A matter of time: tense, mood and aspect in spontaneous Spoken Israeli Hebrew
Dekel, N.

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5. Results

5.1. Introduction

5.1.1. Preface

The results presented in this section are taken from a corpus of spontaneous conversations. The verbs used in this study were collected and analyzed in the form that they appeared in the original conversations. Whether these verbal forms are normatively adequate or not was not addressed. Also, the forms were not converted to normative forms in their listing or analysis. They were analyzed in the way they were uttered. Since this research investigates the spoken language, the verbal forms were taken as representative of the verb system of SIH, with the starting point that native speakers of a language have their own language rule system in mind and they know best what their language is like and how to get their ideas across to other people. The verbs were analyzed with the observation that the forms are not picked up randomly by the speakers while speaking, and that these forms, even if judged to be ill-formed by normative language purists, do follow some regularity. This regularity is discussed in this research.

5.1.2. Exposition: Israeli Hebrew is conceived as a tense-based language

Figure 5-1 below shows the common, normative approach to the Israeli Hebrew (IH) verbal tense system. IH is also referred to by Hebrew language purists as Modern Hebrew (MH). Note that Hebrew language purists do not explain why they refer to the verb system as tense-based. This issue has been commonly accepted as an axiom and no doubts have been raised during the years as to the nature of this system. There is only
one study which raises the possibility that Israeli Hebrew presents aspect in its verbal system (Tsarfaty 2004:293). Still, aspect in this research is not presented as the verbal system’s main characteristics, but rather as an addition to tense. Also, this research was performed on narrative texts of children and thus cannot be compared with a corpus research on adults.

<table>
<thead>
<tr>
<th>Tense</th>
<th>Inflection Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>Suffixed verbs (V-SUF)</td>
</tr>
<tr>
<td>Present</td>
<td>Participles</td>
</tr>
<tr>
<td>Future</td>
<td>Prefixed verbs (V-PRE)</td>
</tr>
<tr>
<td>Imperative</td>
<td>Imperative forms</td>
</tr>
</tbody>
</table>

*Figure 5-1: IH / MH traditional ‘tense’ system*

Bhat (1999) divides the languages of the world into three categories: tense-prominent languages, aspect-prominent languages and mood-prominent languages. Each language can be prominent in only one of these categories, whereas the other two categories would be expressed to a lesser degree. This means that TMA categories are inter-related. Otherwise, it would be possible for a language to be prominent in two TMA categories. The prominence of a language to tense, aspect or mood is reflected by the means, which are used to express this category. The prominent category is usually expressed in great detail by a variety of morphological means, whereas the other TMA categories are expressed to a lesser degree and by peripheral means. The latter can be auxiliary verbs, lexical means and the like.

Apparently, if we refer to the traditional approach towards Israeli Hebrew as presented in Figure 5-1 above, then verb affixes in Israeli Hebrew can indeed be claimed to represent tense, since each verb tense is expressed by a different morphological inflection. But in the frame of this system, there is no explanation in a large number of verbal structures and patterns which are commonly used by Israelis in their ordinary speech. The normative approach would regard them as ‘mistakes’. This is
problematic, since a significantly large amount of verbs used by Israelis in speech can be regarded as ‘mistakes’ according to this approach. It is impossible and illogical that native speakers would use mostly mistakes in their speech. It is thus assumed that these ‘mistakes’ must be systematic, and must present regularity. This regularity is exactly what makes the normative system irrelevant to the spoken language.

The structure of the Israeli Hebrew verb system will be discussed here in the frame of Bhat’s division. I claim that the affixes in the IH verb system represent aspect and not tense. I will bring authentic examples from the data, which suggest that the approach of IH as a tense language is not applicable, and that IH is an aspect-prominent language. Below, I will present data, showing that suffixed forms can indeed denote actions in the past, but not past tense, that participles do not denote present tense in most of the cases, and that prefixed forms are modal in nature, and are used to express several types of mood, but not future tense. I will show that imperative forms are not productive in IH, and are used only under specific phonological constraints. I will also show that all the forms in Figure 5-1 above, which are presented as a tense system in IH/MH, are inflected for other properties rather than tense, and that one cannot guess the time of occurrence by the verb only, when disconnected from its context. I will show that a wide range of lexical tense expressions are used in the corpus to express tense, and that these tense expressions are needed in conversation in order to clarify to the listeners the time of occurrence, because this detail is not represented by the verb. I will show that there is a serious shift in roles of the above forms in IH as opposed to what is conceived and referred to by most traditional researchers as MH. Furthermore, I will present additional, usually syntactic verbal structures, which are used as part of the IH verb system, and which are not treated by traditional theories, and are sometimes referred to as ‘mistakes’ by traditional language purists.
5.1.3. The traditional, normative approach

There are two official authorities in Israel who deal with the Hebrew language. The first one is the Academy of the Hebrew Language (http://hebrew-academy.huji.ac.il/). This authority is responsible for the approval or disapproval of new rules in Hebrew and for assigning new words and terms. The Academy of the Hebrew Language is a normative body, which supports the direction of the speakers towards a ‘correct’ language. It does not refer to the spoken variety as a correct one. The second authority is the Israeli Ministry of Education. This authority is responsible for the development of school curricula in the subject of Hebrew Language, as well as in other subjects. This authority also holds a normative view. Both authorities believe that Israelis speak their own language with grammar mistakes. They dedicate their resources to the direction and correction of the language which is spoken by Israelis in their everyday life, where the verb system is one of the directed linguistic systems.

The number of people who are responsible for these views is negligible, compared with the number of native speakers of IH located in Israel, which is greater than 3.8 millions (ICBS 2009). It is unacceptable that such a small group of people would determine and dictate the rules for all the others. Furthermore, there is complete chaos in the Hebrew Language policy in Israel; the two official bodies, dealing with assigning rules to the language and with educational issues, are not synchronized on what is ‘legal’ in the language and what is not. Some of the materials which are taught in Israeli schools as ‘mistakes’ have already been approved as ‘legal’ by the Academy of the Hebrew Language. This chaos has implications for the native speakers themselves, who show very low self-confidence in their own language, since they are brainwashed from childhood onwards on this issue.

Native speakers of Israeli Hebrew have their own rules. These rules do not correspond to Hebrew, as it is defined by the normative language purists of the Hebrew Language Academy and the Israeli Ministry of
Education. The opposite is true: they are very much different from each other. The verb system of IH reflects this situation. While the spoken language has its own characteristics, the verb system (as well as other systems in the language) that is forced upon Israelis does not go hand in hand with the language they speak. It is of great importance to objectively document and analyze the current spoken language distanced from traditional theories. The verb system is an excellent example for a phenomenon of forcing normative rules on a new entity, where the latter is a completely different system than the tense system that Hebrew language purists try to present.

It is unclear why Hebrew language purists adopted this approach. All the people, responsible for the emergence of Israeli Hebrew, were speakers of aspect-oriented verb systems (see 5.2.2.1 below). This origin is very clearly reflected in the verb system of the resulting language that Israelis use today. Hebrew language purists would claim that Israelis do not know how to use the verb system correctly, and that their speech is full of mistakes. But these ‘mistakes’ have regularity. And this regularity reflects an aspectual system, which functions perfectly among Israelis, with almost no exceptions. A comparison of this system to the normative one, which supports tense as the main characteristics of the verb system, shows that the regularity of the aspectual system is much more consistent. The normative, tense-based system shows many irregularities and exceptions, whereas the aspectual analysis shows almost none.

For 120 years of SIH existence, no one doubted the tense-based verb system theory. People have commonly accepted it as an axiom, without asking questions, without looking into it, without trying to search for the origin of their ‘mistakes’. This in itself is surprising. Resources have always been targeted to normative approaches, rather than to real research of the spoken variety. For example, an annual examination held by the Israeli Ministry of Education in Israeli high schools, which checks high school students’ skills in Hebrew language, consistently results in relatively low grades. The examination claims to check the students’ skills in their ‘mother tongue’. It consists of Hebrew grammar questions and
reading comprehension chunks. In the latest two examinations of 2008 and 2009 which did show an improvement in results compared with previous years, only about two thirds (~67-68%) of the students passed (!) (NRG 2008, 2009). This is a lower success rate than found in English examinations (~74%), which is taught as a foreign language. Unfortunately, no one draws the conclusion that something is wrong with the teaching system and that the material being taught is not the students’ native language, but rather a foreign one. The spoken language has never been equally respected like the normative system. It has been referred to as ‘street language’. Over 3.8 million native speakers of IH do not speak street language, and cannot be directed by several dozens of normative language purists to speak something which does not exist. Israelis speak a rich, living and developing language, which has its own dimensions and characteristics. It may have developed differently than what the normative language purists expected, but it is not inferior to any normative system and should not be regarded as such. Understanding the spoken system is of great importance and may have implications for educational and methodological processes in the future, as well as an important cultural benefit.

5.1.4. General information on the research data

A distribution of the research items in this study is presented in Table 2-1 above. The data in this study contain verbs and verb constructions in Spoken Israeli Hebrew, as employed in spontaneous conversations. A distribution of the data which are treated in this study is presented in Table 5-1 below.
Table 5-1: Distribution of data in the study

<table>
<thead>
<tr>
<th>Item:</th>
<th>Quantitative data:</th>
<th>Percentage:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of verb constructions treated:</td>
<td>6607</td>
<td>100%</td>
</tr>
<tr>
<td>Total verb constructions, informants:</td>
<td>3441</td>
<td>52.1%</td>
</tr>
<tr>
<td>Total verb constructions, non-informants:</td>
<td>3166</td>
<td>47.9%</td>
</tr>
</tbody>
</table>

These data constitute the investigated linguistic items of this study, and are the basis for all the analyses. The corpus is further sub-divided into speech units (see 2.2 above), where verb constructions, which spread over more than one speech unit, are treated separately, as well as verb constructions, which appear in subordinate units. It is important to note that the behavior of verbs and verb constructions in subordinate and non-subordinate speech units is identical. The number of verb constructions in subordinate and non-subordinate speech units in this research is presented in Table 5-2 below.

Table 5-2: Types of speech units in the study

<table>
<thead>
<tr>
<th>Group of subjects</th>
<th>Major speech units</th>
<th>Subordinate speech units</th>
<th>Total speech units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total speech units in the study</td>
<td>5562</td>
<td>1045</td>
<td>6607</td>
</tr>
<tr>
<td>Informants</td>
<td>2907</td>
<td>534</td>
<td>3441</td>
</tr>
<tr>
<td>Non-informants</td>
<td>2655</td>
<td>511</td>
<td>3166</td>
</tr>
</tbody>
</table>

Therefore, subordinate speech units are not discussed separately in this thesis, unless a special phenomenon is observed, which is typical to this type of speech units. The discussion below refers to all speech units in the study.

Verb constructions in ‘broken’ speech units are too few (~1% from the total number of speech units) to reach any linguistic conclusion regarding their behavior. Apparently, ‘broken’ speech units behave the same way as non-broken speech units in terms of TMA expression. Due to their low number these units are not discussed separately either. ‘Broken’ speech units are characterized by having a verb construction with one coherent
meaning being split into at least two speech units, where the first part of the verb construction appears in one unit, and its complement(s) appear(s) in the next unit(s). The distribution of such speech units in this research is presented in Table 5-3 below.

**Table 5-3: Distribution of ‘broken’ speech units in the study**

<table>
<thead>
<tr>
<th>Group of subjects</th>
<th>Non-broken speech units</th>
<th>‘Broken’ speech units</th>
<th>Total speech units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informants</td>
<td>3406</td>
<td>35</td>
<td>3441</td>
</tr>
<tr>
<td>Non-informants</td>
<td>3132</td>
<td>34</td>
<td>3166</td>
</tr>
<tr>
<td>Total speech units in the study</td>
<td>6547</td>
<td>69</td>
<td>6607</td>
</tr>
</tbody>
</table>

### 5.2. Argumentation

#### 5.2.1. Why is SIH not tense-based?

As mentioned above, traditional scholars refer to the verb system of SIH or Modern Hebrew as a tense-based system. This analysis has been commonly accepted as an axiom, and almost no doubts have been raised during the years about its accuracy or correctness.

No quantitative studies are known to have been performed in order to check if this theory is applicable to IH or not. This theory has never been proved to be true, neither has it been negated. The aim of this study is the verification or negation of this theory.

#### 5.2.1.1. Overview

The main forms in the SIH verb system are constructed from verbal patterns and consonantal roots, which are integrated into patterns to form the meanings. Complex verbal structures are also present, but they are fewer than pure verbal pattern-root constructions; yet, their number is not negligible.

Since the corpus was first analyzed by form, all similar forms were collected in their listings into the same group and were then analyzed
separately as explained in Section 2 above. For example, all suffixed forms were treated as one group, where each verb was analyzed separately according to its context.

The process of analysis of forms is described below. An explanation is provided as to why the SIH verb system is concluded to be mostly aspectual, with the addition of some grammatical modal forms, and not tense-oriented. This claim is based on the results and on a comparison with traditional theories.

The SIH verb system is not tense-based, simply because SIH verbal forms do not express tense in more than 90% of the cases. Refer to Figure 5-1 above, showing the traditional MH tense system, and to the arguments below.

5.2.1.2. The use of suffixed forms: suffixed forms do not express past tense

Suffixed forms in IH are referred to by traditional scholars as expressing past tense. The following examples show that the verb suffixes do not point to the time of occurrence, but rather to its aspectual character. Thus, it is assumed that the notion of tense is irrelevant in SIH, and that suffixed forms do not express past tense, but rather the perfective aspect. Each example is presented within its immediate context. The verbs are bold and italicized. Only the analyses of verbs are presented in the glosses. The examples are numbered E-n, where n is the example number. Transcription is given in Sampa and is phonetic.

The first example is taken from the corpus. In this example, the speaker is calling a friend to say goodbye before leaving for NY for studying purposes. She shares with her friend some thoughts about what she is going to do after she graduates. Note that the events described in the conversation have not yet happened:
(. ) \textit{jaXol lijot} Se-

It is possible that-
Form: \textit{jkl}-Qal-PTCP-M-SG + \textit{hjj}-INF
Meaning: speculative mood

(.) \textit{keilu}
maybe {=a colloquial discourse marker}

\textit{ani imtsa et atsmi itonai}]
I will find myself being a journalist
Form: \textit{mts?}-Qal-PRE-1-SG
Meaning: speculative mood

\textit{o maSu kaze}]
or something like that

\textit{o liXtov dvaRim}]
or to write things
Form: \textit{ktb}-Qal-INF

\textit{ani meod esmaX gam letasRit kaze}]
I will be very happy in such a case too
Form: \textit{smh}-Qal-PRE-1-SG
Meaning: assumptive mood

\textit{lo jodaat}]
I don't know
Form: \textit{jdc}-Qal-PTCP-F-SG
Meaning: progressive aspect

\textit{keilu}
maybe {=a colloquial discourse marker}

(.) \textit{an-} \textit{ani \textit{XoSevet Selamadti} amon kvaR be-}
I think I have already learned a lot in-
Form: (a) \textit{h\textsc{shb}}-Qal-PTCP-F-SG (b) \textit{imd}-Qal-SUF-1-F-SG
Meaning: (a) progressive aspect (b) perfective aspect
As mentioned above, the event that is discussed in this text has not yet happened at the time of the conversation. Still, two suffixed forms are used by the speaker, which according to traditional approaches would have been analyzed as expressing past tense. The suffixed forms are: *lamadti* (*lmd*-Qal-SUF-1-F-SG) and *jatsati* (*jtsʔ*-Qal-SUF-1-SG). These forms, within the context of this example, do not express past tense. Past tense is defined as preceding the speech time, while at the time of speech the described events have not yet occurred.

