature that the event no longer takes place during time of speech.

iv. *Background*: A background event is an event which does not necessarily concern the topic of the discourse. This event usually expresses the speaker's/narrator's point of view on a particular event.

(e) <u>Clause Dependence</u>: independent/subordinate;

(f) <u>Adverbial Frame</u>: iterative/periodic/circumstantial/sporadic;

i. *Iterative*: The adverb expresses the repetitive nature of the event with words such as *kol* 'every'*/bexol* 'in every'.[8]

ii. *Periodic*: The adverb expresses the period characterized by the habit.

iii. *Circumstantial*: The adverb expresses a fact or condition which is relevant for the occurrence of the habit. This is expressed with terms such as *ka'ašer* 'when' or *me-rov* 'because of too many'.

iv. *Sporadic*: The adverb conveys the fact that the denoted event happened periodically or sporadically using terms such as *lif'amim* 'sometimes'.

2.3 Results and Discussion

I begin by observing the interaction between construction type and discourse function. The data show that the **episode-shift function** is exclusive to the Simple Habitual – none of the Periphrastic Habituals serve this function. The episode-shift function is responsible for 55% of the Simple Habitual uses.

The **background** function is used significantly more with the Simple Habitual (37% of its uses) than with the Periphrastic Habitual (only 2% of its uses). Moreover, the **elaboration** function is used significantly more with the Periphrastic Habitual (88% of its uses) than with the Simple Habitual (8% of its uses). Finally, the **contrast** function is exclusive to the Periphrastic Habitual (10% of its uses). Figure 2 below summarizes the results.

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[8] Unlike Boneh and Doron (2008), I do not consider adverbs such as *pa'am* 'once'/*pa'amaim* 'twice' as iterative. These adverbs are multiplicative since they express the number of times the event was repeated (hence they are telic), rather than the repetitiveness of the event (which is atelic).
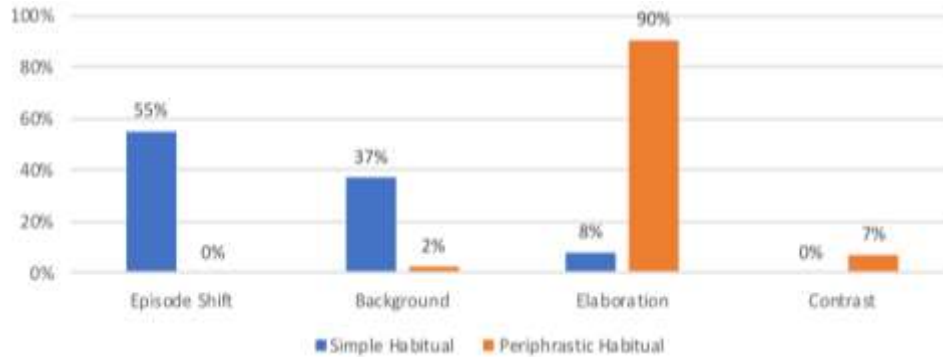
Figure 2. Percentages of discourse functions for each habitual type

Let us observe the following example:[9]

(16) a.   *Christopher Robin, whose parents **called** (**kar'u**) him Billy Moon,*

b.   ***spent** (**bila**) most of his time, as was customary then, in the company of his nanny.*

c.   *During the weekends and holidays,* [they] <u>used to spend time</u> (<u>hayu mevalim</u>) *in Ashdown Forest.*

d.   *He <u>would climb</u> (<u>haya metapes</u>) the trees, <u>observe</u> (<u>mitbonen</u>) the animals and plants,*

e.   *and the stories which his father <u>used to tell</u> (<u>siper</u>), when he <u>came back</u> (<u>haya xozer</u>) from his trips in the woods, **provided** (**sipku**) inspiration for the stories which his father **wrote** (**katav**) in Winnie-the-Pooh.*

(The HeTenTen Corpus; Jakubíček et al., 2013)

