



Syntax, Prosody, Discourse and Information Structure: The Case for Unipartite Clauses. A View from Spoken Israeli Hebrew

*Sintaxe, prosódia, discurso e estrutura informacional:
o caso das orações unipartidas.
Uma visão do hebraico falado em Israel*

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Abstract: The canonical view of clause requires that it include predication. Utterances that do not fit into this view because they lack a subject are usually regarded as elliptical or as non-sentential utterances. Adopting an integrative approach to the analysis of spoken language that includes syntax, prosody, discourse structure, and information structure, it is suggested that the only necessary and sufficient component constituting a clause is a predicate domain, carrying the informational load of the clause within the discourse context, including a “new” element in the discourse, carrying modality, and focused. Utterances that have not been hitherto analyzed as consisting of full clauses or sentences will be reevaluated. The utterance, being a discourse unit defined by prosodic boundaries, can thus be viewed as the default domain of a clause or a sentence, when the latter are determined according to the suggested integrative approach.

Keywords: syntax; clause structure; information structure; discourse; context; prosody; utterance; history of linguistics; spoken Israeli Hebrew.

Resumo: A posição canônica sobre as orações requer que elas contenham uma predição. Enunciados que não se encaixem nessa visão porque não possuem um sujeito são usualmente considerados elípticos ou como enunciados não-oracionais. Adotando uma visão integrativa para a análise da língua falada, que inclui a sintaxe, a prosódia, a estrutura discursiva e a estrutura informacional, sugere-se que o único componente

constituente necessário e suficiente para uma oração é um domínio predicativo, o qual carregue a carga informacional da oração no contexto do discurso, incluindo-se um “novo” elemento no discurso, que carregue modalidade e foco. Enunciados que até então foram classificados como não sendo orações ou sentenças completas serão reavaliados. O enunciado, sendo uma unidade discursiva definida por fronteiras prosódicas, pode assim ser visto como o domínio de uma oração ou sentença por excelência, quando estas são determinadas através da abordagem integrativa sugerida.

Palavras-chave: sintaxe; estrutura oracional; estrutura informacional; discurso; contexto; prosódia; enunciado; história da Linguística; hebraico israelense falado.

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1 “It’s all Greek to me”

Linguistics ... has an analytical system based on categories that were established at the beginnings of its history, between 400 BC and 600 CE. This system has been transposed into the common epistemological system, the collective knowledge, in almost all European cultures. ... The grammatical activities leaned on the only language considered as such, namely Greek, and, when needed, also on Latin. ... The history of Linguistics since the beginning of the 16th century might well be written as a history of rejection and repression of all linguistic phenomena that are not in accordance with the system of presuppositions of European linguistics. (EHLICH, 2005, p. 104-106; my translation)

The dawn of linguistic research had its roots in philosophical, ontological and logical traditions of ancient Greece, notably those founded by Plato and Aristotle (5th-4th centuries BC). In Plato’s *Sophist*, one finds the following discussion of what we can now refer to as ‘sentence’ or ‘clause’:¹

¹ The Greek term *λόγος*, which relates to the semantic field of speech (LSJ s.v.), may represent a broad range of speech units, and has been translated below as either ‘discourse’ or ‘sentence’, depending on the context. For the term *ῥήμα*, most commonly translated and conceived as ‘verb’, see below.

[D]iscourse is never composed of nouns alone spoken in succession, nor of verbs spoken without nouns.

...

[F]or in neither case do the words uttered indicate action or inaction or existence of anything that exists or does not exist, until the verbs are mingled with the nouns; then the words fit, and their first combination is a sentence, about the first and shortest form of discourse.

...

A sentence, if it is to be a sentence, must have a subject; without a subject it is impossible.

...

And if there is no subject, it would not be a sentence at all; for we showed that a sentence without a subject is impossible. (PLATO, *Sophist*, §§262a-263d; translation by FOWLER, 1921)

In a similar vein, Aristotle, Plato's disciple, defined *ῥῆμα* as "a sign of what is being said on another thing". Aristotle further requires that *ῥῆμα* consignify time. (ARISTOTLE, *Περὶ Ἑρμηνείας*, 16^b6; ARENS, 1984, p. 22, §17).