The next example is not taken from the corpus, but was recently recorded by coincidence, when uttered by a native speaker. The speaker was calling the service center of a toll road in Israel, in which she meant to travel on later that day. She wanted to know if going off the road for an hour and then continuing on her way from the same point where she left
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off, would be considered one toll payment or two. The speaker is trying to explain the situation to the service representative.

_ten li leazbiR_|| **Non-corpus example** (E-2)
let me explain
*Form:* _ntn_-Qal-IMP-2-F-SG + _sbr_-INF
*Meaning:* imperative mood

_ani nosaat aXSav bekviS SeS_]
(assume that) I am driving on road #6
*Form:* _nsf_-Qal-PTCP-F-SG
*Meaning:* progressive aspect

_okej/
okay?

_veatsaRti batsad_]
and I stop at the road shoulder
*Form:* _ftsR_-Qal-SUF-1-SG
*Meaning:* perfective aspect

_biglal pantSeR o maSu_]
because of a puncture (in my car tire) or something

_amadti ejze Saa_]
I stay (there) for an hour or so
*Form:* _fmd_-Qal-SUF-1-SG
*Meaning:* perfective aspect

_veaXRej ze imSaXti_]
and then I continue (driving)
*Form:* _mšk_-Hifil-SUF-1-SG
*Meaning:* perfective aspect

_ani meSalemet al nesia aXat/
am I paying for one travel?
*Form:* _šlm_-Piel-PTCP-F-SG
*Meaning:* progressive aspect
Note that this conversation describes a hypothetical situation, one which has not yet happened. Three of the six verbal forms (50%) in this conversation are suffixed forms. In traditional Hebrew grammar, these forms would have been analyzed as expressing past tense, which is clearly not the case, as the events have not yet happened at the time of the conversation. Furthermore, using these forms for a future event might have been considered incorrect or ungrammatical by traditional language purists. Since Israelis speak this way most of the time, this approach would mean that Israelis speak their own language incorrectly. This is not acceptable according to linguistic theories, which agree that native speakers know their language best. The speaker in this conversation, while speaking, referred to these events as complete events, describing them from the point of view of an outsider. These are examples of the perfective aspect. Also, two of the three remaining forms in this example are participle forms, which clearly do not express present tense, as traditional language purists would have analyzed them. These forms are discussed in 5.2.1.5 below. Furthermore, although this is an event which is planned to happen in the future, no prefixed forms are used during the whole conversation. Prefixed forms are referred to by traditional scholars as expressing future tense. This chunk describes a future event; still, not even one prefixed form is used to express it.

The next example is taken from the corpus. It describes a suggestion made by the speaker to his friend. Note that the described events have not yet happened at the speech time.

(....) Setikne bad

let her buy some fabric

Form: qnj-Qal-PRE-3-F-SG
Meaning: optative mood
veítifor lo|  
and sew (it) for him  
**Form:** tpr-Qal-PRE-3-F-SG  
**Meaning:** optative mood

**im gumi kaze|**  
with elastic band

vegamaRnu|  
and that’s that  
**Form:** gmr-Qal-SUF-1-PL  
**Meaning:** perfective aspect

There are three verbal forms in this chunk. One of these forms is a suffixed form. This suffixed form cannot describe a past tense action, because this event has not yet happened at the time of the conversation. Here too, the suffixed form expresses the perfective aspect.

### 5.2.1.3. The use of time expressions with suffixed forms

In many cases, where suffixed forms are present in speech, additional time expressions are needed in order to clarify that the content expressed describes something which has already happened. This means that the time point of the event is not obvious from the verb, but rather additional information is required in order to understand that the transferred content happened in the past. The following examples illustrate this need for an additional lexical item to express the time of occurrence. Time expressions are given with bold underlining.

**Rak etmol itXilu ledaβeR al ze|**  
only yesterday they started talking about it  
**Form:** thl-Hifil-SUF-3-PL + dbβ-Piel-INF  
**Meaning:** perfective aspect

veaiom]  
and today
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paSut Sebati babokeR baXuRa aXal]
simply when I came this morning, a young lady,
Form: bwʔ-Qal-SUF-1-SG
Meaning: perfective aspect

Seavda bebitidZl]
Who used to work at BTG,
Form: ʕbd-Qal-SUF-3-F-SG
Meaning: perfective aspect

avda po SaloS Sanim]
(and) worked here for three years,
Form: ʕbd-Qal-SUF-3-F-SG
Meaning: perfective aspect

velo pagaStl ota meazl
and I have not met her since (then),
Form: pgš-Qal-SUF-1-SG
Meaning: perfective aspect

amRa li pitRu oti ajomll
told me that she was fired today (literally: ‘they fired me’)
Form: ʔmr-Qal-SUF-3-F-SG + pṭr-Piel-SUF-3-M-PL
Meaning: perfective aspect

There are seven speech units in this chunk, containing six suffixed verbs and a suffixed verb phrase. The speaker is telling about a colleague, whom she met earlier that morning, and who told her that she had been fired. The seven suffixed forms themselves were not sufficient to understand that the event belongs to the past. Four time expressions and two duration expressions were needed for the speaker in order to explain the flow of events. If the speaker had used the same text without the time expressions, some important information would have been missing from the context, and the context as a whole could have been interpreted differently. Yet, it can be claimed that the time expressions only give a more specific time point to the past reference that is previously known.
from the context, and that their function is not to assign the past reference to the perfective forms. Therefore, I sought cases where perfective forms describe past events, but are not accompanied by lexical time expressions. I found such forms only under the following condition: there must be another time reference in the context, which is not a time expression. Such time references are occurrences of the auxiliary *hij* ‘be’, which gives the time reference to the context, instead of the time expression. No perfective forms were found which expressed past tense without having a periphrastic past tense reference in their near environment. This means that perfective forms have past tense reference only when they are accompanied by either a time expression or some inflection of the auxiliary verb *hij* ‘be’. Perfective forms with no such reference, do not express past tense. Refer to the example below. The informant’s daughter is living in Jerusalem, where a suicide bomber carried out an attack earlier in the day prior to the conversation.

Informant:

*ma amRu al apigual*  
what (did) they say about the terrorist attack?  
**Form**: *ʔmr*-Qal-SUF-3-PL  
**Meaning**: perfective aspect

Friend 1:

*Rak Samati Seaja pigua|*  
I only hear(d) that there was a terrorist attack  
**Form**: *šmʕ*-Qal-SUF-1-SG + *hij*-Qal-SUF-3-M-SG  
**Meaning**: perfective aspect + past tense

Friend 2:

*ani Samati|*  
I hear(d)  
**Form**: *šmʕ*-Qal-SUF-1-SG  
**Meaning**: perfective aspect
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lefaXot asaRa aRugim||
   at least ten killed

Friend 3:

ken/
   yes?

Informant:

& tsiltsela elaj veamRa|
   & (= a hidden private name) call(ed) me and say(id)
   Form: tsltsl-Piel-SUF-3-F-SG + ?mr-Qal-SUF-3-F-SG
   Meaning: perfective aspect + perfective aspect

ima al titkaSRi|
   mom, do not call (me)
   Form: qšr-Hitpael-PRE-2-F-SG
   Meaning: imperative mood

ani oleXet leSiuR itamlut|
   I am going to the gym
   Form: hlk-Qal-PTCP-F-SG
   Meaning: progressive aspect

(.) akol besedeR||
   everything is okay

It can be argued that if time expressions are not used, the text can still be understood as happening in the past, defining this past as non-specific. Yet, in many cases, without the time expressions, and in spite of the suffixed forms, texts cannot be interpreted by default as happening in the past. In cases of a non-specific past, and on condition that the time point of events is unknown from the broader context, IH speakers use expressions that represent the past, but do not give a specific time point. The examples below illustrate the use of such expressions to mark the non-specific past.
In the first portion, the speaker tells about an event that happened to him during his studies at Harvard. The specific time of this event is unknown; it is only known that it took place many years before the conversation.

(..<) aiti oleX [N-4-1:6-20 (E-6)]
I used to walk
Form: hjj-Qal-SUF-1-SG + hlk-Qal-PTCP-M-SG
Meaning: habitual past
deX (=phonetic pronunciation of deReX) a-
along the-

RiveR|
river

lebet asefeR—
to the school—

la- kompleks Sel bet asefeR leRefua Sel e haRvaRd|
to the complex of Harvard School of Medicine

veaiti oleX|
and I used to walk
Form: hjj-Qal-SUF-1-SG + hlk-Qal-PTCP-M-SG
Meaning: habitual past

kaiths|
summer

XoRef|
winter

ze aja ejze|
it was about

majl vaXetsi|
a mile and a half
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**masu kaze**
something like that

(...) @@
(laugh)

@@@
(laugh)

**vejom eXad alaXti bejom XoRpi**
and one day I walked on a winter day
**Form:** hlk-Qal-SUF-1-SG
**Meaning:** perfective aspect

Although it is known that the event occurred many years before the conversation, the speaker still uses the expression **jom eXad** ‘one day’. The expression is needed in the context, to clarify the non-specific past, as well as to emphasize the single-time characteristics of this event **alaXti** ‘I walked’ as opposed to the background habitual phrase **aiti oleX** ‘I used to walk’. If this expression had not been used in this particular location in the conversation, the context would not have been complete, and theoretically, the single-time action could have taken place some other time and place, and not necessarily be linked with the background events.

The same expression is used in the following text, again, for specifying the non-specific past. The speaker is telling about her daughter, who wanted to raise tadpoles.

**abat Seli jom eXad XazRa** | **N-4-2:47-58 (E-7)**
my daughter one day returned
**Form:** hzr-Qal-SUF-3-F-SG
**Meaning:** perfective aspect

&|
(a hidden private name)
im e kos|  
with a glass

majm|  
of water

(.) vebibnim soXim ejze jetsuRim|  
and there were strange creatures swimming inside
Form: shɔj-Qal-PTCP-M-PL  
Meaning: progressive aspect

vei mevia|  
and she brings it (to me)
Form: bwʔ-Hifil-PTCP-F-SG  
Meaning: relative tense, past reference

vei omeRet li|  
and she says to me
Form: ʔmr-Qal-PTCP-F-SG  
Meaning: relative tense, past reference

ima|  
mom

eveti e|  
I brought eh
Form: bwʔ-Hifil-SUF-1-SG  
Meaning: perfective aspect

RoSanim|  
some tadpoles

As opposed to the previous chunk, in this chunk, the expression jom eXad ‘one day’ is needed in the context, to clarify the non-specific past only. When trying to eliminate this expression from the speech unit, a need for another time expression arises. The fact that the time expression is necessary to understand that this event took place in the past, shows that the time specification is not inflected in the verb. This chunk presents
also participle forms, used for the expression of relative tense. These forms are discussed in 5.2.1.5 below.

In the next chunk, the speaker is telling about an event that happened to him when he was a child. He uses the expression *paam* ‘once’ to express the non-specific past.

\[ \text{[eveti]} \]
\[ \text{I brought} \]
\[ \text{Form: } bwʔ\text{-Hifil-SUF-1-SG} \]
\[ \text{Meaning: perfective aspect} \]
\[ \text{kaRpada paam} \]
\[ \text{a toad once} \]

\[ \text{kazot ktana} \]
\[ \text{a little one} \]

\[ \text{veeReti et ze leima Seli} \]
\[ \text{and I showed it to my mother} \]
\[ \text{Form: } rʔj\text{-Hifil-SUF-1-SG} \]
\[ \text{Meaning: perfective aspect} \]

\[ \text{veze kafats} \]
\[ \text{and it jumped} \]
\[ \text{Form: } qfts\text{-Qal-SUF-3-M-SG} \]
\[ \text{Meaning: perfective aspect} \]

The expression *paam* ‘once’ gives the non-specific past meaning to this chunk. The same sequence of speech units, when appearing in a different context, could have been analyzed differently without this word, including as something that has not yet happened.

The next chunk also contains the expression *paam* ‘once’. The speaker is telling about an event that happened to him when he was a student.
paam brh Qal-SUF-3-M-SG meaning: perfective aspect

N-4-34:38-43 (E-9)

once a small snake escaped from me

beulam aaRtsaot]
in the lecture hall

(../) itstaaRti]
I was so sorry

(../) baRaX ili]
it escaped

siXakti ito|
I played with it

joteR midaj]
too much

Again, the expression paam ‘once’ is needed to specify the non-specific past, and the same sequence of speech units, when appearing in a different context, could have been analyzed differently without this word.

5.2.1.4. The use of prefixed forms: prefixed forms do not express future tense

Prefixed forms in IH are referred to by traditional scholars as expressing future tense. The following examples show that verb prefixes do not point at the time of occurrence, but rather at some modal property. The examples given below show the use of prefixed forms in a non-future
meaning. No prefixed forms were found in the research that can represent future tense apart from a few cases of prefixed *hjj* ‘be’ in the Qal pattern, denoting future tense.

\[
aben Seli jaSav belevanon\]  \textit{N-4-2324:138-142} (E-10)
\text{my son was in Lebanon}
\text{Form: } jšb-\text{Qal-SUF-3-M-SG}
\text{Meaning: continuous aspect}

\[
kol aSeRut\]
\text{all (his military) service}

\[
af paam lo jadati\]
\text{I never knew}
\text{Form: } jdʕ-\text{Qal-SUF-1-SG}
\text{Meaning: perfective aspect}

\[
im u jaXzoR\]
\text{if he would ever come back}
\text{Form: } hžr-\text{Qal-PRE-3-M-SG}
\text{Meaning: speculative mood}

\[
af paam\]
\text{never}

This event has already ended at the time of the conversation. In spite of this fact, a prefixed form is used by the speaker, which according to traditional approaches would have been analyzed as expressing future tense. Future tense is defined as an event that follows the speech time, and that has not yet happened at the speech time. Therefore, this form cannot express future tense, as the event, to which this form refers, precedes the time of conversation, and has already ended. It can be interpreted as representing relative tense, though. Still, under the analysis of relative tense, the meaning of this unit is speculative. If we exclude the conditional from the expression, the speculative meaning remains as well. Hence, the analysis of speculative mood is preferred.
The next example shows a prefixed form used to express the imperative:

\textit{tiSali et & ma katuv po} \textbf{N-3-22:133-134} (E-11)  
ask & (& is a hidden private name) what is written here  
Form: \textit{šʔl-Qal-PRE-2-F-SG}  
Meaning: imperative mood

\textit{efo ze/}  
Where is it?

This is a prefixed form, which functions as an imperative. The vast majority of prefixed forms in IH which were found in the corpus function as imperatives, see 5.5.7 and 5.5.8 below. Another example of prefixed forms which function as imperatives is presented below.