In the above example, the narrator begins by introducing a new subject (Christopher Robin), a new participant (his nanny), a new space-construal (the company of his nanny), and a new tense (past). The narrator uses the *qatal* inflection for this purpose. Hence, the *qatal* verb in (16b) marks an **episode shift**. Moreover, the *qatal* verb in (16a) fulfills the function of **background**: The narrator provides background information about the subject. This piece of information (that he was also called Billy Moon) is not crucial for the purpose of the narrative, but it does provide some background information that could be relevant for the story as a whole. Note that both verbs in (16a) and (16b) characterize their subjects: Or to put it in Comrie's (1976: 27) terms, they are not viewed as "incidental properties of the moment", but as characteristic of the subject (Christopher Robin) during a whole period of time.

In (16c), the narrator uses the periphrastic construction to **elaborate** on the previously mentioned habit, namely Christopher's spending time with his nanny. The narrator continues elaborating about the particulars of this habit in (16d). In (16e), we witness another **episode shift**. The narrator uses the *qatal* inflection because the story-telling event (*siper*) is not conceptualized as part of the elaborated habit. It belongs to the proposition the narrator intends to make regarding this part of the habit, namely, that Christopher's stories inspired his father to write Winnie-the-

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[9] For ease of transcription, I translated the surrounding context of the Habituals to English but preserved the Hebrew transliteration for the Habituals themselves. All Hebrew transliterations are marked in *italics*. The Simple Habitual is marked in **bold**, the Periphrastic Habitual is <u>underlined</u>, and the Literary Habitual is <u>double underlined</u>. An English word or phrase that appears in square brackets signals the lack of this form in the Hebrew version.

Pooh. Note that in order to connect this argument to the elaborated habit, the narrator uses the Periphrastic Habitual (*haya xozer*).

Example (16) showed us three of the four discourse functions discussed so far (episode shift, background, and elaboration). To see the **contrast** function, let us observe the following example:

(17)   *Once, when I <u>used to hear</u> (<u>hayiti šome'a</u>) stories about people who <u>would sit</u> (<u>hayu yošvim</u>) at home for months/half a year until they found a job, it <u>seemed</u> (<u>haya nir'e</u>) insane to me. "How could it be??" I <u>would ask</u> (<u>hayiti šoel</u>) myself.*
                                                                      (The HeTenTen Corpus; Jakubíček et al., 2013)

In (17), the speaker uses the Periphrastic Habitual to mark all instances of the habit. He thus marks the **contrast** with the time of speech. This contrast is first indicated by "once" (*pa'am*), which explicitly expresses the period of the habit. The addressee infers that if the speaker expresses the period of the habit, and the habit is expressed using the Periphrastic Habitual, the habit no longer takes place at time of speech. Thus, in this context, the perfective interpretation is a conversational implicature. The speaker in (17) intends the addressee to infer that the former's opinion about people who could not find a job is restricted to the past. This is affirmed by the continuation of his utterance:

(18)   *Life, of course, is full of irony. Very quickly **I've come to realize** (**hevanti**) that half a year can pass without noticing.*   (The HeTenTen Corpus; Jakubíček et al., 2013)

As we can tell from the above continuation, the speaker explicitly says that s/he experienced the very unemployment they could not conceive of in the past. The speaker uses the *qatal* inflection (*hevanti*) to bring the focus of attention back to his/her argument in which they state the reason for the discontinuation of the habit (i.e., the speaker's own unemployment).