The Greek word *ῥῆμα*, which originally means anything spoken, has most commonly been interpreted and translated as 'verb', being an anachronistic interpretation of *ῥῆμα* as a technical term. This interpretation probably originated in Aristotle's further requirement from *ῥῆμα* to consignify time.

It should be noticed at this juncture that Aristotle, whose impact on the development of Western linguistics cannot be underestimated (ARENS, 1984, p. XX; ALLAN, 2004), used only a well distinguished and accommodated application of language for his needs, i.e., ontology and logic (ILDEFONSE, 1994). Aristotle explicitly states that

not every sentence is a statement-making sentence, but only those in which there is truth or falsity. There is not truth or falsity in all sentences: a prayer is a sentence but is neither true or false. The present investigation deals with the statement-making sentence; the others we can dismiss, since consideration of them belongs rather to the study of rhetoric or poetry. (ARISTOTLE, *Περὶ Ἑρμηνείας*, 16^b33; translation by ACKRILL, 1961, p. 45-6)

Thus, the language of logic is different in goals from ordinary language and it may well differ in form, e.g., in the requirement that *ῥῆμα*

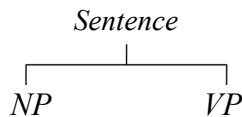
as a logical predicate consignify time, noticing that in Ancient Greek a predicate does not necessarily have to be a verb. Still, Western linguistics has transmitted the original Greek term *ῥῆμα*, via its Latin translation *verbum*, which, like Greek *ῥῆμα*, originally meant ‘anything spoken’, to become the technical term as we understand it today. This point may add further support to the claim that logic rather than language was the root upon which linguistic thinking has had its beginnings. This need not concern us at the moment, although this conception of the term has influenced Western syntactical thinking to the point that any sentence (or clause) is believed to require the presence of a verb, which is not the case in a plethora of languages around the world, including European ones. We shall return to this issue later.

At this point, our interest lies with the requirement to have at least two components in a simple sentence or clause: a subject and a predicate. As mentioned, this requirement has its bases in ancient philosophy and logic, which was carried on to be a basic requirement in the Western study of syntax ever since (SANDMANN, 1979, especially Part II; SEUREN, 1998, §§2.6.3; p. 512).

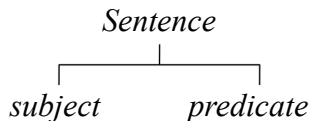
Indeed, *sentence* (or *clause*) is defined even today in terms of subject and predicate, literally as consisting of N(oun)P(hrase) and V(erb)P(hrase), very much like in the dawn of linguistics and its forerunners in philosophy. The most notorious conception of sentence structure was formulated as

$$\text{Sentence} \rightarrow \text{NP} + \text{VP}$$

or



(CHOMSKY, 1957, p. 26-27) or, using syntactically “functional notions”, as



(CHOMSKY, 1965, p. 68-69). This formulation (sometimes allowing some modifications) has become the basis for analyses of sentence structure to date (VAN VALIN; LAPOLLA, 1997, ch. 2; CULICOVER;

JACKENDOFF, 2005, p. 99; GENETTI 2014, p. 121; among many others). Subject and predicate are thus regarded as the very core components of clause structure.

This requirement has been faced time and again with linguistic reality. Hence, recent definitions of clause may make some concessions; (e.g.): “A clause can be defined as a syntactic unit *typically* consisting of a verb (...), its noun arguments, and optional adverbial elements (...)” (GENETTI, 2014, p. 130, my emphasis; note that only adverbial elements are said to be optional).

Interestingly enough, already during the philosophical era and before the rise of grammatical tradition, the Stoics distinguished between complete and incomplete (*ελλιπή*) λεκτά ‘sayables’, among the latter were predicates without a specified subject (LONG; SEDLEY, 1987, v. I, p. 199-200; cf. BLANK; ATHERTON, 2009, p. 315):

Sayables, the Stoics say, are divided into complete and incomplete, the latter being ones whose linguistic expression is unfinished, e.g. ‘[Someone] writes’, for we ask ‘Who?’ In complete sayables the linguistic expression is finished, e.g. ‘Socrates writes.’ So incomplete sayables include predicates, whereas ones that are complete include propositions, syllogisms, questions and enquiries. (DIOGENES LAERTIUS, 7.63 *apud* LONG; SEDLEY, 1987, v. I, p. 196; Greek original: *op. cit.*, v. II, p. 199).