\textbf{Friend:} \textit{G-4-2-3:771-776} (E-12)  
\textit{ulaj nisa paam} \textbf{I}  
maybe we should go (there) some day  
Form: \textit{nsʕ-Qal-PRE-1-PL}  
Meaning: cohortative mood

\textbf{Informant:}  
\textit{tivdok}  
check  
Form: \textit{bdq-Qal-PRE-2-M-SG}  
Meaning: imperative mood

\textit{im ze kokaX (\textit{=phonetic pronunciation of kol kaX}) maanjen otXa}  
if it interests you so much

\textbf{teleX laRav bebet dagan}  
go to the rabbi in Bet Dagan (Bet Dagan is a location)  
Form: \textit{hlk-Qal-PRE-2-M-SG}  
Meaning: imperative mood
This conversation presents a sequence of prefixed forms. It follows a story, told by the speaker, about a rabbi, residing in Bet Dagan, Israel, who knows the innermost things about a person, when this person gives him some details about the names of his parents. There are five prefixed forms in this conversation; none of them expresses future tense, since no future event is discussed here. The first line in this chunk was uttered by a friend of the informant, and expresses cohortative mood, which is a subtype of the hortative mood; the rest of the chunk was uttered by the informant, and represents a sequence of suggestions to his friend, expressed as imperative mood. All the prefixed forms in this conversation express mood, none of them represents future tense. Note the underlined expression paam ‘some day’ in the first speech unit. This is the same expression used to express the non-specific past in the meaning of ‘once’. With prefixed forms, its meaning is different. The presence of this word in the unit intensifies the degree of its uncertainty, pointing at the speaker’s intention to do something in the long run. Many times, and also in this unit, it comes with the conjugation word ulaj ‘maybe’, which also points to uncertainty. The order of their appearance can change, but the meaning remains the same. If we take an identical conversation, and omit the two uncertainty words ulaj ‘maybe’ and paam ‘some day’ from this unit, the intonation with which it is uttered would probably change, but the verb nisa ‘go’ will still express an intention.

I suggest to also refer to example E-2 above, and to the traditional approach, which consider prefixed forms as expressing future tense. This
conversation describes a future event. It contains six verbal forms, and still, not even one of these forms is a prefixed form.

5.2.1.5. The use of participles: participles do not express present tense

Participles in IH are used as nominals (nouns and adjectives) in addition to their verbal use. They are different in nature from other verbal forms, as they do not inflect for person, only for gender and number. In this regard, the verbal forms behave like nominals. Yet, participles in IH are widely used as verbs. They are referred to by traditional scholars as expressing present tense in MH, and this is how they are taught in Israeli schools. The following examples show that participles never represent present tense. Rather, they express all kinds of imperfective-natured actions and situations, as well as relative tense, the latter is present in only a few cases. Examples are presented below.

Friend:  

io ani oevet klavim\|  
no, I like dogs  
Form: ʔhb\-Qal-PTCP-F-SG  
Meaning: habitual aspect

Xatulim lemaSal\|  
cats for example

ani lo oevet\|  
I do not like  
Form: ʔhb\-Qal-PTCP-F-SG  
Meaning: habitual aspect

ze lo Xaja amina\|  
it is not a reliable animal
Informant:

ken

yes

zu Xaja Semitpaneket

it is a self-pampering animal (literally: it is an animal which pampers itself)

Form: $pnq$-Hitpael-PTCP-F-SG

Meaning: habitual aspect

venaim lefanek ota

and it is pleasant to pamper it

Form: ADJ + $pnq$-Piel-INF

Friend:

ata lo mekabel mimena Sum davaR beXazaRa

you do not get anything back from it

Form: $qbl$-Piel-PTCP-M-SG

Meaning: habitual aspect

There are four participles in this conversation, none of which express present tense. Present tense is defined as an ongoing action or state. It is debatable whether present tense exists at all, because it is dynamic and changes every minute. But if we refer to it as the ongoingness of an action or state at the moment of speaking, none of the above participle forms meets the definition of present tense. All of these participles express habitual aspect in this conversation.

Refer also to example E-7 for the function of participles as expressing relative tense. There are three participle forms in this example: $soXim$ ‘swim’, $mevia$ ‘bring’ and $omeRet$ ‘say’. The first participle, $soXim$ ‘swim’, denotes the progressive aspect, as it describes an action in progress (but not one which is ongoing now). The other two participles, $mevia$ ‘bring’ and $omeRet$ ‘say’, denote relative tense, as they describe an event simultaneous with the past event described in the preceding units. This
past event is represented by the lexical item *jom eXad* ‘one day’, which
does not express the non-specific past. The participles represent actions, which
are simultaneous to the time point in the past, when the event happened.
The event described has already ended at the time of the conversation,
and therefore these participles cannot describe present tense. Another
example of participles used to express relative tense is presented below.

\[
\begin{align*}
&aze \textit{alaXti beoto-} & N-4-1:32-43 \textit{ (E-14)} \\
&\text{so eh I walked in the same-} \\
&\text{Form: } \textit{hlk-Qal-SUF-1-SG} \\
&\text{Meaning: perfective aspect} \\
&o\text{ta deReX Se-aiti-} \\
&\text{the same way that I used to-} \\
&\text{Form: } \textit{hjj-Qal-SUF-1-SG} \\
&\text{Meaning: past tense} \\
&\textit{Seaiti } \textit{Ragil ialeXet ba|} \\
&\text{that I used to walk through} \\
&\text{Form: } \textit{hjj-Qal-SUF-1-SG + Adjective + hlk-Qal-INF} \\
&\text{Meaning: past tense} \\
&\textit{ze lo aja muSlag be-oto jom|} \\
&\text{it was not snowy that day} \\
&\text{Form: } \textit{hjj-Qal-SUF-3-M-SG} \\
&\text{Meaning: past tense} \\
&\textit{aval dej kaR|} \\
&\text{but quite cold} \\
&\textit{lo istakalti la-tsadim|} \\
&\text{I did not look right and left} \\
&\text{Form: } \textit{skl-Hitpael-SUF-1-SG} \\
&\text{Meaning: perfective aspect}
\end{align*}
\]
There are two participles in this conversation, *maRgiS* ‘feel’ and *oleXet* ‘walk’, both expressing relative tense with a past reference point. The preceding units contain the auxiliary *hij* ‘be’, which points at the past, as well as single lexical items with past reference, see example E-6 above, which contains the units preceding this example.

Participles can denote any imperfective aspect in SIH. Refer to example E-2 above. Two of the forms in this conversation are participles. The conversation describes an event, which has not yet happened. For this reason, the two participles in this conversation surely cannot express present tense. Both participles in this chunk express the progressive aspect, as they describe actions in progress. These actions are clearly not in the present, since they have not yet happened at the time of the conversation.

Note that relative tense cases are represented only by participles, but they are few, compared with the cases where participles represent
imperfective aspect. Another example, which demonstrates the use of participles to express relative tense, is presented below.

\[ aXarej\ e^- \quad N^{-4-1314:114-119} (E-15) \]

after eh

\[ iks\ Sanim\ Selo\ itRaenu ]\n
several years in which we did not see each other

Form: \( rʔj\)-Hitpael-SUF-1-PL

Meaning: perfective aspect

\[ ani\ magia\ leboston\ beSiSim\ veSaloS ]\n
I arrived in Boston in 1963

Form: \( ngs\)-Hifil-PTCP-F-SG

Meaning: relative tense, past reference

\[ veani\ Roa\ oto\ gam\ beXul ]\n
and I saw him there too

Form: \( rʔj\)-Qal-PTCP-F-SG

Meaning: relative tense, past reference

Two participles are used in this conversation to express relative tense: magia ‘arrive’ and Roa ‘see’. Although an exact time point of this event is given together with the use of the participles, the time point is relative to the flow of events in the speaker’s story.

The cases of relative tense are also few compared with absolute tense cases in SIH (which are few as well): the majority of instances of tense in SIH is absolute tense, i.e. those cases that are relative to the speech time. As mentioned above, the tense category shows a very low usage percentage in SIH (~7%, see 5.4.1, 5.5.3 and 5.5.4 below).

5.2.1.6. The use of the auxiliary hjj ‘be’: tense representation in SIH

Only a very few verbal forms represent tense in SIH. These forms are limited to one root (hjj ‘be’) appearing in one pattern (Qal), usually in the suffixed forms, together producing an auxiliary verb. These forms of hjj
‘be’ are the only ones which represent tense in SIH. When using \textit{hjj} ‘be’ forms, the use of additional time expressions is redundant, because the tense is already known from the context. Hence, in cases where \textit{hjj} ‘be’ appears, usually no time expressions are present. Examples of such tense forms are presented below.

In the following conversation, the speaker talks about the suicide bomber who blew up a restaurant in Haifa, Israel, on October 2003. Since all the other participants know exactly when this event took place, no time expressions are needed in the sequence of speech units, and the root \textit{hjj} ‘be’ is used.

\begin{verbatim}
\textit{bemaksim}$\mid$ \textit{N-4-2324:102-105} (E-16)
in Maxim (\textit{Maxim} is the name of a restaurant in Haifa)
\end{verbatim}

\begin{verbatim}
\textit{kSaja apigua bemaksim}$\mid$
when the terrorist attack took place in Maxim
\end{verbatim}

\begin{verbatim}
\textit{az aja Sam e}$\mid$
there were eh
\end{verbatim}

\begin{verbatim}
\textit{kol minej miSpaXot im jeladim}$\mid$
families with children there
\end{verbatim}

The next example illustrates a similar situation. The speaker and another person, who is participating in the conversation, used to be neighbors. The speaker is relating to this period. Since all the participants know when this event occurred, the speaker is using \textit{hjj} ‘be’ forms, and does not add any time expression to the conversation.

\begin{verbatim}
\textit{ken}$\mid$ \textit{N-4-1314:11-17} (E-17)
yes
\end{verbatim}
Results

*u ajä SaXen Seli*
  he used to be my neighbor
  Form: *hjj*-Qal-SUF-3-M-SG
  Meaning: past tense

*ani aiti bat XameS esRe*
  I was fifteen years old
  Form: *hjj*-Qal-SUF-1-SG
  Meaning: past tense

*kSeu ajä student*
  when he was a student
  Form: *hjj*-Qal-SUF-3-M-SG
  Meaning: past tense

*veani aiti-
  and I was -
  Form: *hjj*-Qal-SUF-1-SG
  Meaning: past tense

*hjj* ‘be’ forms can also be used with nominal predicates as time shifters. In such cases, they can be omitted from the unit, to obtain the same meaning but at another time occurrence. Nominal predicates without a support verb are grammatical in IH. Only the auxiliary *hjj* ‘be’ can be used to shift the nominal predicate in time, as will be apparent from the next example.

*kol adjo*  
  all the ink

*N-3-22-d:243-247* (E-18)

*ze ajä keset im djo*
  it was an inkstand with ink
  Form: *hjj*-Qal-SUF-3-M-SG
  Meaning: past tense
A matter of time: tense, mood and aspect in spontaneous spoken Israeli Hebrew

**ajta nimRaXat**
used to be smeared
*Form:* *hjj*-Qal-SUF-3-M-SG + *mrḥ*-Nifal-PTCP-F-SG
*Meaning:* habitual past

The second unit contains the auxiliary *hjj* ‘be’. If we omit the auxiliary, the unit will still be grammatical, but it will not specify the time of occurrence:

ze keset im djo
this is an inkstand with ink

In addition, *hjj* ‘be’ is used for the habitual past, together with participle forms. The combination of the two forms yields this meaning, which is a combination of habitual aspect (assigned by the participle) and past tense (assigned by the auxiliary verb *hjj* ‘be’). For further explanation on the habitual past forms, see 5.4.4 below.

There are very few cases where *hjj* ‘be’ is used in a prefixed form to express future tense. In most of the cases, prefixed forms of *hjj* ‘be’ express mood, like all other prefixed forms in the language (see below). The following example shows the use of *hjj* ‘be’ in its prefixed form to express future tense.

Informant:

**tekabel et apRas/ G-4-2-3:329-333** (E-19)
you may receive the prize
*Form:* *qbl*-Piel-PRE-2-M-SG
*Meaning:* assumptive mood

**ije tekes||**
there will be a ceremony
*Form:* *hjj*-Qal-PRE-3-M-SG
*Meaning:* future tense
Friend:

ken|  yes

ken e|  yes eh

Raiti azmanot:

I have seen the invitations
Form: rʔj-Qal-SUF-1-SG
Meaning: perfective aspect

This chunk contains three verbal forms. Two are prefixed forms and one is a suffixed form. The first prefixed form denotes an assumption of the speaker. The informant assumes that his friend will receive a prize. The second prefixed form contains the root hjj ‘be’, which denotes tense. From the context of this conversation, we can learn that the speaker knows about a ceremony that is going to take place. This is a pre-set event, and therefore, we know that it will happen and when. We also learn about it from the informant’s friend, who uses a suffixed, perfective form, to mention that he has seen the invitations to this ceremony. Since the time of this ceremony is known, and it is scheduled for sometime after the speech time, it can be interpreted as future tense, and the auxiliary hjj ‘be’ is used for this purpose.

hjj ‘be’ forms representing tense (both past and future) constitute only 6-7% of the verbal forms in the language (see below). All other verbal forms represent other notions, out of which the most dominant one is aspect.

5.2.1.7. The combination of verbal forms in a conversation

The examples E-1 to E-19 above present verb forms that are referred to by traditional scholars as representing tense. In fact these forms represent aspects and mood, and only a few of them represent tense. It is apparent that most of these conversations contain a variety of verb forms that are
different from one another, and are a mix-up of suffixed, prefixed and participle forms, as well as some additional complex verb compound forms. The use of suffixed forms for the description of events that have not yet happened, and the use of prefixed forms for events that ended long ago show that the meanings lying behind the forms cannot express tense. Also, the fact that a conversation about the future can contain verbal forms, out of which not even one is a prefixed form, strengthens this claim. Additional examples are presented below to show the variety of verbs used in very short conversations.

\textit{titkaSRi Sejatsat} | \textbf{Non-corpus example} (E-20) \\
 call me when you have left \\
 \textbf{Form}: q\textit{šr}-\textit{Hitpael}-PRE-2-F-SG + \textit{jts}?-\textit{Qal}-SUF-2-F-SG \\
 \textbf{Meaning}: imperative mood + perfective aspect \\

This speech unit was uttered by a native speaker, who was talking to her daughter. The daughter was at work, and the mother meant to pick her up after work. The first form is a prefixed form, representing a command. The second form is a suffixed form, representing a completed action but in the future. The event in the subordinate clause has not yet happened, yet, it does not use the prefixed form. The first prefixed form is not used as a future either, but as an imperative mood. Normative language purists would have considered these forms ungrammatical. But such a usage is widespread.