Next, let us observe the interaction between construction type and **situation aspect**. A chi-square test reveals no statistical difference between the Simple and Periphrastic Habituals with regard to each of the situation aspect classes. However, we can observe tendencies. The Simple Habitual tends to involve more stative verbs (29%) than the Periphrastic Habitual (15%). The Simple Habitual also involves more achievement verbs (13%) than the Periphrastic Habitual (5%). The following figure summarizes these results:
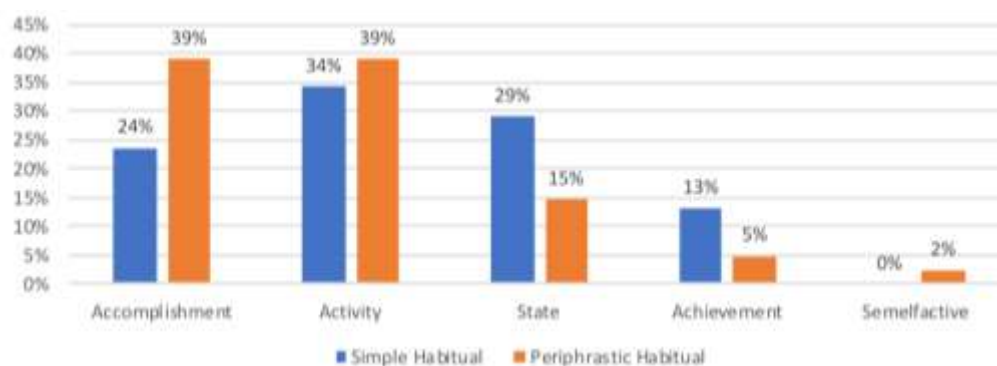
**Figure 3.** Percentages of situation aspect classes for each habitual type

The following example, taken from a later part of the Christopher Robin story in (16), shows the variety of situation aspects of each habitual construction.

(19) a.   *Indeed, it was a risk to let him run free,*

b.   *But on the other hand, the risk was worth it.*

c.   *Because seconds after* [he] **entered** (**nixnas**) *the woods,* [his] *screams dissipated* (**namogu**)*, until* [they] **disappeared** (**ne'elmu**) *completely.*

d.   *And he <u>would find</u> (<u>haya moce</u>) himself a clearing in the forest and <u>run</u> (<u>ma'avir</u>) his fingers through the sand, or <u>look</u> (<u>mebit</u>) at a piece of wood*

e.   *that* **interested** (**inyena**) *him.*   (The HeTenTen Corpus; Jakubíček et al., 2013)

In (19) the narrator is describing events that occurred habitually (i.e., whenever they went to the woods), although the habituality of the verbs in (19c) is not particularly salient due to the lack of an explicit time reference in the immediate context. Nevertheless, the Simple Habituals in (19c), which express an episode shift, denote three Accomplishment situations, all of which include a process and a resulting state (entering, dissipating, disappearing). In (19d), the narrator uses the Periphrastic Habitual to elaborate on the habit of spending time in the woods. She begins with an accomplishment (find), continues with an activity (passes), and ends with a state (observes). In (19e), the narrator provides background information about Christopher's action of looking at the wood using the Simple Habitual. There, the situation aspect is a state.[10]

Moreover, example (19) above shows us that the habits expressed by the Periphrastic Habitual in (19d) ('finding a bald spot', 'running his fingers', and 'looking') seem particularly specific to have occurred every single time 'he' entered the woods. I claim the narrator uses the Paraphrastic Habitual to describe events that occurred on particular occasions in order to characterize and elaborate on the habit of 'entering the woods' expressed by the Simple Habitual.

