In spite of growing recognition of the primacy of spoken varieties of language over written ones, the study of spoken language has suffered from neglect practically during most of the 20th century, following a tradition of over two millennia of linguistic studies. Exceptions were few. Only recently, notably with the advent of large computerized corpora, we have been granted with large-scale grammars that include data from spoken varieties of language, of which Biber et al. 1999 can be signaled as a notable pioneering effort. As much as one can admire the results, one cannot ignore the heavy load of traditional linguistics on the authors of this work, as noted by Sinclair (2002: 358): "I have mentioned one or two places where the commentary gets into difficulties because the language obstinately refuses to divide itself into the categories prepared in advance for it."

In what follows1, I will try to overcome tradition by utilizing data from spontaneous speech recorded for the Corpus of Spoken Israeli Corpus (CoSII2), always having in mind the way J. Sinclair would regard corpus data: "To me a corpus of any size signals a flashing neon sign 'Think again', and I find it extremely difficult to fit corpus evidence into received receptacles" (Sinclair 2002: 357).

---

1 The subject matter of this study has been presented before diverse audiences in Jerusalem, Florence, Tsukuba, Paris and Berlin, as well as in graduate seminars at Tel-Aviv University during the past few years. I have benefited from insights, questions and criticism by colleagues and students. I have further benefited from conversations and correspondence with Claire Blanche-Benveniste, Zygmunt Fraszyngier, Gilson Goldenberg, Yaacov Hever, Michel Marmontel (Schwartzberg), and Ittai Malheb-Yaacov, among others, who have further enhanced my understanding of the issues involved. Yaacov Hever's input has been especially constructive in forming the definition of predicate as offered in this paper. It was also a pleasure to read a previous draft of this paper and offer useful comments. I thank you all for your precious input. Needless to say, I bear sole responsibility for the ideas presented in this article.

2 For the state of research, availability and dissemination of the corpus, see <humanities.tau.ac.il-CoSII>
1. Preliminaries

My "mean sign" includes in addition the following premises:

- Language is a tool of expression and communication. Its most frequent manifestation is interhuman communication.
- Spoken varieties, notably the language of everyday conversation, are the most frequent of all linguistic systems. It is this capacity of spoken language that lends it the power to have its impact on all other linguistic systems and their development.
- Therefore, proper linguistic attention must be drawn to spoken language.
- Spoken language must be analyzed according to its own properties. We must detach ourselves from any preconceptions about the structure of language based on its written forms.
- Corpus data reflect the perceived language rather than the produced one. Therefore, linguistic analyses based on corpus data can lean solely on data as heard rather than as generated by the speaker.
- Linguistic analysis must regard language as a system on its own, notwithstanding its mutual-relationship with elements that are either external to the linguistic system or external to the immediate discourse.
- Prosody is a formal feature of spoken language no less than segmental features.
- Prosody is the main tool we use for spoken language segmentation. The "prosodic group" (aka "intonation unit", "tone group", or the like) encapsulates a segmental unit of language ("speech unit") and defines its boundaries: major (terminal) or minor (continuing). A terminal boundary is also the boundary of an utterance (cf. Izre'el & Mietouchi 2011).
- Syntax, information structure and prosody integrate in spoken language structure, forming a coherent linguistic unity (cf. Izre'el, forthcoming b).

Using these premises as guidelines for my work, I will try to lay down some basic features of sentence structure in spoken Israeli Hebrew.

2. Some common ideas on sentence structure

Let me list some preconceived, common notions about sentence structure, which I will try to challenge in this paper. While some of these assumptions or tenets are widespread, others tend to be confined to some theoretical orientations, among them ones that have a strong foothold in the Hebrew grammatical tradition. The main points relevant to our discussion here are the following:

- A defining feature of "sentence" is predication. As such, a sentence is viewed as consisting of both subject and predicate (e.g., Carter & McCarthy 2006: 486; Soares and Stevenson 2008 s.v. clause).
- The subject is the component upon which the sentence is constructed; i.e., the subject is the basis of the sentence, upon which predication is held (cf. Matthews 2007: 15). While this is by no means a general theoretical tenet

3 See below, note 6, for the use of the term "sentence" rather than "clause" in this study.

(e.g., Tesnière 1966: chs. 48-49; van Valin & LaPolla 1997: § 2.2; cf. Matthews 2007: 15-16), one should note that it is so in the Hebrew grammatical tradition.
- Exceptions are treated as elliptical sentences or are excluded from the general analysis of sentence structure altogether (e.g., Biber et al. 1999: ch. 14, especially § 14.3).