\textit{u baRaX mimeni} | \textbf{N-4-1:58-60} (E-21) \\
 it ran away from me \\
 \textbf{Form}: br\textit{ḥ}-\textit{Qal}-SUF-3-M-SG \\
 \textbf{Meaning}: perfective aspect \\

\textit{veani Rats aXaRav} \\
 and I was running after it \\
 \textbf{Form}: rw\textit{ts}-\textit{Qal}-PTCP-M-SG \\
 \textbf{Meaning}: progressive aspect
@ani Rodef aXaRej akelev
(laughing) I was chasing the dog
Form: rdf-Qal-PTCP-M-SG
Meaning: progressive aspect

This is a part of a longer conversation, uttered by a native speaker, who was talking about something that happened to him when he was younger. The first form is a suffixed form, representing the perfective aspect. The time point of this event is known from the previous context, and thus it is clear that it describes something in the past. Note that in other contexts, it could be interpreted differently, and not necessarily in the past. The other two forms are participles, representing actions in progress. The entire event ended a long time ago. Still, two participles are used to express the imperfectivity of these actions.

5.2.1.8. SIH as a non-tense language: summary

SIH is not a tense-based language, because its verbal forms do not carry a temporal meaning. If the verbal forms had represented tense, the time of occurrence would have been obvious from the forms, even when being isolated from their context. But this is not the case. A context-free SIH verb does not by default express the time of occurrence. From the above sections, it is apparent that peripheral means are needed in order to understand the time of occurrence of the described events. Such means are lexical time expressions, which are completely external to the verb system, and the auxiliary hij ‘be’, which is part of the verbal system, but not a verb inflection. On the other hand, verbal forms, which in traditional theories are claimed to express tense, in fact express other semantic categories rather than tense, such as aspect and mood. Suffixed forms, which are claimed to express past tense, actually express the perfective aspect, and are widely used in contexts which have not yet happened. Prefixed forms, which are claimed to express future tense, actually express several types of mood, in particular the imperative mood, and can be found in non-future contexts. Participles, which are claimed to express present tense, never express present tense, but rather express the
imperfective aspect or, in some cases, relative simultaneous tense, and are always found in non-present contexts. In addition, all forms can be used one after the other within the same conversation without changing the absolute time point of the events. If IH were a tense language as claimed, I would expect, for example, all forms in a conversation about the past to be suffixed forms.

Apparently, none of the linguistic definitions of tense applies to SIH verbal forms, and additional information is always needed for the listener in order to understand the time of occurrence.

5.2.2. Why is SIH aspect-based?

In the previous section I show why SIH is not a tense-oriented language. I give examples of verbal forms, which do not express tense, but are claimed to express tense by traditional language purists. These examples are representative of the corpus as a whole, and verbal forms represent other notions rather than tense. But in order to claim that SIH is aspect-oriented, further arguments are needed. These arguments are presented below.

5.2.2.1. Historical reasons

As mentioned above, Israeli Hebrew (IH; also referred to as Modern Hebrew (MH) by scholars) is described in the literature as a tense-based language. Historically, it is unclear why its verb system has always been referred to as expressing tense. It has been debatable how the language spoken in Israel was created, and there are several theories about the emergence of SIH. No matter which emergence theory is adopted, the SIH parent language (or languages, if we follow Zuckermann’s theory), as well as the SIH additional contributors, present(s) an aspectual verb system. Apparently, there is no reason that the target language would have a tense-based verb system, no matter what the emergence approach is. Being one of the core systems in a language, the verb system of SIH is assumed to reflect the character of the verb system(s) of
its antecedent(s), as well as the verb systems of its first speakers' native languages. This follows the founder principle, according to which the target language would always reflect the character of the native languages of its founders (Zuckermann 2006:62, 2008:48). IH first speakers' native languages were mainly Yiddish and Slavic languages, as well as some additional ones. Therefore, according to all approaches, when referring to the emergence of Israeli Hebrew, its verb system should have presented aspectual properties. This is true in either of the 'emergence' theories: In case that IH emerged from previous Hebrew layers — it should have reflected the verb systems of Biblical and Mishnaic Hebrew, which are aspectual. If, on the other hand, IH is a Slavic language or a descendent of Yiddish in a Semitic disguise, as Wexler (1990) claims, it should also have an aspectual verb system, as both Slavic and Yiddish verb systems are aspectual (Binnick 1991:135-139, Jacobs 2005: 221-222). If IH is a new entity based on Yiddish and Hebrew, as Zuckermann (2006, 2008) claims, it should also have an aspectual verb system, as both Yiddish and previous layers of Hebrew present such systems, in addition to the minor contributors, such as Russian, Polish, German and Arabic, with the exception of English, which is a minor contributor, and a tense-based language. Thus, the origin of the idea according to which the IH verb system is tense-based is unclear.

5.2.2.2. Quantitative reasons

The analysis of forms in the corpus shows the following statistical distribution: Over two thirds of the forms in both groups (research group and control group) exhibit aspectual meanings, see 5.5.1 and 5.5.2 below. These forms include suffixed forms and participles, or variations of suffixed forms and participles with several types of complements. This means that more than 67% of the verbal forms in SIH are used to express aspect, and that these forms are the same ones that in traditional grammars are referred to as expressing past and present tense, respectively. Since the vast majority of the verb system in SIH is used to express aspect, SIH should be referred to as aspect-oriented, rather than as tense-oriented.
The difference between the current analysis and the traditional one, is that in traditional grammar, there is no explanation for cases like the ones presented in examples E-1 to E-21 (as well as many more), which obviously do not express tense. Normative views might have conceived these as ‘ungrammatical’. Yet, since these are widely produced by native speakers, it is impossible to exclude them from the language, with the claim that they are ungrammatical or non-representative. It is not likely that native speakers would use so many ungrammatical structures of their own language during speech, and still understand each other so well. If most of the native speakers of the language use these forms, then they must be grammatical, and there must be some logic in their use. Therefore, these forms are referred to in this study as representing standard speech, as well as being grammatical, where ‘grammatical’ does not refer to ‘normative’. Normative approaches support the direction of the language to what the normativists consider ‘grammatical’. All the rest is ungrammatical or constitutes a set of ‘mistakes’. SIH native speakers use other rules than the normative ones. These rules have their own logic and they are not inferior to normative rules. SIH native speakers use ‘non-normative’ rules for daily communication and still understand each other very well. This means that they share the same rules. This also means that their non-normative rules work. This is called grammar, and therefore, these rules are grammatical. The linguistic definitions of aspect cover all these ‘ungrammatical’ cases, as opposed to the definitions of tense, which are obviously not followed in a case that the system is analyzed as tense-prominent.

The fact that tense in SIH is represented only by one auxiliary form, which is limited in root and pattern, corresponds to Bhat’s theory whereby a language can be prominent for one semantic category, and that other semantic categories are represented to a lesser degree or by peripheral means in that language. Auxiliary verbs are one type of peripheral means. Lexical time expressions are another type of peripheral means. In SIH
both an auxiliary verb and lexical time expressions are used to express tense, but inflected forms express other categories which according to Bhat’s theory means that SIH is not tense-prominent.

5.2.3. What is the status of mood in SIH?

The SIH verb system contains two main structure types which express mood: prefixed verbs and imperative forms. The former are referred to by traditional grammars as future tense, the latter as imperatives. The only detail in the traditional MH verb system that is parallel to the findings in this research is the use of imperative forms to express the imperative mood. But there is a large difference between the reasons for that use in the two approaches and between the ways that these imperatives are derived. The explanations are provided below.

5.2.3.1. The origin of imperative forms

The traditional approach presents the imperative forms as independent forms, based on the prefixed forms of each verbal pattern, with some constant changes. According to this approach, each pattern, apart from the passive patterns, has its own imperative form. All normative imperative forms are based on their parallel prefixed forms. For example, according to the traditional approach, imperative forms of the pattern Qal are based on their parallel prefixed form. This way, the imperative form of Qal should look as follows: \(C_1\text{a}C_2\text{a}C_3\) or \(C_1\text{e}C_2\text{o}C_3\). These forms are derivatives of \(XiC_1aC_3\) and \(XiC_1oC_3\), respectively, the two prefixed patterns of Qal (X stands for a consonant, which changes according to the person and number). Similarly, traditional scholars claim that imperative forms of the pattern Hifil are still in use, and should look as follows: \(haC_1C_2\text{e}C_3\). This is a historical form, based on the prefixed form \(XaC_1C_2\text{i}C_3\), (again, ‘X’ represents a changing consonant, depending on the person and number). Sometimes, the combination of the imperative pattern with a root forms a consonant cluster in word initial position. This mainly happens in the second person feminine and second person plural. Since traditional Hebrew does not allow a consonant cluster in word initial position, a short
A matter of time: tense, mood and aspect in spontaneous spoken Israeli Hebrew

epenthetic vowel is inserted between \( C_1 \) and \( C_2 \), as shown above for the Qal imperative forms. Imperative forms of the Qal pattern were found in the corpus, whereas not even one imperative form of the Hifil pattern was found. Only negligible numbers of imperative forms were found in other patterns than Qal; in the research group only three forms of Nifal imperative (non-normative) and eight forms of Piel imperative were found; in the control group only eleven forms of Piel imperative were found. Hifil imperative forms were completely absent, and their parallel prefixed forms were used instead. The imperative forms that were found do not follow the normative formation rules of the imperative. Upon further consideration, it turns out that the reason for using imperative forms in SIH is phonological, and not morphological. Imperative forms in SIH are employed almost always only in cases where a root with (a) weak consonant(s) is used. A negligible number of cases were observed with imperatives containing roots with three strong consonants. All these forms are derived by the omission of the initial syllable of the prefixed form, rather than by using a separate imperative pattern, as in the classical forms. Refer to example E-22 below; the omitted syllable is underlined:

**Prefixed form:** taazvi ‘leave (it)’ tifteXu ‘open’ (E-22)

**Normative imperative:** ?`izvi pitXu

**Spoken imperative:** azvi fteXu

(ʕzb-Qal-2-F-SG) (pth-Qal-2- PL)

Only forms like azvi ‘leave (it)’ and fteXu ‘open’ were found in the corpus. Not even one classical form like ?`izvi ‘leave (it)’ and pitXu ‘open’ was found. The forms that were found are derived from their parallel prefixed form by the omission of the first syllable, which contains the person and number. The imperative forms in SIH do not follow a constant pattern, but rather a phonological omission. The rules, according to which classical imperatives are derived, do not apply here, neither do they apply in other similar examples across the corpus. It has been already implied by Bat-El (2002:657-458) that imperatives in Israeli Hebrew (to which she
refers as Colloquial Hebrew) are derived phonologically. Yet, she refers to truncation in all imperative forms in IH. In the corpus truncation was found mainly in forms with weak root consonant(s), and in a limited number of patterns.

This means that SIH has phonologically-derived imperative forms. These imperatives are sometimes identical to and sometimes different in form from the normative patterns. They are different in their derivation process, as they follow a phonological constraint, and not a morphological pattern, and they are not possible for all roots. They are produced only under specific constraints; otherwise, their parallel prefixed forms are used. It is assumed that the normative imperative forms are not productive in SIH, and that identical normative and spoken forms are probably a result of a coincidence, rather than of an identical rule.

This means that the origin of the imperative forms in SIH is different from that of the classical, normative forms, and that the main mood-expressing category in SIH is the prefixed form, which is claimed to represent future tense according to normative views. Prefixed forms are used to express the imperative as well.

5.2.3.2. Prefixed forms in SIH express mood

Since there is complete agreement between form and modal meaning in SIH, and modality types are grammaticalized at the morphological level, it is concluded that mood exists in the verb system of SIH. The forms which express mood are prefixed forms and imperative forms, the latter being phonological derivatives of the former.

Refer to 5.2.1.4 above. All prefixed forms that were found in the corpus express mood. No prefixed form expressed anything else but mood. The specific mood type is not denoted by the prefixed patterns, but rather by other parameters in the context, such as lexical items or other verbal patterns. The most widespread use of the prefixed forms is the imperative mood, but other types of mood are also used with the prefixed forms. Refer to Example E-23 below.
SIH 'imperative' forms, which are phonologically derived from prefixed forms, also express mood, only that these forms express the imperative mood only, and not other mood types.

5.2.3.3. Quantitative information

Mood is the second most widespread category in SIH after aspect. It constitutes almost 25% of all verbal forms in a conversation, see 5.5.1 and 5.5.2 below. The patterns which represent mood in SIH are prefixed forms, as well as imperative forms, which are not the same imperative forms as in traditional grammars, but newly-created, phonologically-oriented ones.

Apparently, there is a hierarchy in SIH in the TMA categorization, where aspect is the most prominent, mood is the second most prominent,
and tense is the least prominent category. The grammaticalization of aspect is the most widespread, and makes use of the largest number of forms and the largest number of patterns (suffixed forms and participles). The grammaticalization of mood includes less forms than the aspect category: only the prefixed patterns and the imperative forms, which are assumed to be dependent on and derived from the prefixed forms and are limited in their distribution. The grammaticalization of tense is limited to one root in one pattern, in most of the cases only to suffixed forms. This produces the lowest number of forms, and is thus the least prominent. Also, in the case of tense, the use of many peripheral means is needed, which is typical for non-prominent categories.

There is a clear border in the SIH verb system between the forms and the meanings they represent: suffixed forms and participles represent aspects; prefixed forms (and imperatives) represent mood; a suffixed hjj ‘be’ in the Qal pattern represents tense.

5.2.3.4. Theoretical linguistic definitions

According to Bhat (1999), semantically speaking, only one of the three TMA categories can be prominent in a language. This means that the three TMA categories must be inter-related, since otherwise, they could have had the same degree of dominance, which is usually not the case. This is apparent in the above hierarchy of TMA categories in SIH. According to Bhat, languages make use of their prominent category to express the other two, non-prominent categories. For example, he claims that in languages, which are aspect-prominent, past tense is expressed by a variety of the perfective (p. 91). SIH presents exactly this case, where suffixed forms, basically expressing aspect, are used to express past tense, yet with additional peripheral means, usually time expressions, that indicate that the event happened in the past. Sometimes, participles can be used to express future tense as well, again, with the addition of a time expression, which denotes future. Mood can be also inter-related to tense. It is mainly used to express the imperative mood, but with the addition of
time expressions, its forms can be used to express future tense, like in the case of aspect.

5.3. **Verb constructions – formal discussion**

In this section I will start from the various verbal forms and study the TMA meanings they may express. Table 5-4 below shows the major verb forms in SIH and the major TMA meanings they represent. The participle is the most used verbal form in SIH. Participles in SIH represent mainly imperfective aspect, but also relative tense. Some of the forms are parallel to the normative forms, which are shown in Figure 5-1. Note the differences in meanings.