Digging deeper into **stative verbs**, I differentiate between mental states (e.g., 'understand', 'watch'), sensory states (e.g., 'hear', 'feel', 'see'), and positional states (e.g., 'lie', 'be found in'). A chi-square test reveals a significant difference ($p < 0.02$) between the two Habituals with regards to **mental stative verbs**. Mental states are expressed significantly more with the Simple Habitual than the Periphrastic Habitual. Moreover, although the difference is not statistically significant, sensory states appear more in the Periphrastic Habitual than in the Simple Habitual. Figure 4 illustrates these results:
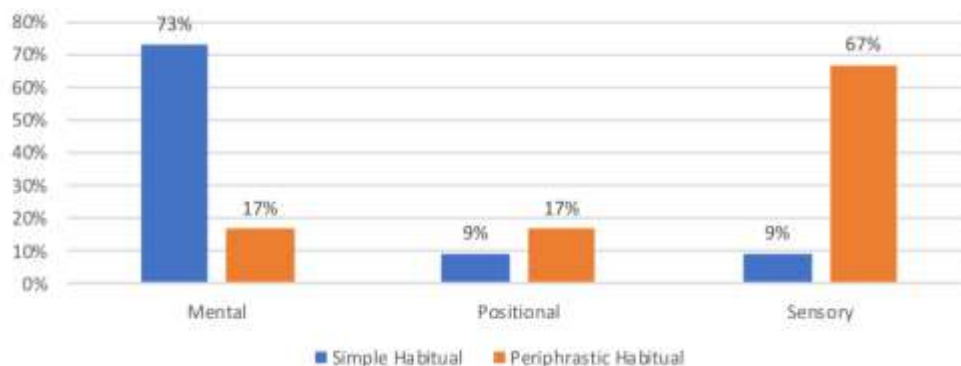
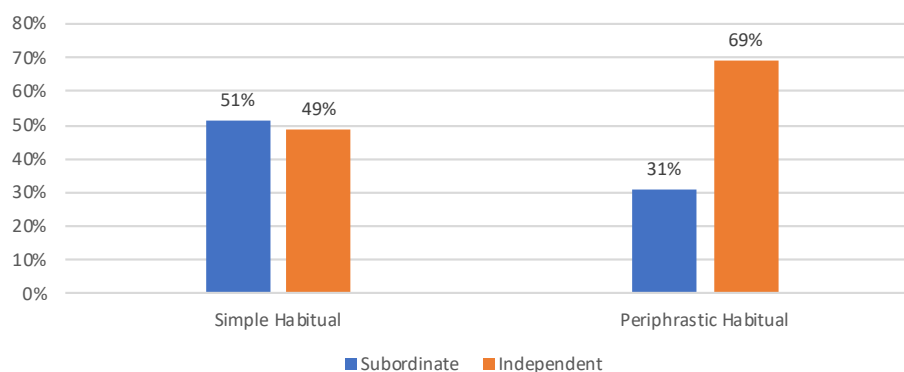**Figure 4.** Percentages of state types for each habitual type

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[10] Interestingly, the narrator slowly shifts from expressing a process with a resulting state to a process, and finally to a state. This pattern was observed several times throughout the corpus. I suggest that it represents the scale of markedness of situation aspects for the Periphrastic Habitual: Accomplishments and activities are the least marked, while states are more marked in comparison.

Consider the following examples:

(20)   *When I was young, they **used to say** (**nahagu le-hagid**): "Our secret weapon is the Arab refusal". Every time someone would propose (haya maci'a) a peace treaty, we **counted** (**samaxnu**) on the Arabs to say "no".*

(The HeTenTen Corpus; Jakubíček et al., 2013)

(21)   *Because of too much excitement, I would run (hayiti rac) far away and not hear (lo šomea) when called.*   (The HeTenTen Corpus; Jakubíček et al., 2013)

(22)   *He would (haya) […] sit (yošev) on the trail and get absorbed (šokea) in the complex patterns of the yellowing and dead leaves which covered (kisu) the earth.*[11]

(The HeTenTen Corpus; Jakubíček et al., 2013)

In (20), the Simple Habitual ('counted on the Arabs to say "no"') is a mental state. In (21), the Periphrastic Habitual ('do not hear') is a sensory state. In (22), the Periphrastic Habituals ('would sit', 'get absorbed) and the Simple Habitual that follows them ('covered the earth') are all positional states.