The concept of *ellipsis*, having arisen within prescriptive orientations of language studies, is already found in the first study of syntax by Apollonius Dyscolus (2nd century CE). For Apollonius, “the deleted words have a virtual presence, which will be revealed by the requirements of the sentence” (APOLLONIUS DYSCOLUS, *Περὶ συντάξεως*, §42; cf. HOUSEHOLDER, 1981, p. 33; LALLOT, 1997, p. 108-109). As of today, the common practice has remained very much the same as the one adopted by Apollonius: a sentence (or clause) must have a predesigned form with required components. If these are not found in an actual sentence, the sequence is being regarded as an elliptical sentence, as if a virtual component is represented in the sequence as a zero component; alternatively, it will be regarded as a non-sentential utterance (BENAYOUN, 2003; STANTON, 2004; CULICOVER; JACKENDOFF, 2005; FOLEY, 2006; WINCKLER, 2006; REICH, 2011; GINZBURG, 2012; MERCHANT, 2015; among many others).

As regards our case here, genuine linguistic observation tells us that subjectless clauses are amply attested in spoken languages (e.g., GIVÓN, 1983; BIBER *et al.*, 1999, §§14.3.3-4; CRESTI, 2005; cf. IZRE'EL, 2005, p. 4-5). Thus, according to the common view, the study of spoken languages allow for many non-sentential utterances. Indeed, Carter & McCarthy (2006, p. 490) explicitly claim that “[t]he sentence is a unit of grammar, and must be grammatically complete (i.e. it must have at least one main clause). The utterance is a unit of communication. It [...] does not need to be grammatically complete”. Biber *et al.* (1999, ch. 14) use the term “non-clausal” for units that do not conform to the traditional definition of a clause, yet nevertheless feel the need to coin an “umbrella term ‘C-units’ for both clausal and non-clausal units; i.e., for syntactically independent pieces of speech” (p. 1070). This was done precisely because many of the units used in everyday speech do not fit in the “received receptacles”, to use Sinclair’s metaphor in his review of this magnum opus (SINCLAIR, 2001, p. 357; see note 3 below).

Givón, in his book *The Story of Zero*, comments as follows:

When coded as a **verbal clause** in actual communication, the mental proposition may only weakly resemble the full fledged Aristotelian proposition or its Chomskian deep-structure equivalent, with obligatory subject and verb and optional objects and adverbs. In spontaneous spoken language, the mental proposition often appears as an elliptic, truncated structure, with zeroed out arguments or even a zeroed out verb. (GIVÓN, 2017, p. 28-29)

Lee *et al.* (2009), drawing attention to the fact that in many languages the lack of subject in spoken discourse is pervasive, find the same tendency in English, concluding that

[s]uch phenomena in conversation are not syntactic anomalies... Unfortunately, linguists have neglected this sort of grammar and language or have imposed inappropriate categories from writing. ... We must conclude, then, that the “omission” of subjects (and other arguments) is not an omission at all but a natural and ordinary practice in English grammar that has simply been overlooked because of our reliance on artificially manipulated grammar. If anything, overt subjects are “additions” to English grammar. (LEE *et al.*, 2009, p. 106)

This bias towards written language analysis is reflected in the title of a book by Per Linell, *The Written Language Bias in Linguistics*. Linell claims, *inter alia*, that “‘elliptical’ sentences are fully functional and sufficient for their communicative purposes, given the relevant sequential positions and activity contexts in which they occur” (LINELL, 2005, #41, p. 74).