**Table 5-4: Major verb forms and their meanings in SIH**

<table>
<thead>
<tr>
<th>Verb form</th>
<th>Tense</th>
<th>Mood</th>
<th>Aspect</th>
<th>Tense+ aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suffixed verbs</td>
<td></td>
<td></td>
<td>Perfective</td>
<td></td>
</tr>
<tr>
<td>Participles</td>
<td>Relative</td>
<td></td>
<td>Imperfective</td>
<td></td>
</tr>
<tr>
<td>Prefixed verbs</td>
<td></td>
<td></td>
<td>Imperative + other types</td>
<td></td>
</tr>
<tr>
<td>Imperatives</td>
<td></td>
<td></td>
<td>Imperative</td>
<td></td>
</tr>
<tr>
<td>Suffixed <em>hij</em> ‘be’ forms in Qal</td>
<td>Past</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suffixed <em>hij</em> ‘be’ forms in other patterns</td>
<td></td>
<td></td>
<td>Perfective</td>
<td></td>
</tr>
<tr>
<td>Suffixed <em>hij</em> ‘be’ + participle</td>
<td>Countferactual</td>
<td></td>
<td>Habitual past</td>
<td></td>
</tr>
</tbody>
</table>

5.3.1. **The participle in SIH and its use**

Participles in SIH can be used both as verbs and as nominals. Each of the SIH verb patterns has its own participle forms, which are inflected for gender and number, but not for person. Participles can thus appear in four forms, similarly to nominals in IH. Figure 5-2 below shows the four participle forms of the **Qal** pattern. ‘C’ represents a root consonant; the stress location is also noted. The plural suffixes of the participles
correspond to plural suffixes in the nominal system of SIH. The root used in the example is *lmd* ‘learn, study’.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male</strong></td>
<td>CoCéC → <em>lomed</em></td>
<td>CoCCiC → <em>lomdim</em></td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>CoCéCet → <em>lomedet</em></td>
<td>CoCCót → <em>lomdot</em></td>
</tr>
</tbody>
</table>

*Figure 5-2: Participle inflections of the root Lmd ‘learn, study’ in the Qal pattern*

When a participle is the only verbal form in the expression, it generally expresses the imperfective aspect. On a more limited scale, the participle also expresses relative tense. As mentioned above, this only happens in narrative texts. There is no grammatical distinction between imperfective sub-types, and the more specific aspectual meanings are derived from the context, rather than by a separate grammatical structure. Therefore, habitual, progressive, continuous, iterative and durative aspects are all expressed by the same form, which is the participle.

Participles are also used as parts of verbal constructions. Such constructions can include either two contiguous participles or a participle preceded by a suffixed form of the root *hjj* ‘be’ in the Qal pattern. In the former case – the two participles express a quantitative, durative aspect. In the latter case, the construction expresses the habitual past. Further details on these constructions along with examples are presented in 5.3.6.2 and 5.4.4 below, respectively.

As mentioned earlier, participles can also express relative tense in the past, i.e., in cases where past time reference is obvious from the context. This happens only in narratives, where participle forms serve as part of the flow of events. Examples for the use of participle as a relative tense specifier are presented in E-14 and E-15 above.
The main role of the participle is the expression of the imperfective aspect, i.e. it is marked for the imperfective. Its functioning as a relative tense specifier is dependent on the context and content of the conversation. Participles serving as imperfective aspect are default cases, whereas all other appearances of the participle are conditioned.

In Modern Hebrew grammars, participles are referred to by the authors as present tense. In fact, participles in SIH can serve as almost everything else but present tense. The many roles of the participle do not negate the fact that participles, in their deep structures, are marked for the imperfective aspect.

5.3.2. Suffixed forms and their use

Suffixed verb forms in SIH express the perfective aspect. They do not express past tense, as traditional scholars claim, because they are used to express complete actions, which are not necessarily in the past. There is one exception to this rule: Whenever the auxiliary verb hjj ‘be’ is used in combination with the verb pattern Qal, the suffixed form expresses past tense. In all other cases, it expresses perfective aspect. An example for a suffixed form expressing a perfective meaning, which is not in the past, but actually in the future, is presented below:

\[ lo \textit{jeleX} \]
\[ C-4-1-3:229-232 \text{ (E-24)} \]
if it does not work
Form: \textit{hlk}-Qal-PRE-3-M-SG
Meaning: speculative mood

\[ lo \textit{imtsa Xen beenaj} \]
if it does not work
Form: \textit{mts?}-Qal-PRE-3-M-SG {an idiom}
Meaning: speculative mood
**alaX**

I will give it up  
**Form:** hlk-Qal-SUF-3-M-SG  
**Meaning:** perfective aspect

**mamSiXim ala**

and will continue forward  
**Form:** mšk-Hitil-PTCP-M-PL  
**Meaning:** relative tense

### 5.3.3. Prefixed forms and their use

Prefixed forms in SIH express mood. Several types of mood exist in SIH, the most widespread is the imperative. Most of the prefixed forms are used as imperatives. Imperative forms are also used for this purpose, but they are derived from the prefixed forms, and are phonological in nature, see 5.2.1.4 above. There is no distinction in form between the various mood types. A distinction between them is possible according to the context of the conversation or to lexical items. As opposed to the traditional approach, prefixed forms do not express future tense. They are tenseless, appearing in conversations describing events that have ended. Also, they can be absent from conversations, describing future events.

### 5.3.4. Imperative forms and their use

Imperative forms express the imperative (directive) mood. They correlate with the prefixed forms in this regard. There is a clear distinction of when a prefixed form is used to express the imperative, and when an imperative form is used for the same purpose. Imperative forms are used only in cases where at least one root consonant is a weak consonant. Weak root consonants in SIH can be glottal consonants (which are not pronounced at all), glides or sonorant consonants. It does not matter where the weak consonant is located in the root in order that the imperative form be used. It can be the first, second or third (usually also last) consonant of the root.
Prefixed forms that express the imperative mood have all their root consonants overt.

Imperative forms are used only as commands. Prohibition, for example, is always expressed by the negation of a prefixed form, and does not make use of imperative forms at all. Examples of imperative forms from the corpus are presented below.

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>bo</em></td>
<td>come</td>
</tr>
<tr>
<td><em>jeled matok</em></td>
<td>sweet boy</td>
</tr>
<tr>
<td><em>Xake Rega</em></td>
<td>Wait a minute</td>
</tr>
<tr>
<td><em>simi et ze po</em></td>
<td>put it here</td>
</tr>
</tbody>
</table>

5.3.5. **Auxiliary verb constructions**

There is only one auxiliary verb in SIH, which is the root *hjj* ‘be’ in combination with the Qal pattern. This form expresses tense, usually appearing as a suffixed form, sometimes appearing as a prefixed form. When suffix-inflected it represents past tense. When prefix-inflected it
represents future tense. When the root *hij* ‘be’ appears in any other verb pattern it expresses aspect (if the pattern is suffix-inflected or a participle) or mood (if the pattern is prefix-inflected). Examples from the corpus of the auxiliary verb *hij* ‘be’ are presented below.

\[
\text{ze } \text{ije dalil} | \text{ it will become diluted} \\
\text{Form: } \text{hij-Qal-PRE-3-M-SG} \\
\text{Meaning: Future tense}
\]

\[
\text{ze } \text{aja eleganti} | \text{ this was elegant} \\
\text{Form: } \text{hij-Qal-PRE-3-M-SG} \\
\text{Meaning: Past tense}
\]

5.3.6. Concatenated verbs

The number of concatenated verbs in this research was relatively low. Yet, several types of concatenated verbs could be identified, and are detailed below. Each of the verbs in these phrases is inflected separately. Still, it is important to note that as opposed to the habitual past construction, concatenated verb phrases with more than one inflected element denote only one TMA category, usually different types of mood or a quantitative aspect. The types of verb phrases with more than one inflected element that were found in this research are detailed below.

5.3.6.1. Two suffixed forms in a sequence

Sequences of two suffixed verbs were found in this study. Although not widespread, all the occurrences of this construction are characterized by a sequence of a state verb followed by an active verb. The first element in these phrases, the state verb, assigns a durative meaning to the whole phrase. Thus, these phrases represent durative aspect. This construction is an exception, for two reasons: First, it makes use of two qualitative forms in a sequence to express a quantitative aspect. Second, as opposed to other sequences of two inflected forms, it represents aspect,
and not mood. Each element of the phrase is separately inflected, and both elements have an identical inflection. But the construction still represents only one TMA category. Like other constructions found in this study, this may hint at a tendency to prefer more analytical constructions in the language. The following examples illustrate such constructions:

**jaSav dibeR** | **G-4-2-3:884** (E-30)
he was speaking (literally: he sat spoke)
Form: *jšb*-Qal-SUF-3-M-SG + *dbbr*-Piel-SUF-3-M-SG
Meaning: durative aspect

**amad safar** | **C-11-4-1:57** (E-31)
he was counting (literally: he stood counted)
Form: *ʕmd*-Qal-SUF-3-M-SG + *spr*-Qal-SUF-3-M-SG
Meaning: durative aspect

It should be noted that the two verbs in these constructions are always adjacent, and nothing can appear between them. There are cases where the conjugation word *ve*-‘and’ is present between the two elements of the phrase. In these cases each of the elements expresses the perfective aspect independently.

### 5.3.6.2. Two participles in a sequence

A few sequences of two participles were found in this study. Like the sequence of two suffixed forms, this sequence also represents aspect, and not mood. But as opposed to the sequence of two suffixed forms, this sequence makes use of two qualitative forms in a sequence to produce a quantitative aspect, namely durative meaning. Similarly to the two suffixed forms, the first element in these constructions is always a state verb, which is apparently the element that assigns the durative meaning to the whole expression. This means that in SIH it is possible to produce a specific durative aspect using two participles, one after the other, with the first one being a state verb. Yet, in most of the cases the durative aspect is specified in SIH by external lexical means. It is possible that a process of change is underway, where the two forms exist. The distribution of the
forms suggests that expressions where external lexical means are used are currently the more dominant ones. Examples of two consequent participles are presented below:

\[ \text{joSev medabeR} \mid \text{G-4-2-3:57 (E-32)} \]
\[ \text{sitting (and) speaking} \]
\[ \text{Form: } j\check{s}b-\text{Qal-PTCP-M-SG} + dbR-\text{Piel-PTCP-M-SG} \]
\[ \text{Meaning: durative aspect} \]

\[ \text{omedet boXeRet} \mid \text{G-3-2-1:183 (E-33)} \]
\[ \text{standing (and) picking up} \]
\[ \text{Form: } \check{q}md-\text{Qal-PTCP-F-SG} + bXR-\text{Qal-PTCP-F-SG} \]
\[ \text{Meaning: durative aspect} \]

5.3.6.3. Two prefixed forms in a sequence

A sequence of two prefixed forms was also observed in this study. Although not very widespread, it is clear from its occurrences that there are two main types of such constructions. The first type contains two identical prefixed forms, one after the other. Both these forms are inflected for the second person. This type always denotes the imperative, like in the following examples:

\[ \text{tamSiX tamSiX} \mid \text{G-6-3-2:129 (E-34)} \]
\[ \text{go on, go on} \]
\[ \text{Form: } m\check{sh}-\text{Hifil-PRE-2-M-SG} + m\check{sh}-\text{Hifil-PRE-2-M-SG} \]
\[ \text{Meaning: imperative mood} \]

\[ \text{tavi tavi} \mid \text{D-7-4-1:304 (E-35)} \]
\[ \text{bring (it to me), bring (it to me)} \]
\[ \text{Form: } bw?-\text{Hifil-PRE-2-M-SG} + bw?-\text{Hifil-PRE-2-M-SG} \]
\[ \text{Meaning: imperative mood} \]

In the second type, the first element is always a dynamic verb, more specifically a movement verb, in particular the verbs evi ‘bring’ (bw?-\text{Hifil-SUF-3-M-SG}) and ba ‘come’ (bw?-Qal-SUF-3-M-SG), both having the
same root. This type represents either directive or hortative mood, as in the following example:

**tavo teSev |**  
**G-6-3-2:28 (E-36)**  
sit down  
*Form: bwʔ-Qal-PRE-2-M-SG + jšb-Qal-PRE-2-M-SG*  
*Meaning: directive mood*

**tavi niRe |**  
**D-7-4-1:408 (E-37)**  
let me see OR let’s see  
*Form: bwʔ-Hifil-PRE-2-M-SG + rʔj-Qal-PRE-1-PL*  
*Meaning: hortative mood*

Both types represent an illocutionary act, where the duplication of the prefixed form is meant to point at an immediate action, i.e. something, which is to be done immediately. This act can be either directive or hortative. In the second type, the two elements do not need to be inflected for the same person and number. Yet, the immediate act meaning is still there.

### 5.3.6.4. Two imperative forms in a sequence

A sequence of two imperative forms was also found in this study. This construction has two main types. Similarly to the sequence of two prefixed forms, the first type contains two identical imperative forms in a sequence. The example below shows this type:

**kXi kXi |**  
**C-11-4-1-B:9 (E-38)**  
take (it), take (it)  
*Form: lkħ-Qal-IMP-2-F-SG + lkħ-Qal-IMP-2-F-SG*  
*Meaning: imperative mood (immediate)*

Similarly to the construction with the two prefixed forms, the first element of the second type is always a dynamic verb, more specifically a movement verb. There were two such elements in this study: **bo** ‘come’ and **leX** ‘go’. The following example illustrates such a construction:
In both types, this construction denotes the imperative. Apparently, there is no difference in meaning between the sequence of two prefixed forms and the sequence of two imperative forms. Please note that imperative forms are used only in cases where the roots of the forms have at least one weak consonant, otherwise the prefixed forms are used. Probably, the two constructions fulfill the same functions and the use of the imperative forms is due to phonological reasons rather than to morphological or syntactic ones.

5.3.6.5. A sequence of imperative form + prefixed form

Sequences of an imperative form followed by a prefixed form were found in this study. This construction type always contains a movement verb as its first component. The movement verbs observed in these constructions in the study were bo ‘come’ (root bwʔ) and leX ‘go’ (root hlk). The second component is a prefixed verb, which inflects for the second person, having an inflection identical to the first component, or first person plural. The former case denotes the imperative mood, the latter usually denotes the hortative mood. Furthermore, the imperative of bo ‘come’ can have both types of complement, whereas the complement of leX ‘go’ can only be of the first type, which means it can only have the same person-number inflection as the first component. The examples below show these types:

Imperative (bo ‘come’) + prefixed form – both inflected identically:

- **bo j teRdi | C-5-2-3:561 (E-40)**
  - come down here
  - Form: bwʔ-Qal-IMP-2-F-SG + jrd-Qal-IMP-2-F-PL
  - Meaning: imperative mood
Imperative (leX ‘go’) + prefixed form – both inflected identically:

**leXu tivdeku ma koRe Sama |**  
*go check what is happening there*  
*Form: hlk-Qal-IMP-2-PL + bdq-Qal-IMP-2- PL + qrj-Qal-PTCP-M- SG*  
*Meaning: imperative mood + progressive aspect*

Imperative (bo ‘come’) + prefixed form – differently inflected:

**bo nazmin pitsa |**  
*let’s order pizza*  
*Form: bwʔ-Qal-IMP-2-M-SG + zmn-Hifil-PRE-1-PL*  
*Meaning: hortative mood*

Apparently, there is no difference between the use of this construction, and the use of prefixed forms alone. The first two examples could have the same meaning when uttered without the first component (imperative form of a movement verb), i.e. teRdi ‘go down’ and tivdeku ‘check’, respectively. Yet in the third example, the compound cannot be separated, because it will lose its meaning.

5.3.6.6. Infinitive complements

Infinitive complements are very widespread in SIH. They can appear with any verbal form, as well as with adjectives. Infinitives do not carry TMA, since they are nominal in nature, and are not inflected. They are not discussed separately in this thesis, but rather as part of other constructions. Infinitive complements are considered grammatical in normative views.