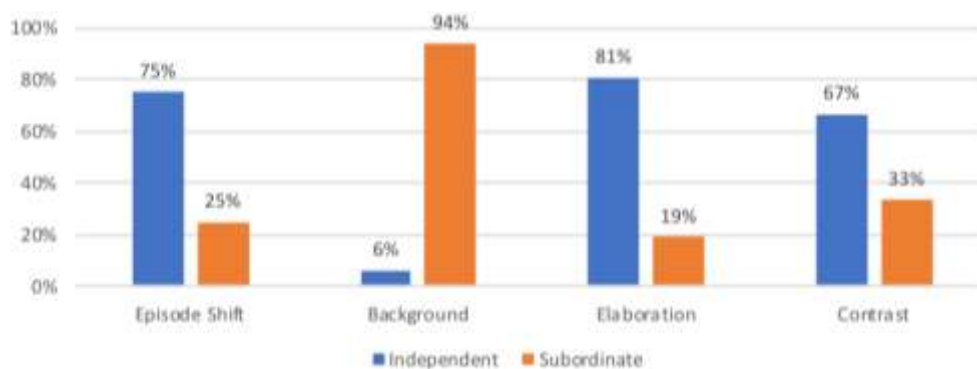Next, the interaction of construction type with **clause dependence** reveals a significant difference between the two Habituals ($p < 0.03$): While the Simple Habitual is used almost equally ($p > 0.87$) in both independent and subordinate clauses, the Periphrastic Habitual is used significantly more in independent clauses ($p < 0.005$). Figure 5 summarizes these results:

**Figure 5.** Percentages of clause dependencies for each habitual type

When we look deeper into the various functions of each of the Habituals, the picture becomes clearer. In the case of the Simple Habituals, the **episode-shift** function is used significantly more in independent clauses (chi-square: $p < 0.007$). In contrast, the **background** function is used significantly more in subordinate clauses (chi-square: $p < 0.000$). As for the Periphrastic Habituals, the **elaboration** function is used significantly more in independent clauses (chi-square: $p < 0.000$). The **contrast** function, on the other hand, does not reveal any significant difference between the two clause types, probably due to lack of data (only 3 Periphrastic Habituals were tagged for this function). These results are summarized in Figure 6 below.

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[11] In this example, the past tense auxiliary *haya* modifies several verbs. Therefore, it does not appear immediately before the verb *yošev* ('sit.PART.SG.M').

Figure 6. Percentages of clause dependencies for each discourse function

Moving on to the interaction between construction type and **adverbial frame**, we observe no significant difference in the prevalence of adverbial frames for each habitual: 41% of the Simple Habituals and 45% of the Periphrastic Habituals have an adverbial frame. When we observe the type of adverbial frame available in each construction type, we discover one significant difference: The Periphrastic Habitual is accompanied by a **circumstantial** adverb significantly more than the Simple Habitual ($p < 0.01$). Moreover, iterative adverbs tend to be used more with the Simple Habitual than with the Periphrastic Habitual. This is a near-significant finding ($p = 0.058$). These findings are illustrated in Figure 7.
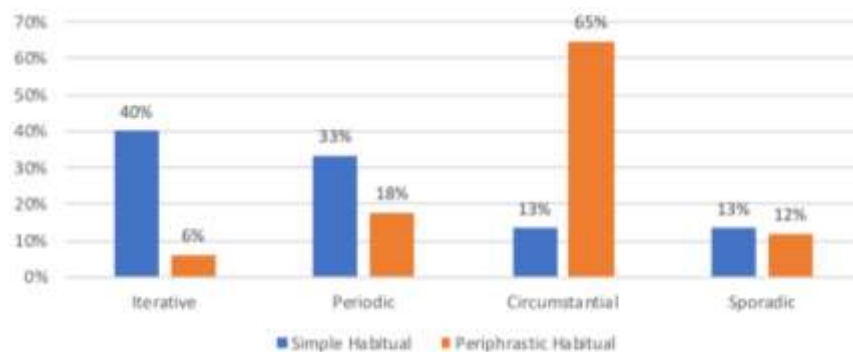
Figure 7. Percentages of adverbial frame types for each habitual type

Consider the following examples, taken from The HeTenTen Corpus (Jakubíček et al., 2013):

(23)   […] *every evening I **explained** (**hisbarti**) to him that one did not simply become deaf all of a sudden.*

(24)   *When I was little, my grandfather <u>used to take</u> (<u>haya loke'ax</u>) me to see the model of the second temple in the Hollyland hotel.*

(25)   *When we **called** (**karanu**) his name, he <u>would not lift</u> (<u>lo haya merim</u>) his gaze.*

(26)   *Sometimes, he <u>would not calm down</u> (<u>lo haya nirga</u>) for hours.*

In (23), the Simple Habitual ('explained') is accompanied by the iterative adverb 'every evening'. In (24), the Periphrastic Habitual ('used to take') is accompanied by a periodic expression ('when I was little'). In (25), both Habituals are under the scope of the circumstantial

expression 'when we called his name'. In (26), the Periphrastic Habitual 'would not calm down' is accompanied by the sporadic adverb 'sometimes'.