For Givón, it is rather the bias towards competence:

Lastly, a more general – theoretical or methodological – lesson to be drawn from this study concerns the linguist’s bias toward ‘competence’ data. Reflective, well edited, written English may well be an empirical fiction. As much as we love it as writers, as linguists we may have to stop basing our theories of natural language on this quaint artifact. (GIVÓN, 2017, p. 156)

Some languages are notoriously sparing in the use of subjects (see, *inter alia*, KIBRIK, 2011, §3.4; GIVÓN, 2017, ch. 5). This is especially prominent in languages of Asia and the Pacific (GIVÓN, 2017, p. 130). For example, a textbook of Japanese for foreign students states as follows: “Clauses without subjects are very common in Japanese; Japanese speakers actually tend to *omit* subjects whenever they think it is clear to the listener what or who they are referring to” (BANNO; OHNO; SAKANE; SHINAGAWA, 1999, p. 14; my emphasis).

Japanese linguists tend to refer to clauses without subjects as if the subjects are “missing”, terming subjectless clauses as showing “nominal ellipsis” or as consisting of “null anaphora” or “zero pronouns” (TSUJIMURA, 2007, p. 255-256; IWASAKI, 2013, p. 279). Iwasaki states that

[s]ince Japanese does not have any co-referencing system between arguments and the predicate, the process of zero anaphora is largely pragmatic, and contextually retrievable information can be, more often than not, unexpressed. (IWASAKI, 2013, p. 279, referring to OKAMOTO, 1985)

Iwasaki comments on the use of terms:

Although the terms such as ellipsis and zero anaphora are used in this chapter, it is more accurate to state that not expressing a noun argument is an unmarked case, both in spoken and written discourse, and only pragmatic necessity such as disambiguation and initial mention requires an overt noun in discourse. (IWASAKI, 2013, p. 279, note 3)

Indeed, Japanese linguistics has drawn much from Western traditions (CHUNG, 2013, §10.4), to the extent of using structural trees as in Generative linguistics and other schools in contemporary linguistics (e.g., TSUJIMURA, 2007, p. 255-256).

A notable tradition struggling with analyses of unipartite clauses, i.e. clauses consisting of only a predicate domain, has originated in Francophone scholarship. According to this tradition, utterances that do not fit the concept of predication between two components are still considered sentences, where subjects are not required at all; rather, predicates and modality form complete sentences (cf., e.g., BALLY, 1965, §§49, p. 61-65; TESNIÈRE, 1966 [English: 2015], chs. 45-46, 73, 75, 77; LE GOFFIC, 1993, §351; LEFEUVRE, 1999, *Troisième partie*; BLANCHE-BENVENISTE, 2006, §3). See further §5 below.

As for Israeli Hebrew, the language I am using here as a test-case, it should be mentioned that although spoken Hebrew does not dispense with subjects at the rate Japanese and other subject-sparing languages do, still unipartite clauses are quite frequent in spontaneous spoken Hebrew. For an illustration of the find, I chose a 20'12" conversation consisting mostly of small narratives (uttered by speaker 1). As Table 1 shows, more than half of the substantive units and more than 90% of the regulatory units do not manifest predication.² Thus, units without predication form the majority in the sample. Such units will be analyzed as unipartite clauses, consisting of only a predicate domain.

² Substantive units are those which carry the contents of the discourse; regulatory units are those which regulate the discourse flow (CHAFE, 1994, p. 63-64).

TABLE 1 – Units with and without predication

	speaker 1			speaker 2		
	total	+predication	-predication	total	+predication	-predication
utterances:	344			186		
incomplete:	-21			-6		
complete:	323	145	178 — 55%	180	80	100 — 56%
substantive:	283	140	143 — 51%	130	76	54 — 41.5%
regulatory:	40	3	37 — 92.5%	50	4	46 — 92%

As we have seen above, the concept of bipartite structure of sentence/clause goes back to ancient Greece, be it to its language or logic (cf. further MAUTHNER, 1901-1902, v. III, p. 4; 1907, p. 96-97; LENK, 1993; GIL, 2012, p. 330). It is Greek philosophy out of which Western linguistics has sprung, starting with the study of the language of Ancient Greece, spreading to the study of Latin, and from there to the study of other European languages and much beyond. As regards linguistics, it indeed seems that it's all Greek to us. The burden of grammatical tradition may be too heavy. Perhaps one should, once and for all, dispense with this burden and start — or rather restart — take a fresh look at language, using authentic linguistic data, as has been sporadically called for along the history of linguistics (see further below, §7).