In the Hebrew grammatical tradition, which has its roots in studies of medieval Hebrew grammarians, the terms for "subject" and "predicate" are especially instructive, as they carry the notion of grammatical dependency of the predicate upon the subject:
- The term for "subject" is nazî, bearing the literal meaning "(the one that) carries".
- The term for "predicate" is năsî, bearing the literal meaning "(the one being) carried".

Jonah Ibn Janah (ca. 990-1050) in his Kitāb al-Lumā'ī ("The Book of Variegated Flower-beds"; translated into Hebrew by Yehuda Ibn Tibbon [1171 C.E.]), describes the relationship between the two as follows:

It has already been clarified... that there is nothing... but Substance and Event. And it has been known that Substance is self-contained, carrying [nāṣî] the events, and Event is carried [nāṣî] by Substance, and cannot stand in itself... Since Substance is previous to Event by nature, because it carries it or renounces it...

Terminology carries with it notions and conceptual framework. Therefore, it is no surprise that this old tradition, backed by similar conceptual frameworks in Western linguistic schools, is still deeply rooted and commonly held in the study of Hebrew up until today. Note the definitions of the relevant terms in a contemporary Hebrew linguistic dictionary:

Sentence: A complete notional unit that includes a subject and a predicate. Indicated by S in generative-transformational grammar.
Clause: (1) A syntactical structure that includes a subject and a predicate; a complete notional unit which ends with a pause. (2) A syntactical structure that includes a subject and a predicate, [...]. (Rodrig-Schwarzwal椎 and Sokoloff 1992: 203 and 35 respectively; my translation).

More recently, Coffin and Bolozy (2005: 314) define the notion of sentence in similar terms:

The sentence is the maximal unit of syntax [...]. The major constituents of sentences are the subject and predicate phrases that join to construct a sentence.

One example may suffice to show that these definitions cannot hold even in a brief encounter with spoken Israeli Hebrew.4

4 Transcription is broad phonetic with some phonological input, and generally segmented into prosodic groups. Transcription notations: each prosodic group is transcribed in a separate line; final tones: terminal [ ]; continuing [ ] apostrophe; truncated word [ ]; truncated prosodic group [ ]; non-uttered sounds [brak]; overlapping [ ] (cf. Izre'el 2002, following its essence Du Bois et al. 1992). Predicates are indicated by boldface characters, subject by underlining; predicative constructions are indicated by curly brackets [ ]. Glossing follow, in general, the Leipzig Glossing Rules.
As for the terminological problem, one must note that the terms "verbless" or "non-verbal" mean that a verb is missing in the discussed structure. However, there is no need for a verb in this type of sentence, neither a copula is required nor a copula deleted. "Nominal" means that the predicate is a noun. However, not only nouns can occupy the predicate slot in any of the sentence types that are termed "nominal". In fact, one will find in this position any part of speech: nominal (substantives, adjectives), participial (active or passive), pronominal (personal pronouns, demonstratives, interrogatives and other pronouns), adverbs and prepositional phrases. Sentences and other types of syntactic complexes will be found as predicates as well. The two following examples will suffice to illustrate this:

(4) ani be-kans
iSG in-course
(Prepositional phrase; OCD3_sp1_59)
I am taking a course.

(5) veela ma zeal nagon
question what this right
(Sentence; OCh_sp2_045)
The question is what is the truth.

As for the conceptual problem, one should note that a verbal predicate differs in its internal structure from any other predicate. This deserves some dilution.