Finally, the interaction between construction type and transitivity reveals no significant differences ($p = 0.73$).

3   The Function of the Habituals in Discourse

Based on the corpus analysis, I shall now answer the research questions presented in §1.2. The first question inquired regarding the discourse function of each of the Habituals. I conclude that the Simple Habitual expresses an **episodic habit**. Semantically speaking, the Simple Habitual conceptualizes an unmarked habit which is prototypically viewed as a whole (unless it overlaps with another event). This habit often provides a temporal frame for other habits, expressed by the Periphrastic Habitual (examples (16), (19), (25)). The discourse function of the Simple Habitual is a **topical** one: It is used to introduce new information into the discourse, i.e., a new subject and/or a shift in tense/aspect.

Another function of the Simple Habitual concerns the addition of **background** information which the speaker/narrator finds relevant to the discourse/narrative as a whole (as in examples (16), (19), (22)). This function is similar to the episode-shift function in that it **shifts the focus** of discourse. In this case, the focus is shifted from the expressed habit to a parenthetical comment of the speaker/narrator. Moreover, the functions of the Simple Habitual differ in their information status: The backgrounding function is used more in subordinate clauses, while the episode shift is used more in independent clauses. Hence, the episode-shift function is more salient in the discourse than the backgrounding function.

The Periphrastic Habitual expresses an **eventive habit**. The eventive habit is conceptualized as a particular event that stretches over some timeframe within an episode. For this reason, the Periphrastic Habitual shows more imperfective properties than the Simple Habitual (e.g., it has an overlap reading but not a consecutive reading; see §1.1). The Periphrastic Habitual thus has two functions: (i) To **elaborate** on an episodic habit by expressing a particular occasion which characterizes it (as in examples (16), (19), (20)), and (ii) To **contrast** the habit with the time of speech. Both functions are used prominently in independent clauses which demonstrate their salience in discourse. The following illustration demonstrates the interaction between the episode shift, backgrounding, and elaboration functions based on example (19). Black arrows represent elaboration, red arrows represent elaboration achieved by characterization, and green arrows represent the backgrounding function.
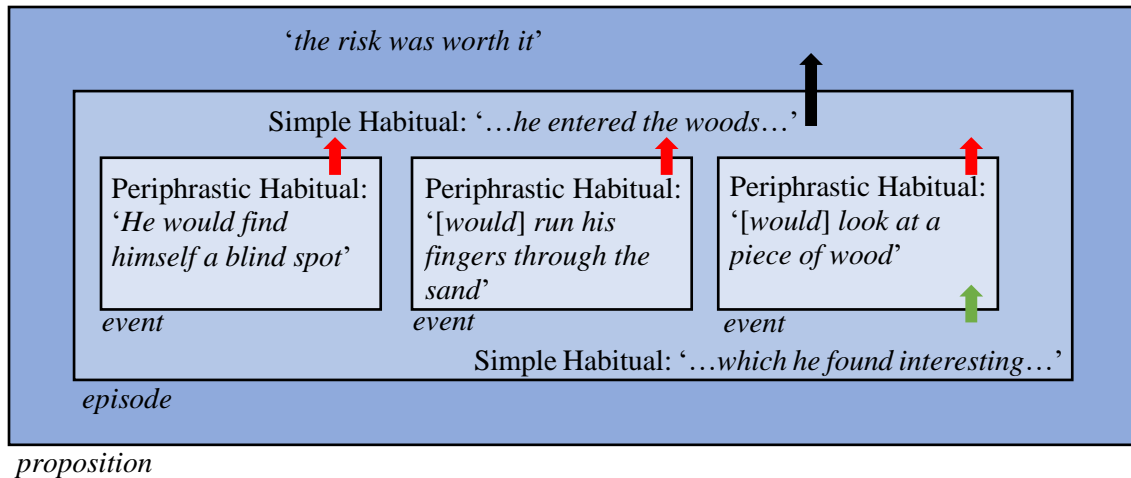
Figure 8. Illustration of the habitual functions