5.3.6.7. Modal verbs

There are several modals in SIH. These are either verbs or adjectives with an inherent modal meaning, which are followed by an infinitive complement. In some cases they can also appear with nominal
complements in the accusative case. Such auxiliaries, for example, are Xajav ‘must’ and tsaRiX ‘need’, as well as jaXol ‘can’ and Rotse ‘want’. The first two are mostly adjectives, the last two have verbal inflections. Although tsaRiX ‘need’ can inflect in the Hitpael pattern, these inflected forms are hardly used in regular speech. tsaRiX ‘need’ is mainly used as an adjective. jaXol ‘can’ can inflect in the Qal pattern in some cases, but usually its participle forms are used. Suffixed and prefixed forms of jaXol ‘can’ are more rare, and are usually replaced by a construction of the auxiliary hjj ‘be’ followed by a participle form of jaXol ‘can’, which is a more analytical structure. Rotse ‘want’ inflects in the Qal pattern, and is used this way in speech as well. Xajav ‘must’ appears only as an adjective. These forms, in particular Xajav ‘must’ and tsaRiX ‘need’, are not auxiliary verbs, but can perhaps be considered as semi-auxiliary forms. They are different from hjj ‘be’ in that the latter indicates only a shift in time, whereas this group of words indicates a modal property, which is inherent in their lexical root. Therefore, hjj ‘be’ cannot change the meaning of the complement, while these words can add an additional modal meaning to it. It is possible that these words will turn into auxiliaries in the future and that they are currently in the process of changing.

5.4. TMA categories – semantic discussion

In the previous section I started out from the various verb forms and studied their TMA meanings. In this section I take the opposite perspective, and study how various types of TMA meanings can be expressed formally.

5.4.1. Tense

5.4.1.1. Absolute tense

Representation of absolute tense in SIH is achieved only by the auxiliary verb hjj ‘be’ in combination with the Qal pattern. These are inflected forms of the root hjj ‘be’ in the Qal pattern, usually appearing as suffixed forms,
but sometimes also as prefixed forms. No participle forms of *hjj ‘be’ exist. A very few forms of *hjj ‘be’ inflected in the *Nifal pattern (suffixed form) were found in this study. However, these do not denote tense, but rather aspect, similarly to other suffixed forms. The use of the auxiliary *hjj ‘be’ as a tense specifier can be further sub-divided into two types of cases:

- When *hjj ‘be’ is the only verbal form in the expression, and it is followed by a nominal complement, as in the following example:

  : *lo *aja efRoAX | D-6-3-2:317 (E-43)
  it was not a chick
  Form: *hjj-Qal-SUF-3-M-SG
  Meaning: past tense

- When *hjj ‘be’ is followed by a verbal participle form, which denotes aspect, together expressing either the habitual past or counterfactual mood. Examples E-44 and E-45 below show the use of *hjj ‘be’ as part of the habitual past, and as part of the counterfactual mood, respectively. There are two consequent habitual past cases in Example E-44. Both of them appear in ‘broken’ speech units. Yet, this fact does not change their habitual past meaning.

  : *aja *beemet| N-4-2:117-119 (E-44)
  she was (=literally: used to) really
  Form: *hjj-Qal-SUF-3-F-SG
  Meaning: habitual past – first part

  : oseket bebaalej Xaim Sebaem (.) *aju-
    working with animals in which were (=literally: used to)
  Form: *saj-Qal-PTCP-F-SG + *hjj-Qal-SUF-3-PL
  Meaning: habitual past – second part + habitual past – first part

  : osim nisuim|
    performing trials
  Form: *saj-Qal-PTCP-M-PL
  Meaning: habitual past – second part
Whole expression meaning: She used to work with animals, which used to undergo (medical) trials

The counterfactual mood is presented in Example E-45 below.

\[ \text{ani noRa oev Xaj- baalej Xaim|} \quad N-4-2:99-102 \quad (E-45) \]
- I very much like ani- animals
  - Form: \( \text{?hb-Qal-SUF-3-M-SG} \)
  - Meaning: habitual aspect

\[ \text{mamaS|} \]
- really

\[ \text{aiti jaXol lilmod—} \]
- I could have studied—
  - Form: \( \text{hjj-Qal-SUF-3-M-SG} + \text{jkl-Qal-PTCP-M-SG} + \text{lmd-Qal-INF} \)
  - Meaning: counterfactual mood

\[ \text{jeS mitksoa SenikRa \{animal husbandry\}|} \]
- there is a profession called animal husbandry
  - Form: \( \text{qr?-Nifal-PTCP-M-SG} \)
  - Meaning: habitual aspect

For discussion of the habitual past see 5.4.4 below. For discussion of the counterfactual mood see 5.4.2.2 below. Example E-18 above illustrates both \( \text{hjj} \) ‘be’ sub-types – past tense and the habitual past, where the first \( \text{hjj} \) ‘be’ is followed by a nominal complement and represents tense, whereas the second \( \text{hjj} \) ‘be’ is followed by a participle and represents the habitual past.

5.4.1.2. Relative tense

In the course of a conversation, especially in narrative chunks, cases of relative tense were observed in SIH. These cases are strictly conditioned. They are always expressed by participle forms, and they must have an absolute time reference established somewhere in the context. This time reference can be expressed either grammatically or lexically. The vast
majority of the cases of absolute time reference in SIH is lexical. For the use of participles as relative tense specifiers, see 5.3.1 above.

5.4.2. Mood

5.4.2.1. Imperative mood

Imperative mood denotes direct commands or requests, and is usually expressed in IH by two types of forms, one serving as the subsidiary of the other. These forms are the prefixed forms and the imperative forms, respectively. Types of direct commands are prohibition, permission and the like.

An example for the imperative mood in SIH, as observed in this study, is presented below.

**al taSmii et ze po | N-3-23:77 (E-46)**

do not play it here

**Form:** šmʕ-Hifil-PRE-2-F-SG

**Meaning:** imperative mood

5.4.2.2. Counterfactual mood

Counterfactual mood occurs in a conditional statement that indicates what would be the case if its antecedent were true. Since it describes a hypothetical situation rather than a real one, it is in many cases considered mood. Yet, researchers have pointed at a strong connection between counterfactuals and the habitual aspect, claiming that these two are using the same morphology. Their claim is based on a typological study of several languages (Haiman and Kuteva 2002:119). None of these languages was Israeli Hebrew. Yet, Israeli Hebrew represents similar behavior in this regard. Counterfactual mood structures were found in this research, having an identical morpho-syntactic structure as the habitual past.
An example for the counterfactual mood in SIH, as observed in this study, is presented below.

\[
\text{ani } \text{ai} \text{t} \text{i } \text{neXSelet} \text{ be} \text{RoRSaX} \mid \text{N-3-22:289 (E-47)} \]
I would have failed Rorschach
Form: \text{hj}j\text{-Qal-SUF-1-SG} + \text{kšl-Nifal-PTCP-F-SG}  
Meaning: counterfactual mood

5.4.2.3. Assumptive mood

Assumptive mood indicates that the statement is assumed to be true, because under similar circumstances it is usually true, although there is no evidence that the statement is true at the moment of speech.

An example for the assumptive mood in SIH, as observed in this study, is presented below.

\[
\text{baRe} \text{g}a \text{ Se} \text{ani bematsav } \text{Se} \text{bo} \mid \text{G-9-3-1:524-527 (E-48)} \]
when I get into a situation in which
\[
\text{ani } \text{lo meRutse} \mid \]
I am unhappy

......................

\[
\text{az min ast} \text{am i titmoX bi vetagid} \mid \]
then she will probably support me and say
Form: \text{tmk-Qal-PRE-3-F-SG} + \text{ngd-Hifil-PRE-3-F-SG}  
Meaning: assumptive mood

......................

5.4.2.4. Hortative mood

Hortative mood is a group of semantically similar deontic moods, which are relatively neutral with regard to attitude, usually reflecting encouragement with a little more urging to take part in a proposition.
An example for the hortative mood in SIH, as observed in this study, is presented in Example E-42 above.

### 5.4.2.5. Commissive mood

Commissive mood is a commitment of the speaker that the action is going to take place.

An example for the commissive mood in SIH, as observed in this study, is presented below.

\[\text{ani aXSav } jatXil \text{ ledabeR Rak jafe} \quad N-3-22:61 \quad (E-49)\]

I will now start talking nicely \{=meaning: from now on\}

- **Form:** thl-Hifil-PRE-1- SG + dbr-Piel-INF
- **Meaning:** commissive mood

### 5.4.2.6. Optative mood

Optative mood indicates a wish or hope that the speaker expresses.

An example for the optative mood in SIH, as observed in this study, is presented below.

\[\text{Seamaim lo } itkaReRu \quad G-5-1-1:531 \quad (E-50)\]

I wish that the water will not cool down

- **Form:** qrr-Hitpael-PRE-3-M-PL
- **Meaning:** optative mood

Note: In many cases, optative expressions start with the particle Se- ‘that’, like in example E-50 above, but this particle appears only in part of the optative expressions. No difference in structure or meaning was found between optative expressions which contain the Se- ‘that’ particle, and the ones which do not. Therefore, it is concluded that the optative nature of the expressions is not in the particle Se- ‘that’, but in the verb form.
5.4.2.7. Speculative mood

Speculative mood indicates that the utterance is based on a speculation of the speaker, and is not necessarily true.

An example for the speculative mood in SIH, as observed in this study, is presented below.

\[ \text{gam im u jaamod al jad e} \mid \text{N-4-2324:183-190 (E-51)} \]
\[
\text{even if he will stand next to eh} \\
\text{Form: } \text{ḍmd-Qal-PRE-3-M-SG} \\
\text{Meaning: speculative mood}
\]
\[
\text{(…)} \text{ av} \\
\text{a father}
\]
\[
\text{im bno} \\
\text{and his son}
\]
\[
\text{veaav jenase lidkoR oto} \\
\text{and the father will try to stab him} \\
\text{Form: } \text{nṣ-Ḥifṭl-PRE-3-M-SG + ḍqr-Qal-INF} \\
\text{Meaning: speculative mood}
\]
\[
\text{o aben} \\
\text{or the son will}
\]
\[
\text{o maSu} \\
\text{or someone else}
\]
\[
\text{u lo jagiv} \\
\text{he will not react} \\
\text{Form: } \text{nḡb-Hifṭl-PRE-3-M-SG} \\
\text{Meaning: speculative mood}
\]
\[
\text{lo ifga baem} \\
\text{(he will) not hurt them} \\
\text{Form: } \text{ḍfg-Qal-PRE-3-M-SG} \\
\text{Meaning: speculative mood}
\]
5.4.3. Aspect

The grammatical distinction between aspects in SIH concerns the major distinction between perfective and imperfective aspects. This means that verb constructions denote either perfective or imperfective aspect, without further distinction of the aspectual sub-types. The distinction between aspectual sub-types in SIH is done only lexically, with the exception of a few minor and rare multiple-verb sequences, which are detailed in 5.3.6 above.

5.4.3.1. Perfective

Perfective forms in SIH are represented by suffixed verbs. This means that the suffixes attached to verbs, represent perfective aspect, alongside with person, gender and number. As opposed to traditional theories, and to most of the current approaches to the Modern Hebrew verb system (Berman 1978, Glinert 1994, Coffin-Amir and Bolozky 2005), verb suffixes never express past tense, unless the inflected root is *hjj* ‘be’ and the verb pattern is *Qal*. Only this combination represents past tense, see 5.4.1 above.

5.4.3.2. Imperfective

Imperfective meaning in SIH is expressed by participles. Participles are inflected for imperfective aspect, as well as for gender and number. As opposed to other verb forms in SIH (suffixed, prefixed), participles are not inflected for person. Thus, participles present only the distinctions of male-female and singular-plural, whereas person in these contexts is represented lexically. For this reason, participles have only four inflectional forms in each pattern, which are the singular-male, singular-female, plural-male and plural-female forms. The participles actually constitute the most consistent system in the SIH verb system, in contrast to suffixed and prefixed verbs, which show inconsistency in their forms (suffixed verbs are basically inflected for person, but not all of them are
inflected for gender). Thus, suffixed forms present seven inflections for each verb: first person singular and plural, second person singular male and female, second person plural (no gender distinction), third person singular male and female, and third person plural (no gender distinction).

Prefix verbs in SIH have only five inflections, as a result of a merger between some of the forms, such as the first person and third person male singular forms and the second person male and third person female singular forms). Traditional scholars tend to refer to participles in the verb system as expressing present tense. Yet, participles never stand for present tense, but rather represent imperfective aspect, leaving the expression of present tense to independent lexical items. In a few cases, participles can express relative tense, but these cases are limited in number, and can only denote past and future, but not present tense. For further explanations and examples see 5.3.1 above.

5.4.4. The expression of two TMA categories – the habitual past

Habitual past constructions in SIH contain two elements; each of these elements is inflected separately. These elements are the auxiliary verb *hjj* ‘be’, generated into the *Qal* pattern, and inflected by a suffix, representing past tense, followed by a participle, which is itself the inflected form for imperfective aspect. The combination of these two forms yields a habitual past, where the imperfectivity can only be realized as habitual in this structure. Examples from the corpus are presented in 5.4.1 above.

5.5. Distribution of TMA categories in the research

General notification: the percentages in all the graphs below are rounded.

5.5.1. Major TMA distribution in the research group

For the statistical calculations, only grammatical TMA forms are taken into account. This means that only forms that express TMA meaning by either a pattern or a syntactic structure, but not by lexical items, are taken into
account. The distribution of major TMA categories among the informants in this research is presented in Figure 5-3 below.

![Figure 5-3: Distribution of major TMA categories in the research group](image)

Israeli Hebrew turns out to be an aspect-prominent language. The aspect category is the most widespread category, while all aspektual forms constitute almost 68% (over two thirds) of the verb forms in a conversation. Only 6.9% of the verbal forms denote tense, and all of them are expressed by very limited means. This is in complete contradiction to all traditional theories on Modern Hebrew, which view the verb system of the language spoken in Israel as a tense-based system. These include absolute and relative tense forms, see the discussion in 5.4.1 above. About 0.6% of the forms represent both aspect and tense, and include structures with the auxiliary verb הָיָה ‘be’ and a participle. The remaining 24.6% represent different types of grammatical mood.
5.5.2. Major TMA distribution in the control group

The distribution of major TMA categories in the control group in this research is presented in Figure 5-4 below.

As shown here, the results in the control group are almost identical to the ones in the research group. Again, the aspect category is the most widespread one; the aspectual forms constitute 67% (exactly two thirds) of the verb forms in a conversation. The verbal forms which denote tense constitute 7.7% of the overall distribution, 0.8% more than in the research group (6.9%). These forms include absolute and relative tense forms, see discussion in 5.5.3 and 5.5.4 below. This strengthens the claim that Israeli Hebrew verb system is not tense-based. Identically to the research group, 0.6% of the forms represent both aspect and tense, and include structures with the auxiliary verb *hijj* ‘be’ and a participle. And almost identically to the research group, the remaining 24.7% represent different types of grammatical mood.
5.5.3. Tense distribution in the research group

Out of the 6.9% of the forms that express tense among the native speakers in the research group, most of the forms denote absolute tense. The distribution of absolute and relative tense forms among the research group is presented in Figure 5-5 below.