4. The Hebrew verb

A verb, it must be noted, occupies a special position in Hebrew, as it does in other Semitic languages. The Hebrew verb is a morphological complex consisting of a subject and a predicate, and holds the nexus between the two components (Goldenberg 1998). As such, it makes a complete sentence in itself. Let us first observe the morphological components of the Hebrew verb, and then their syntactic capacities. We shall compare these structures to those of the nominal and participial forms, and see that participles, although they are usually seen as enabling paradigmatic substitution by verbs in a sentence, in fact they differ in structure and capacities. For our analysis, we shall use derivatives of the root gdl, which carries the basic meaning of "bigness".

<table>
<thead>
<tr>
<th>2SGM</th>
<th>3SGF</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-gidal</td>
<td>t-gidal-i</td>
<td>y-gidal-a</td>
</tr>
<tr>
<td>2SGM-will grow</td>
<td>2SGF-will grow</td>
<td>3PL-will grow</td>
</tr>
<tr>
<td>you will grow</td>
<td>you will grow</td>
<td>they will grow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prefix conjugation</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-gidal</td>
</tr>
<tr>
<td>2SGM-will grow</td>
</tr>
<tr>
<td>you will grow</td>
</tr>
<tr>
<td>t-gidal-i</td>
</tr>
<tr>
<td>2SGF-will grow</td>
</tr>
<tr>
<td>you will grow</td>
</tr>
<tr>
<td>y-gidal-a</td>
</tr>
<tr>
<td>3PL-will grow</td>
</tr>
<tr>
<td>they will grow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suffix conjugation</th>
</tr>
</thead>
<tbody>
<tr>
<td>gadal-ta</td>
</tr>
<tr>
<td>grew-2SGM</td>
</tr>
<tr>
<td>you grew</td>
</tr>
<tr>
<td>gadal-t</td>
</tr>
<tr>
<td>grew-3SGF</td>
</tr>
<tr>
<td>she grew</td>
</tr>
<tr>
<td>gadal-3pl</td>
</tr>
<tr>
<td>grew-3PL</td>
</tr>
<tr>
<td>they grew</td>
</tr>
</tbody>
</table>

Table 1. Verbal morphology

3 Types of predicates

Let us first look briefly at the type of sentences one usually thinks of when studying Hebrew, viz., "verbal" sentences (ex. 2) and "nominal" or "verbless/non-verbal" sentences (ex. 3):

(2) hi te-kabel
she 3SG-will get
She will get (OM_sp2_058)

(3) hukol fvl-im
everything path-PLM
All are dust-roads. (OCh_sp1_180)

Looking at this classification, as well as looking at the two typical examples given above as if equivalent, there are two problems involved: a terminological problem and a conceptual problem.

5 Personal names (in this case, a nick name) have been changed or eliminated in CoSH for privacy.
<table>
<thead>
<tr>
<th>SGM</th>
<th>SGF</th>
<th>PLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>gadel-ḥ</td>
<td>gadel-ḥ</td>
<td>gadel-ḥ</td>
</tr>
<tr>
<td>ḥayyin-ḥ ḥayyin-ḥ</td>
<td>ḥayyin-ḥ ḥayyin-ḥ</td>
<td>ḥayyin-ḥ ḥayyin-ḥ</td>
</tr>
</tbody>
</table>

**Table 2. Nominal morphology as represented in participles and adjectives**

Adjectives and participles, like all nominal forms, inflect only for gender and number, whereas verbal inflection includes also indication of person. Therefore, in order to form predication, nominal forms need a subject marker added. This is also the case with other predicates, excluding denominative verbs. A verb, then, is a morphological manifestation of a predicative complex, i.e., a sentence. It includes, minimally, a predicate with its subject, with nexus, i.e., predication. Therefore, the verb is not a predicate per se.