The second research question asked what determines the factual status of the perfective interpretation of the Periphrastic Habitual. Based on my findings (in §2.3), we can say that when the Periphrastic Habitual has the function of contrast, the perfective interpretation is a conversational implicature: The speaker intends the addressee to infer that the spoken habit ended before time of speech and no longer takes place. When the Periphrastic Habitual has the function of elaboration, the perfective interpretation is a background assumption, since the particular event expressed by the Periphrastic Habitual already takes place within an explicit temporal frame. In other words, the perfective interpretation is the implicated premise which the Periphrastic Habitual relies on when elaborating.

The third research question asked why the Simple Habitual can trigger dispositional readings (as in example (9)), while the Periphrastic Habitual cannot. To answer this question, let us look at example (9) repeated here as (27a), this time including the following utterance in (27b):

(27) a. *meri* **tipla** *ba- do'ar me- antarktika.*
Mary **handled.3SG.F** in.the-mail.SG.M from-Antarctica
'Mary **handled** the mail from Antarctica.'

   b. *mikevan še-lo haya doar kaze,* haya la
since that-no was.**3SG.M** mail.SG.M such was.**3SG.M** to.her
harbe zman panuy.
a.lot.of time.SG.M.INDEF free.SG.M
'Since there was no such mail, she had a lot of free time.'

                                 (Boneh and Doron, 2010:(27))

What example (27) shows us is that, unlike the Periphrastic Habitual (which would not be acceptable in this context), the Simple Habitual does not require actualization. However, such interpretations are marked, as they require a very specific context (I did not find any such examples in my corpus). I claim that example (27) is acceptable because of the very context that facilitates it. When the topic of the discourse is people's responsibilities, the event expressed by the *qatal* inflection does not require actualization. I assert that this is possible precisely because the Simple Habitual in (27) does not conceptualize a habitual event, but rather attributes a dispositional habit to the subject. In other words, the Simple Habitual in (27) adds propositional content about the

subject (a disposition or responsibility), whereas the Periphrastic Habitual functions to conceptualize a habitual event.

Moreover, I claim that the attribution of a habit to a subject requires more than the *qatal* inflection and an appropriate context. It also requires a particular verb constellation, namely, a transitive verb that depicts a process. The following examples demonstrate it:

(28) a. *#meri **mac'a** pitriyot ba- ya'ar.*
          Mary **found.3SG.F** mushroom.PL.F.INDEF in.the-forest.SG.M
          'Mary **found** mushrooms in the forest.'   (Transitive Achievement)

      b. *#meri **halxa** ba- ya'ar.*
          Mary **went.3SG.F** in.the-forest.SG.M
          'Mary **walked** in the forest.'   (Intransitive Activity)

      c. *#meri **yašva** al ha-safsal.*
          Mary **sat.3SG.F** on the-bench.SG.M
          'Mary **sat** on the bench.'   (Intransitive State)

      d. *meri **kisxa** et ha-deše.*
          Mary **mowed.3SG.F** ACC the-grass.SG.M
          'Meri **mowed** the lawn.'   (Transitive Accomplishment)

      e. *mikevan še- lo haya / hayu (#pitriyot /#ya'ar*
          since that-no was.3SG.M were.3PL mushroom.PL.F.INDEF forest.SG.M.INDEF
          /#safsal /deše), haya la harbe zman
          bench.SG.M.INDEF grass.M.INDEF was.3SG.M to.her a.lot.of time.SG.M.INDEF
          panuy.
          free.SG.M
          'Since there was/were no (#mushrooms/#forest/#bench/lawn), she had a lot of free time.'