2 Premises

Before bringing forward my analysis of unipartite clauses in spoken Hebrew, I should state here the premises that serve as a guide for my work on spoken language (IZRE'EL, 2012, §1; IZRE'EL, 2018, §§1,2):

- Language is, first and foremost, a tool of expression and communication. Its most frequent manifestation is human communication.
- Language should be studied for its own sake. A corollary of this demand is that linguistic analysis must detach itself from any dependence on other disciplines, notably logic.

- Spoken language varieties, notably the language of everyday conversation, are the most frequently used among 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.
- Given the prominence of spoken language in human communication, proper linguistic attention must be drawn to the spoken varieties of language, notably spontaneous ones.
- 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-driven approach. viz., building up a theory of language from actual data (TOGNINI-BONELLI, 2001) is to be preferred over corpus-based approach, viz., looking for data to establish a preconceived theory.³
- Corpus data reflect the perceived language rather than the produced one. Therefore, linguistic description and analysis based on corpus data can lean solely on data as heard rather than as generated by the speaker, as we do not have direct access to the linguistic system that had generated the actually produced speech.⁴
- Language is intimately related to discourse, so that it will express only what is needed to be expressed within the discourse context, be it linguistic or extra-linguistic.
- Accordingly, language cannot be disconnected from the discourse for the sake of analysis.

³ “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 ... the language obstinately refuses to divide itself into the categories prepared in advance for it” (SINCLAIR, 2001, p. 357). “It is not about using spoken French to illustrate a theory, but finding a theory that allows to approach the data of spoken French” (BLANCHE-BENVENISTE; JEANJEAN, 1987, p. 90; my translation).

⁴ This perspective does not contradict the possibility to look into cognitive processes while scrutinizing the received materials (see, e.g., the remarks by GIVÓN, 1992, especially §6 and §8; also the methodology used by KIBRIK, 2011).

- Notwithstanding its mutual-relationship with elements that are either external to the linguistic system or external to the immediate discourse, language is a system on its own, and must be analyzed accordingly.
- Referents are not part of the linguistic structure; they may or may not be represented in the discourse at any time. Furthermore, potential arguments need not be represented in the syntactic form.
- Taking the point of view of the recipient, there can be no question about ellipsis at all.

Using these premises as guidelines for my work, I will try to determine the notion of *unipartite clause*. Before doing that, let me draw a few guiding lines on the structure of Hebrew that will set up the ground for this undertaking.


3 C'est de l'hébreu pour moi

When French people say *C'est de l'hébreu pour moi* ("It's Hebrew to me"), they mean exactly what Americans mean when they say "It's (all) Greek to me". Having suggested that Greek, in its peculiar way, has blocked our understanding of other languages, or, rather, made us look at other languages and language in general taking the point of view of Greek (language or philosophy) (§1), let us see whether the study of Hebrew can suggest some other ways for the analysis of clause structure.


Hebrew, like many other languages, does not require a verb to be its predicate. In fact, *any* part of speech (save bare prepositions, except for some special cases) can form a predicate: nominal (substantives, adjectives, participles), pronominal (personal pronouns, demonstratives, interrogatives and other pronouns), adverbs and prepositional phrases, as well as larger phrases, clauses and other types of syntactic complexes (IZRE'EL, 2012, §3). Some examples:⁵

⁵ The data for this research is drawn from spontaneous speech recordings collected for *The Corpus of Spoken Israeli Hebrew (CoSIH)* <<http://cosih.com/english/index.html>>. References follow the system used in *CoSIH*; speakers are referred to as sp1, sp2, etc. Excerpts that are not retrievable from *CoSIH*'s website are referred to by record reference followed by time measures (exx. 10, 14, 17).