![Pie chart showing 85% absolute tense and 15% relative tense forms.]

Figure 5-5: Distribution of absolute and relative tense forms in the research group

The vast majority of the forms in the sub-group of absolute tense express past tense. The division of the absolute tense sub-category into past and future tense is presented in Figure 5-6 below. No present tense forms are found in the research group.
Figure 5-6: Distribution of absolute tense forms in the research group

This is also in contradiction to the common approach towards Modern Hebrew, which claims that Modern Hebrew has three tenses: past, present and future. No present tense forms are found in the research group, and the amount of past and future forms is very limited.

Future forms are always expressed by prefixed forms of the root *hij* ‘be’ in the *Qal* pattern, such as the form *ije* (*hij*-Qal-PRE-3-SG). Yet, forms of *hij* ‘be’ in the *Qal* pattern can also express mood. The difference between cases where *hij* ‘be’ in the *Qal* pattern expresses mood and where it expresses future is in the complement which follows it. In most of the tensed cases, the complement of *hij* ‘be’ is a noun, whereas in most of the mood cases, the complement of *hij* ‘be’ is an adjective. Yet, there is no clear border, and there are other types of complements as well in both categories.

Past forms are mainly expressed by suffixed forms of the root *hij* ‘be’ in the *Qal* pattern, such as the form *aja* (*hij*-Qal-SUF-3-SG). Yet, in the past tense category, a few (6% total) additional forms are found, as presented in Figure 5-7 below. These forms included two sequences of a
suffixed form of the root \text{rtsj} 'want' + an infinitive, one independent suffixed verb and eight constructions containing \text{hjj} 'be' and an adjectival or adverbial complement. The majority of these forms (73\%, which are 5\% of all the past tense forms) contain the root \text{hjj} 'be' (suffixed form) in combination with a complement. The number of forms without \text{hjj} 'be' is negligible (3), and cannot be regarded as representative.

\text{InflectedAdj=} an adjective, which inflects to M-F and SG-PL; \text{FrozenAdj=} an adjective, which does not inflect; \text{Rtsj='want'}

\textbf{Figure 5-7: Distribution of past tense forms in the research group}

Seventeen percent of the forms in this tense group express relative tense. All these forms involve the use of participles: 81\% of the forms are expressed by independent participles, whereas 19\% are expressed by a complex structure of participle + infinitive. This structure includes a sequence of a participle, followed by an infinitive, and also plays the role of relative tense. The division of the relative tense sub-category into grammatical structures is presented in Figure 5-8 below. An example for a structure of participle+infinitive representing relative tense follows the figure.
Figure 5-8: Distribution of relative tense forms in the research group

**u amaR|**
he say
*Form: ḫmr-Qal-SUF-3-M-SG*
*Meaning: perfective aspect*

**takSiv|**
listen (to me)
*Form: qšb-Hifil-PRE-2-M-SG*
*Meaning: imperative mood*

**ani Rotse laasot meaXajal aze|**
I want to make this soldier distinctive
*Form: rtsj-Qal-PTCP-M-SG + ṣṣj-Qal-INF*
*Meaning: relative tense*

**mitstajen||**
distinctive
5.5.4. Tense distribution in the control group

Similar to the research group, out of the 7.7% of the forms that express tense among native speakers in the control group, most of the forms denote absolute tense. Yet, the distribution of absolute and relative tense in the control group was significantly different from the distribution in the research group. The differences between the two groups are probably a result of the discourse type, and do not point at a significant difference in the verbal use of the forms. Although a higher percentage of relative tense forms are used in the control group, it is probably not a result of differences in linguistic structures, but rather differences in the content, participants and registers of the tested conversations. The distribution of absolute and relative tense forms among the control group is presented in Figure 5-9 below.

![Pie chart](image)

*Figure 5-9: Distribution of absolute and relative tense forms in the control group*

The vast majority of the forms in the sub-group of absolute tense express past tense. This is also similar to the research group. But
although in both groups the majority of forms is past tense, the distribution of past vs. future tense is different. This difference can be a result of the low number of tense forms in the corpus, which is probably not sufficient for statistical calculations, and can produce a high error rate and larger differences than those that really exist. The division of the absolute tense sub-category into past and future tense is presented in Figure 5-10 below. No present tense forms were found in the research group.

![Pie chart showing 96% past and 4% future tense forms](image)

*Figure 5-10: Distribution of absolute tense forms in the control group*

The results in the control group constitute a further contradiction to the common approach towards Modern Hebrew, which claims that Modern Hebrew has three tenses: past, present and future. No present tense forms were found in the control group either, which is consistent in the two groups.

Also in the control group, future forms are always expressed by prefixed forms of the root *hjj* ‘be’ in the *Qal* pattern. And also in the control group, forms of *hjj* ‘be’ in the *Qal* pattern can express mood. There are only five cases of *hjj* ‘be’ representing future tense in the control group.
Therefore it is difficult to come to any conclusion regarding the difference between cases of tense and mood here.

Similarly to the research group, past forms in the control group are mainly expressed by suffixed forms of the root *hjj* ‘be’ in the Qal pattern. Only two additional forms expressing past tense are found in the control group, as opposed to the research group, and as presented in Figure 5-11 below. These two structures are negligible in number, and constitute only 4% of all the past tense forms. Similarly to the research group, both these structures contain the root *hjj* ‘be’ (suffixed form) in combination with some adjective; one of them contains also an infinitive.

![Figure 5-11: Distribution of past tense forms in the control group](image)

Thirty seven percent of the forms in the tense group express relative tense. All these forms include the use of participles: 80% of the forms are expressed by independent participles, whereas 20% are expressed by a complex structure of participle + infinitive. These results are almost identical to the results in the research group. The division of the relative tense sub-category into grammatical structures is presented in Figure 5-12 below.
Figure 5-12: Distribution of relative tense forms in the control group

5.5.5. Aspect distribution in the research group

The most widespread TMA category in SIH is aspect. Over two thirds of the verbal forms in spontaneous speech express aspect among native speakers. The major distinction of aspect types is the perfective-imperfective distinction. The distribution of perfective and imperfective categories in the research group is presented in Figure 5-13 below.
Figure 5-13: Distribution of perfective and imperfective categories in the research group

The sub-group of perfective aspect includes 3 occurrences of punctual aspect. Punctual aspect was rare in the research, and thus was not treated independently. This distribution refers to pure aspects only, and thus it does not include the cases of the habitual past.

The sub-group of Imperfective aspect includes two major groups: qualitative aspect and quantitative aspect. The former group (qualitative) contains aspect types that represent uncountable actions. These types are continuous and progressive aspects, the last being a sub-type of the first one. The latter group (quantitative) contains countable aspect types, such as habitual, iterative and durative. The distribution of qualitative and quantitative aspect categories in the research group is presented in Figure 5-14 below.
The internal distribution of the qualitative aspect categories in the research group is presented in Figure 5-15 below. In some cases it was impossible to determine the sub-type of the continuous aspect from the context. In these cases, the 'continuous' sub-category appears as undecidable.
The internal distribution of the quantitative aspect categories in the research group is presented in Figure 5-16 below. It is obvious that the ‘habitual’ category is the most dominant one, whereas some cases of iterative and durative aspects were also observed.

![Pie chart showing the internal distribution of quantitative aspect categories.](image)

*Figure 5-16: Internal distribution of the quantitative aspect category in the research group*

The overall distribution of the aspect category in the research group is presented in Figure 5-17 below. It shows the distribution of all aspect subtypes, qualitative and quantitative, altogether. Apparently, the progressive is the most widespread aspect category in SIH, whereas the habitual is the second most widespread. The repetitions of the other three subaspects (durative, iterative and continuous) are quite limited.
5.5.6. Aspect distribution in the control group

In the control group, like in the research group, the most widespread TMA category in SIH is aspect. Exactly two thirds of the verbal forms in spontaneous speech express aspect. The major distinction of perfective-imperfective aspect is presented in Figure 5-18 below.
Figure 5-18: Distribution of perfective and imperfective categories in the control group

The sub-group of perfective aspect includes 5 occurrences of punctual aspect. As in the research group, the punctual aspect was rare in the research, and thus was not treated independently. This distribution refers to pure aspects only, and thus it does not include the cases of the habitual past.

The results in the control group are slightly different from the results in the research group. These differences are probably due to the conversation types, and therefore are not discussed separately.

The distribution of qualitative and quantitative aspect categories in the control group is almost identical to the research group, and is presented in Figure 5-19 below.
Figure 5-19: Distribution of qualitative and quantitative aspect categories in the control group

The internal distribution of the qualitative aspect categories in the control group is presented in Figure 5-20 below. The guidelines regarding the continuous aspect are identical to the ones used in the research group. The results are nearly identical to the ones in the research group.

Figure 5-20: Internal distribution of the qualitative aspect category in the control group
The internal distribution of the quantitative aspect categories in the control group is presented in Figure 5-21 below. Also in the control group, like in the research group, the ‘habitual’ category is the most dominant one, whereas some cases of iterative and durative aspects are also observed. The distribution of the quantitative aspect in the control group is very similar to that of the research group.

![Pie chart showing aspect distribution in the control group](image)

*Figure 5-21: Internal distribution of the quantitative aspect category in the control group*

The overall distribution of the aspect category in the control group is presented in Figure 5-22 below. This distribution is slightly different from the overall aspect distribution in the research group. Also here, the progressive is the most widespread aspect category, whereas the habitual is the second most widespread. The repetitions of the other three sub-aspects (durative, iterative and continuous) are quite limited in the control group as well.
Figure 5-22: Overall distribution of the aspect category in the control group

5.5.7. Mood distribution in the research group

The overall distribution of the mood category in the research group is presented in Figures 5-23 and 5-24 below. The first figure (5-23) shows the forms which express mood in SIH. The second figure (5-24) shows the mood sub-types that exist in SIH.
The mood category in SIH is mostly expressed by prefixed forms (77%). There are also imperative forms which are used to express mood (16%), as well as some additional, marginal, forms (7%). Imperative forms in Hebrew are based on prefixed forms, and are built from them. The use of the imperative forms in SIH is probably a result of phonological processes, since imperative forms are found only among roots having at least one weak consonant. Hence, the imperative forms are not discussed separately in this thesis.
Figure 5-24: Overall distribution of the mood category in the research group

It is apparent from the figure above that a large variety of mood types are used in SIH. The total number of mood sub-types found in the research group was 7. An attempt was made to track some regularity between the mood types and specific verbal forms. Yet, due to the large variety of mood types, the repetitions of most of them were too few to track any regularity. Also, the relatively low number of forms which represent mood (2 main ones, and three marginal ones, total five) does not enable to find any correlation between the 7 mood sub-types and any formal distribution, apart from the fact that most mood sub-types are expressed by prefixed and/or imperative forms and structures. The only correlation is between structures of *hiːj* ‘be’ + participle and the counterfactual mood.
The most widespread mood categories were taken for this purpose. The categories that were taken are the ones which occurred more than 100 times. Three such categories were found in the research group, out of the total of 7 mood categories: commissive, imperative and speculative. An internal distribution of structures representing each of these categories is presented in Figures 5-25 to 5-27 below.

![Pie chart](image)

*Figure 5-25: Formal distribution of the commissive category in the research group*

‘Complement’ in the imperative and speculative categories below represents the following complements: infinitive, prefixed form, or imperative form.
Figure 5-26: Formal distribution of the imperative category in the research group

Figure 5-27: Formal distribution of the speculative category in the research group
The counterfactual category, which appears less than 100 times in the research group, always contains forms with the root $hjj$ 'be'.

5.5.8. Mood distribution in the control group

The overall distribution of the mood category in the control group is presented in Figures 5-28 and 5-29 below. The first figure (5-28) shows the forms which express mood in SIH. The second figure (5-29) shows the mood sub-types that exist in SIH. It is apparent that in the control group as well the mood category is mainly expressed by prefixed forms. In the control group, similar to the research group, there are imperative forms which are used to express mood.

*Figure 5-28: Forms which express mood in SIH – control group*

The percentage of the forms is very similar to the research group: The mood category in SIH is mostly expressed by prefixed forms (75%). There are also imperative forms which are used to express mood (19%), as well as some additional, marginal, forms (6%). A larger number of structures are used in the control group to express mood than in the research group.
(7 as opposed to 5). But the percentage of the additional structures is negligible (<1%; numbers are rounded).

![Figure 5-29: Overall distribution of the mood category in the control group](image)

Similarly to the research group, the total number of mood categories found in the control group was 7. But the distribution of the categories was slightly different in the control group. Although the three most and least widespread categories in both groups are the same, the percentages of their distribution are different.

The most widespread mood categories in the control group are the imperative and speculative categories. These categories are repeated more than 100 times. This is slightly different than in the research group, where the commissive category also repeated more than 100 times. An internal distribution of structures representing each of these categories is presented in Figures 5-30 to 5-31 below; ‘complement’ in these categories represents the following complements: infinitive, prefixed form, or imperative form.
As in the control group, the counterfactual category, which appears less than 100 times in the control group, always contains forms with the root *hjj* ‘be’. 
5.6. **Expression of TMA**

### 5.6.1. Lexical TMA

Tense, mood and aspect in SIH are all expressed by various linguistic means, i.e. lexical, morphological and syntactic. In order to be considered grammatical, they need to be either morphological or syntactic, but not lexical. Thus, cases where TMA units were expressed only lexically were excluded from this research. Such cases included, for example, instances of tense, which were expressed by independent lexical items such as *maXaR* 'tomorrow' or *etmol* 'yesterday'. Such units were not analyzed as expressing tense, since the tense element in these units was lexical. Other cases included instances of modality that are part of the consonantal root, and thus lexical. Such cases were, for example, *tsaRiX* 'need' (*tsrk*-ADJ-M-SG) *laleXet* 'go' (*hlk*-Qal-INF) 'need to go' or *ani* 'I' *mevin* 'understand' (*bjn*-Hifil-PTCP-M-SG) 'I understand'. Examples like the former one were not analyzed as modal, because the modal meaning is contained in the root *tsrk* 'need'. They were analyzed for aspect or tense, if they expressed an aspectual or temporal meaning in addition to the inherited modal meaning. Examples such as the latter one were analyzed by comparative analysis, where the form was substituted with another form having a different root with no inherent modal meaning. The meaning was thus assigned according to the pattern, ignoring the lexical modal meaning.

Grammatical TMA can be either integrated in the pattern, or inflected on the verb, or it can be syntactic, i.e. a combination of two consequent inflected verbs. Participles, for example, always carry imperfective meaning or relative tense. These meanings are pattern-internal, and they do not change when the pattern is further inflected for gender or number or both. In these cases, the pattern itself is a TMA-carrier. Prefixed forms, for example, do not carry TMA meaning on their basic pattern or stem, as the stem itself without its inflections is meaningless. Therefore, the modal meaning of the prefixed forms is carried by the inflections of the prefixed forms, and not by the pattern. Infinitives, for example, are not inflected in
SIH, and have a unified pattern which does not change. It does not carry any TMA meaning either. Therefore, combinations of a verb or verb-substitute and an infinitive are marked for TMA only by their inflected portion, which is usually the first one in the sequence. Such combinations were thus separated, and TMA was analyzed only for the inflected component of the phrase. Infinitives in such examples were considered as complements, where complements denote no TMA category in SIH. For further details on these constructions see 5.3.6.6 above.