5. Hebrew sentence structure

5.1. Hypotheses

- The kernel of the sentence is a predicate. The predicate introduces a “new” element to the discourse; it is the informative component of the sentence and carries its modality.
- Theme and rheme or topic and comment (cf. Somicola 2006) are thus the default functions of “subject” and “predicate” respectively (cf. Lyons 1971: 335).
- A sentence will be defined as a unit consisting minimally of a predicate, being the rhematic element and the one which carries the modality of the sentence.
- Two main classes of sentences can be discerned: (1) Unipartite, consisting of a predicate only. (2) Bipartite, where a sentence consists – in its minimal manifestation – of a subject and a predicate. This basic structure will be regarded as first-level predication.
- Sentences with higher level predication incorporate predicates that are sentences in themselves.
- Subjects, like predicates, can consist of sentences.

5.2. Unipartite sentences

Unipartite sentences consist of a predicate in itself (or a predicate with complements and peripherals), and do not include a subject. A predicate is the “new” element in the discourse (Chafe 1994: 108) and thus carries the informational load of the sentence. As such, it is identified with the rheme. The predicate carries the modality of the sentence (cf. Lefevere 1999: ch. 1; Martin 2009: ch. II/1). Ex. 1 above exhibits some

---

6. "Sentences" is taken here to be the reference unit of syntax, thus replacing "clause" in any way this term may be used by other schools, including those dealing with spoken language (e.g., Miller & Wernert 1998).
between the two components. As such, every Hebrew verb is a bipartite sentence with first-level predication. Keeping track with our forms derived from the root \( gd\), one will recall the comparison made above between adjectival and participial forms on one hand and verbs on the other hand, where— in contrast with nominal forms, including participles—verbs include the subject marker in them:

(8) y-gdal
  t-gdal
  gadal-ta
  cf. ha gadol

Verbs tend not to require an explicit, external to the verb indication of the subject referent. Such indication will mostly be added when communicatively required. A prominent example is the introduction of a new topic to the discourse (or a re-introduction of a topic), which will usually be specified as a noun (ex. 9). An externally added pronominal subject may be required to express contrast (ex. 10) or for any other pragmatic need (ex. 11, line 8). These will be labeled later as second-level predication. Otherwise, there is no need for any other reference than the one which is part of the verb, as in the 1pl forms in ex. 11 (narrative), in ex. 12 (directive), or in ex. 13 (last line), where the reference is made only by the 3sg subject marker within the verb, because the active person is known to the participants in the conversation. These last cases are examples for primary (or first-level) predication.

(9) ylad (heyyt-y) ffe (by)

Eldad decided-3SGM that=3SGM
lo mveates ||
NEG give up

Eldad decided that he wouldn’t give up. (OCh_sp1.782-783)

(10) ylad (lukay-y) uveke- otobus le=po

Eldad took-3SGM train bus to=here
le=Hong_kong

to=Hong_kong

Eldad took a train bus over here to Hong Kong, but I returned directly to Beijing. (OCh_sp1.715-716)

Further, predicates without referent (usually called “impersonal”), which in Hebrew are usually expressed by 3pl verbs (or PLM participles), will not be adjoined by an “external” subject (ex. 14):

(14) fin-y po et bar-kvif

changed-3pl here ACC DEF=road

The road has been changed. (OCD2_sp3.117)

5.3.2 Second-level predication

Second level predication is the case where an overt subject is added to a basic construction with primary, first-level predication. This basic construction, viz., a sentence in itself, thus becomes the predicate of the additional subject. Such structures are very frequent, and occur with all types of predicative constructions with a pronominal subject, be it independent or affixed:

(15) david (big gadol)

david 3SGM big

david (y-gdal)

david 3SGM-will grow
hu (y-gdal)

He will grow.

3SGM 3SGM-will grow
tu (y-gdal)

You will grow.

2SGM 2SGM-will grow
david (gadol-y)

david grew-3SGM
hu (gadoli)

He grew.

3SGM grew-3SGM
atu (gadoli)

You grew.

2SGM grew-2SGM

\(^8\) Sentence-final topicalization needs further research. We shall see below some other cases of fronting and backing, which will not be treated in this paper.
However, the discourse structure does not allow this analysis: it is types of travelers that are discussed, and the new element in this sentence is clearly “Japanese”. According to the definition of the predicate suggested above, japanim should be regarded as a predicate. Prosody also supports this analysis. In all other cases, the prosodic accent, which points at the focal kernel of the sentence, has always been on the grammatical predicate, which by default comes following the subject. In contrast, here the accent falls not on the final word but on the first one. Therefore, in the framework suggested here, the preferred analysis will take japanim as the predicate:

(18a) japanim (hem tajalim) !