The unacceptability of (28e) as a continuation of (28a) shows that a telic event without a process (finding mushrooms in the forest) is contradicted by the denial of the existence of the mushrooms (in 28e). Similarly, an event with an intransitive process (walking in the forest), as seen in (28b), is also contradicted by the denial of the existence of the forest (in 28e). Moreover, the intransitive state in (28c) (sitting on the bench) cannot be understood as non-actualized when the existence of the bench is denied (in 28e) either. However, (28d), which depicts a transitive verb with a process (mowing the lawn), is compatible with the nonexistence of the lawn (in 28e).

Therefore, I conclude that the dispositional reading of the Simple Habituals is achieved under the following conditions: (i) A supportive context with a topic that discusses people's responsibilities, (ii) A transitive verb, and (iii) A verb that depicts a process. Thus, I refer to the habit in (27) as an **attributive habit**, since its main function is to describe the subject rather than conceptualize a habitual event. For this reason, the Simple Habitual allows non-actualized habits. For the sake of comparison, the Periphrastic Habitual depicts a **referential habit** since only an actualized habit that is conceptualized in detail can be referred to.

This can also explain the prominence of mental stative verbs with the Simple Habitual. Mental stative verbs are more easily understood as being attributed to the subject than sensory stative verbs, since the former are less prone to change. Recall this part of sentence (20): "we **counted** (*samaxnu*) on the Arabs to say 'no'". The mental stative verb *samaxnu* 'counted (on)' is understood more as a property that characterizes the subject than as a habit that repeats itself. In

this example, the speaker **justifies** his disposition (to count on the Arabs to say 'no'), rather than depicts it as a result which repeats itself depending on the circumstances.

This is why the prominent adverbial frame of the Periphrastic Habitual is a circumstance. While the Simple Habitual specializes in depicting more permanent and independent states of affairs, the Periphrastic Habitual specializes in elaboration which is circumstantial in nature. Hence, I conclude that uttering a Periphrastic Habitual with no intention to rely on previously mentioned circumstances or to contrast it with the circumstances of the time of speech, defeats the very purpose of employing it. Table 2 summarizes the discourse profiles of the Hebrew Habituals:

	SIMPLE HABITUAL	PERIPHRASTIC HABITUAL
SEMANTIC REPRESENTATION	episode (the habit as a whole), or proposition (the attribution of the habit to the subject)	event (a particular occasion of the habit)
DISCOURSE FUNCTION	episode shift/backgrounding	elaboration/contrast
PROMINENT ADVERBIAL FRAME	undetermined	circumstance
PROMINENT STATIVE TYPE	mental	sensory
CLAUSE DEPENDENCE	independent (episode shift) subordinate (background)	independent (elaboration, contrast)
ACTUALIZATION	undetermined	actualized
ASPECT	undetermined	durative
THE FACTUAL STATUS OF THE PERFECTIVE INTERPRETATION	truth-compatible inference	conversational implicature, or background assumption

Table 2. Summary of the discourse profiles of the Hebrew Habituals

4 Conclusions and Final Remarks

In this paper I have determined the discourse functions of the Hebrew Habituals based on a corpus of colloquial and literary written Hebrew. I have shown that the Periphrastic Habitual refers to an **eventive habit**. This habit functions in discourse to contrast a past habit with the time of speech, or to elaborate on a previously mentioned habit. These uses explain best the semantic properties of the Periphrastic Habitual, such as imperfectivity and actualization. The Simple Habitual was shown to refer to an **episodic habit** which is presented as a whole. In discourse it shifts the focus of attention to present a new subject, tense/aspect, and circumstances. Additionally, it provides a temporal frame for the occasions of a habit expressed by the Periphrastic Habitual. This study shows that semantic meanings are inseparable from their discourse functions. In order to understand why a certain from has its particular semantic meaning, one has to observe how this form is used in discourse. Such an analysis reveals the interrelations between semantics and discourse.

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