5.6.2. General overview

First, all verb constructions in SIH except for one can be grammatically inflected for one TMA category only. There is only one construction in SIH which can be grammatically inflected for two TMA categories. This construction is the habitual past, which expresses past tense and habitual aspect, see discussion in 5.4.4 above. The same construction is used also to express the counterfactual mood, see discussion in 5.4.2.1 above. Otherwise, no double TMA inflection was found in SIH. Apparently, SIH cannot inflect two TMA categories on the same verb or verb phrase. This means that grammatically it is possible to inflect only one TMA category in SIH, while additional TMA categories within the same expression can be expressed only lexically, by periphrastic means. In cases of a verb phrase with two elements or more, only the first element is customarily inflected for TMA, while its complement is usually an infinitive, which is not inflected. Construction types, as well as their repetitions in the language, where the complement is not an infinitive, are very few. For further details see 5.3.6 above.

The most widely grammaticalized TMA category in SIH is aspect, while mood is grammaticalized to a lesser degree, and tense is the least grammaticalized. The grammatical resolution of aspect distinction goes as far as the major distinction between perfective and imperfective, whereas the distinction between qualitative and quantitative aspects is lexical, using periphrastic means. Since most of the verbal structures in SIH are aspectual rather than anything else, Israeli Hebrew can be considered an
aspect-prominent language (see Bhat 1999). The nature of its aspectual prominence will be discussed later on in this thesis.

Tense in SIH is grammaticalized only in two very limited cases, one of which is the presence of the auxiliary verb *ḥjj* ‘be’ in the expression, generated into the Qal pattern. This construction represents absolute tense. Participle forms may represent relative tense in narrative texts, yet, these cases are few, and most of the time, participles represent aspect. In all other cases, tense is limited to periphrastic means only, see 5.4.1 above for details and examples.

The Grammaticalization of mood in SIH is limited to prefixed forms and, to a lesser extent, to some verb phrases, which contain prefixed forms or imperatives (see below). Prefixed forms in SIH express either the imperative or other mood types. Normative imperative forms are still used in SIH, but these seem to appear only in cases where roots with weak consonants are present. Their use is probably due to phonological reasons rather than morphological ones. See discussion in 5.4.1.2 above for the mood category.

5.7. **An outline of the TMA system of Spoken Israeli Hebrew**

5.7.1. Forms vs. meanings

An outline of mapping forms to TMA categories in SIH is presented in Table 5-5 below.
Table 5-5: An outline of the TMA system in SIH

<table>
<thead>
<tr>
<th>Form</th>
<th>Tense</th>
<th>Aspect</th>
<th>Mood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suffixed verb</td>
<td>perfective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prefixed verb</td>
<td></td>
<td>Relative (past / future)</td>
<td>Imperative +additional (*)</td>
</tr>
<tr>
<td>Participle</td>
<td></td>
<td>(past / future)</td>
<td>Imp-perfective</td>
</tr>
<tr>
<td>Imperative form</td>
<td></td>
<td></td>
<td>imperative</td>
</tr>
<tr>
<td>Root hij ‘be’ only (Qal pattern)</td>
<td>Absolute (past / future)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Root hij ‘be’ (Qal pattern) + participle</td>
<td>habitual past</td>
<td></td>
<td>counterfactual</td>
</tr>
<tr>
<td>Two suffixed forms in a sequence</td>
<td>durative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two participles in a sequence</td>
<td>durative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two prefixed forms in a sequence</td>
<td></td>
<td></td>
<td>immediate illocutionary act</td>
</tr>
<tr>
<td>Two imperative forms in a sequence</td>
<td></td>
<td></td>
<td>imperative</td>
</tr>
<tr>
<td>Imperative + prefixed form</td>
<td></td>
<td></td>
<td>Imperative / commissive</td>
</tr>
</tbody>
</table>

(∗) Additional mood types: speculative, assumptive, hortative, commissive, optative, speculative; counterfactual mood is not expressed by a prefixed verb only.

5.7.2. TMA categories in SIH classified to FDG layers

An outline of mapping TMA categories in SIH to FDG layers is presented in Table 5-6 below. The table shows the TMA categories, which exist in SIH, distributed according to the layers they represent in FDG.
Table 5-6: Crossover of TMA categories in SIH with FDG layers

<table>
<thead>
<tr>
<th>TMA category → FDG layer</th>
<th>Aspect</th>
<th>Aspect + Tense</th>
<th>Tense</th>
<th>Mood</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>illocution</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>π</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>π</em>&lt;sub&gt;ep&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>π</em>&lt;sub&gt;op&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>π</em>&lt;sub&gt;ip&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The category of aspect is represented in the first (predicate) and second (predication) layers. The category of tense (absolute) is located in the third (episode) layer. Relative tense which in SIH is limited, is represented, together with quantitative aspect, in the second (predication) layer. Note that both quantitative aspect and relative tense are represented in SIH by the same morphological pattern: the participle. Mood is located in the highest, proposition layer, as well as under illocutionary acts, which are located above all the other layers. The combination of aspect+tense (the habitual past) is located across the second (predication) and third (episode) layers.

As mentioned before, the higher up one goes on the FDG layer, the more complex is its semantic unit, the more redundant details are included.
in the conversation and the more abstract is the entity it represents. The function of operators at higher layers is cognitively more complex than at the lower layers. Therefore, the function of operators with wider scope is communicatively least motivated, whereas the most motivated function is the one of predicate operators ($\mathfrak{p}^f$) as well as predication operators ($\mathfrak{p}^e$), which are narrower in scope. These operators describe the event, which occurs nearly in every expression. This means that a standard conversation would contain more basic FDG layers (namely $\mathfrak{p}^f$ and $\mathfrak{p}^e$ expressions), than complex ones (namely $\mathfrak{p}^{ep}$ and $\mathfrak{p}^{p}$). Hence, TMA categories, located lower in FDG hierarchy and describing the predicate or predication, would be more basic than other TMA categories, which are located higher up in the hierarchy.

Since FDG layers are hierarchically organized, and lower FDG layers are components of higher FDG layers, a language cannot contain an episode layer without containing the predicate and predication layers, since these are its components. Therefore, a construction can either contain no layers, or it can contain some layers, with the proviso that their sub-layers are also included. A construction cannot contain, for example, layers 1 and 3, without layer 2.

TMA expressions in SIH apply to all four layers and to illocutionary acts, thus representing hierarchical relations, where lower layers are components of higher ones. Since the function of the first layer operators ($\mathfrak{p}^f$) is the most required and least redundant of all the layers, aspect would represent the most basic and dominant category in SIH; it is located in the lowest FDG layers (predicate and predication layers). Also, the frequency of aspect is the highest in SIH, see below. This trend is also apparent in Boland’s findings for TMA in English among adults, where TMA categories, which appear in more basic layers, are more frequent than categories, which appear in higher layers (2006:511). Although Boland’s TMA categories were tested in the framework of Functional Grammar (FG) rather than FDG, the basic idea is identical, only that the additional layer in FDG enables a more detailed division of the layers. Aspect in SIH, in its major perfective-imperfective distinction, is
grammatically represented by verbal inflections (operators), rather than by lexical items (satellites), and is thus more basic to the language. Only when a further specification is needed, such as sub-categorization of an imperfective aspect type, do we find lexical items in combination with aspctual expressions.

Tense and mood are represented in higher FDG layers than aspect. They also appear in a much smaller distribution than aspect in SIH, and are thus less dominant categories. Tense (absolute) is located in the episode layer, and its distribution is very low, as it is very limited in use, and applies only to one root in one pattern. Usually, lexical items, and not grammatical structures, are used to assign past tense meaning to aspectual perfective forms and future tense meaning to imperfective or participle forms. Relative tense is located in the predication layer, together with quantitative aspect. It is very limited in its distribution, and usually occurs in narrative texts only. Note that relative tense uses the same grammatical forms (participles) as quantitative aspect, which is located in the same layer.

Mood in SIH is expressed in the two highest layers: layer 4 (proposition) and higher illocutionary acts. Event-oriented modality is an illocutionary act and thus is grammatically represented above layer 4. Event-oriented modality includes deontic-imperative forms, which are basically expressed in SIH by prefixed forms, sometimes by phonologically-derived imperative forms. About 50% of the mood cases in SIH are imperative cases. These are more basic than other mood occurrences, as no additional lexical items are needed next to the prefixed forms in order to clarify the imperative meaning. Epistemic modality is grammatically represented in layer 4, which is more complex than aspect and tense. The occurrences of epistemic mood apply to the whole proposition. In these occurrences prefixed forms are used as well, but additional information is needed to distinguish between the different mood sub-types and to connect between these forms and the other layers. This information is obtained either from lexical items, which are located next to the verbal forms, or from the broader context.
The habitual past, which is a combination of aspect and tense, is located in-between aspect and tense, in the second (predication) and third (episode) layers. This is a more complex category, and it is dependent on background events.

As mentioned above, the distribution of TMA categories in SIH shows that aspect is the most frequent category. It is also located in more basic layers, where operators’ functions are communicatively more crucial, and a lesser amount of peripheral means is used in order to utter the semantic contents of the expression. Furthermore, aspectual expressions are used as the ingredients of larger contexts, and hierarchically are more basic and less redundant. An example of this point is apparent in expressions, where perfective forms are used together with time expressions, to express past tense. It is a use of aspectual forms, which are more basic, to express tense, which is less basic and also less widespread. All the aforementioned constitute some of the periphrastic means to express TMA functions in the higher layers. For example, in order to fully understand an epistemic modal expression, it is necessary to include all the background events, which in turn are built with sequences of expressions from lower layers. It was shown previously that suffixed verbal forms and participles do not denote tense, since additional information is needed in the context to understand the time of the events. They rather denote aspectual functions. The combination of all these points, fits into Bhat’s theory, and present SIH as an aspect-prominent language.

Tense and mood in SIH are located in higher layers than aspect. This means that their meaning, in most cases, is not obvious from the context, and that additional modifiers are needed to provide the meaning. These modifiers can be either satellites or expressions from lower layers, which are more basic, and add the needed additional information to the whole context.

Mood is less widespread in the language than aspect (but still much more widespread than tense), and thus is located in the highest layer,
which are less basic. Mood, as shown above, is a less dominant category in SIH than aspect.

Figure 5-32 below illustrates the crossover of TMA categories in SIH with FDG layers. For each layer two parameters are mentioned: the TMA category that it represents in SIH and the type of grammatical structures that are used for it. Categories, which do not exist in SIH are presented as empty boxes.
Figure 5-32: 3-D representation of TMA categories in SIH: classification according to FDG layers and means of expression
As mentioned in 3.4.1 above, referring to a lower layer of representation, correlates with a decreased need for external operators, and makes the property more basic. The above figure shows that the lowest layer (predicate layer – $\pi^I$) represents only aspect in SIH and not other TMA categories. This means that aspect is the most basic property in SIH. This goes hand in hand with the statistical findings of this study, which show that aspect is the most dominant category in SIH, constituting about two thirds of the TMA system (see 5.5.1 and 5.5.2 above).

5.8. **A suggested aspectual system for SIH**

On the basis of the current field research, a new verb system is presented in figure 5-33 below for Spoken Israeli Hebrew. This system is aspectual. It represents the actual spoken language in Israel, which is independent of previous Hebrew varieties or normative approaches.
**Figure 5-33: Israeli Hebrew aspectual system**

### 5.9. Summary: SIH as an aspect-prominent language

Bhat (1999:43-61) points out to three main types of aspect-prominent languages, according to the **grammatical** distinctions that they make between the aspectual sub-categories: (i) perfective vs. imperfective; (ii)
ingressives, progressives, egressives and resultatives; and (iii) semelfactives, iterative, habitual and frequentatives. When comparing several aspect-prominent languages, different grammatical aspectual distinctions can be presented, because they differently grammaticalize their aspects. An aspect-prominent language can be of one type, but can still retain some or all of the other types, only that the latter are not grammaticalized. Since IH makes a grammatical distinction between perfective and imperfective categories, it can be classified into the first type. IH also contains some other sub-categories of aspect, such as progressive, iterative and habitual. The distinctions between them are not grammaticalized, and therefore IH would not be classified as being of the other two types.

The most important aspectual distinction in languages belongs to the first type of perfective-imperfective distinction. Languages of this type are characterized by the tendencies listed below, but do not need to include all of them in order to be classified as part of this group:

• Other temporal and modal properties found in these languages may constitute further sub-divisions of the aspectual main division (Bhat 1999:45-46).

• Using auxiliaries with participles can denote more specific temporal and modal properties (Bhat 1999:46-47).

• In some languages of the perfective-imperfective type the imperfective is a formulation of the perfective form with some suffix (Bhat 1999:46).

• In other languages of the perfective-imperfective type, there is a tendency to use perfective forms to describe past events, punctual and resultative events, and imperfective forms to describe progressive and durative events. In these languages, the perfective-imperfective aspectual system led language purists to conclude that these verb systems express tense (Bhat 1999:48).

Israeli Hebrew has an aspectual perfective-imperfective verb system. Its verbal system can be analyzed in the frame of Bhat’s criteria
mentioned above regarding the interpretation of verbs in such verb systems:

- In IH temporal properties, when grammaticalized, are expressed by using a subset of the aspectual means. This subset is the suffixed forms, used to express past tense only with the root $hjj$ ‘be’. Mood on the other hand in IH is not a subset of aspectual structures, as it is independently grammaticalized. Yet, mood is a much less widespread category than aspect in IH, and therefore the IH verb system is aspectual and not modal, see discussion above.

- In IH, as in other languages which Bhat mentions, the combination of an auxiliary together with a participle is used to express more specific temporal properties. This way, the auxiliary $hjj$ ‘be’ in a suffixed form is used with a participle form to express the habitual past, which is a more specific temporal – aspectual category.

- Imperfective forms in IH are not derived by suffixation of their parallel perfective forms. Perfective forms in IH are suffixed, whereas the imperfective forms are infixed, and each of the two forms is derived independently by a different affixation process.

- A tendency to use perfective forms to describe past events, as well as punctual and resultative events, and imperfective forms to describe progressive and durative events is well noted in IH. As mentioned above, Hebrew language purists tend to analyze IH/MH verb systems as expressing tense, where the suffixed perfective forms are analyzed as past tense. IH imperfective forms (participles) are analyzed as expressing present tense, and modal forms are analyzed as expressing future tense. It is possible that the analysis of IH/MH as a tense language originated from this fact.

These criteria are optional. They constitute possible, but not compulsory, characteristics of perfective-imperfective languages. Some languages can only present one of them. Three of the above four criteria are met in IH, two of them are fully met, and one is partially met.
Therefore, IH can be regarded as a classical case of a language with an aspectual (perfective-imperfective) verb system.