Having asserted japanim, the subject now includes a sentence in which an anaphoric pronoun (hem) makes the subject of the predicate tajalim “travelers”, which carries the modality (affirmative) of this subject sentence. Other subject sentences occur rather frequently in questions; e.g.,

(19) az elx (dibat-tsn) / So how spoke-2PLM

(20) [i] fiat le-ma || What do we need a Fiat for?
[2] le-satva ||
[to-grandma]
[3] [ananyu nos-tn] mataj !
[we go-3PL when]
[4] be-jeem fliji ||
[in=day third]

On Tuesday. (CT12:237′′′′-241′′)

In ex. 19, the verb—a sentence in itself—is the given element, and the interrogative adverb is, of course, the new one, hence the predicate. In ex. 20, the topics asked about in the interrogative sentences (lines 1, 3) are already known from the context. In line 3, the sentence ananyu nosim “we are going” is therefore to be taken as a subject sentence, the interrogative adverb mataj “when” being the predicate. In the following example, both the context and the accent on the phrase floja jamim “three days” require that it be analyzed as a predicate and the sentence which follows as the subject:

(21) floja jamim (ge haja kays) !

three days it was thus Three days it was like that. (OCh.sp1.359)

I would not regard these sentences as carrying second-level predication, since it is not the predicate of the larger sentence that includes a first-level predication but rather the subject.

Conclusion

In this paper I have tried to lay some foundations for a unified theory of sentence structure in spoken Israeli Hebrew, starting with unipartite sentences that consist of only a predicate, going on to the hierarchical structure of bipartite sentences, with three levels of predication, where the second and third levels include predicates which are in themselves complete sentences.
I should end this homage to Claire by citing what she wrote about the study of spoken French, only replacing “French by “Hebrew”:

... il ne s'agit pas d'utiliser l'hébreu parlé pour illustrer une théorie, mais de trouver une théorie qui permette d'aborder les données de l'hébreu parlé.


References


DEKEL Nurit, 2010, A Matter of Time : Tense, Mood and Aspect in Spontaneous Spoken Israeli Hebrew, PhD dissertation, The University of Amsterdam, Amsterdam, LOT.

DU BOIS John, CUMMING Susanna, SCHETTE-COBURN Stephan & PAOLINO Danae, 1992, Discourse Transcription, Santa Barbara Papers in Linguistics 4, Santa Barbara, CA, Department of Linguistics, University of California, Santa Barbara.


IZREFEL Shlomo, forthcoming b, “Prosodic and Segmental Units : A view from Spoken Israeli Hebrew”.


PENSER LES LANGUES
AVEC CLAIRE BLANCHE-BENVENISTE

Ce volume réunit les communications données en hommage à Claire Blanche-Benveniste (1935-2010) lors de trois journées organisées à Paris en décembre 2010. Les articles sont signés par des chercheurs de tout premier plan, originaires de France, d'Europe et d'ailleurs, qui ont voulu honorer la mémoire de cette grande linguiste en rappelant ce qu'elle avait apporté dans le domaine des études sur le langage et les langues, et en montrant l'influence qu'elle a pu exercer sur leurs propres recherches. Les travaux présentés dans cet ouvrage abordent un grand nombre de thèmes qui étaient chers à Claire Blanche-Benveniste et dans lesquels elle a apporté des contributions majeures : la syntaxe et la morphologie flexionnelle du français oral et écrit, l'orthographe et la ponctuation, la constitution de corpus, les relations entre syntaxe et discours, le langage enfantin et l'acquisition de la langue, la linguistique comparée des langues romanes, l'enseignement du français à l'étranger, l'enseignement simultané des langues romanes, l'histoire des idées linguistiques.

(Extrait de la couverture)