Substantive:

- (1) ze **ha = sa'lon** ||
 DEM[SGM] DEF=living.room 
 ‘This is the living room.’
 (C842_sp1_166)


Adjective:

- (2) a'val ze **ja'fe** ||
 but DEM[SGM] **beautiful**[SGM] 
 ‘But this is beautiful.’
 (C711_1_sp1_024)

Active participle:

- (3) v **ha = 'otobus** **ko'fets** |
 and DEF=bus(SGM) **jumping**[SGM] 
 ‘and the bus is jumping,’
 (OCh_sp1_176)

Prepositional (adverbial) phrase:


- (4) a'ni **be = 'kurs** ||
 I **in=course** 
 ‘I am taking a course.’
 (OCD_3_sp1_059)

Transcription is usually broad phonetic, with some attention to the phonological system. Phonological input is added mainly in the representation of /h/, which is omitted in most environments in contemporary spoken Hebrew, and in the representation of some occurrences of /j/, which may also elide in certain environments. For typographic and reading convenience, the rhotic phoneme, which in standard Israeli Hebrew is uvular, is represented as *r*; the mid vowels are represented as *e* and *o*, although their prototypical respective pronunciations are lower. Two successive vowels are separated by a syllabic boundary, e.g., 'bait 'house' is to be read 'ba.it; diphthongs are indicated by vowel+semi-vowel (in both directions), e.g., aj, ja. Glossing follows, mutatis mutandis, the Leipzig Glossing Rules <<http://www.eva.mpg.de/lingua/resources/glossing-rules.php>>.


Notation: | minor boundary; || major boundary; / major boundary with “appeal” tone; — fragmentary (truncated) prosodic unit; - truncated word (cf. IZRE'EL, 2002, following in essence DU BOIS *et al.*, 1992).

Predicates in Exx. 1-7 are indicated by boldface characters.


Existential negation:

- (5) **en** kvif || 
NEG.EXT paved.road
 ‘There are no paved roads.’
 (OCh_sp1_179)


Complex:

- (6) ma =ʃ= tsa'riχ liv'dok ba'sof | **ze ma ro'tsim ʃ=ji'hje** ||
 what=that=necessary to.check in.the.end **this what want.PLM that=it.will.be**
 ‘That is, what has to be checked in the end is what one wants that will take
 place.’
 (OM_sp6_004-005) 

One may be surprised that verbs are not listed among the predicate types. The reason is that a verb makes a whole clause in itself, as it comprises both a pronominal subject morpheme and a verbal predicative stem:

- (7) **hits'liχ-a** /
succeeded-3SGF
 ‘Did she succeed?’ 
 (C714_sp1_096)

In all the cases above, the cited clauses are bipartite. As mentioned above (§1), spoken Hebrew is ample with utterances without predication. Ex. 8 illustrates this type of utterances, which I am suggesting that they be regarded syntactic units, viz., clauses. Sp1 had told sp2 about a ride he had taken in Mongolia on a local breed of horses, and sp2 suggested that they were mules rather than horses. Sp1 insisted that this kind of animal is a genuine horse, and sp2 now responds by a verifying question:

- (8) sp2: sus ma'maʃ /
 horse real 
 '(Is it) a real horse?'
- sp1: sus sus |
 horse horse
 '(It is) a real horse,'
- rak jo'ter na'muχ ||
 only more short
 'but shorter.'
- rag'laim mekutsa'rot ka'ele ||
 legs shortened sort.of
 '(It has) sort of shortened legs.'
 (OCh_sp2_091; sp1_286-288)

In this exchange, quite typical of Hebrew casual talk, none of the units conforms to the common definitions of *clause* as a unit consisting of both subject and predicate. Taking the point of view of the recipient (§2), I would rather not refer to nonexistent elements as if elided or missing. I will try to find a path through which we can reach a unified theory that will encompass all the evidence provided by spontaneous speech data including units that do not include predication and therefore are usually not regarded as (complete) clauses. In other words, I will try to accommodate unipartite clauses into a unified theory of clause structure (IZRE'EL, 2012).

Taking into account the discussion hitherto, we may bring forth the following questions:

If a predicate does not have to be a verb, so that arguments not always can be called for; if any part-of-speech can function as a predicate; if observation of language tells us that subjects are frequently non-existent in clauses, so that one cannot define a predicate as an attribute to an entity represented within the limits of the clause, or, more generally, as depending on a subject — then how do we know what a predicate might be and, consequently, how can we define a clause?

Before getting into the analysis of unipartite clauses, a few words on the interface between syntax, discourse, information structure and prosody are in order.

4 Syntax, discourse, information structure and prosody

In addition to the general premises set above (§2), I build on more specific premises as regards syntax, discourse, information structure and prosody:

- The syntactic approach adopted here is functional, communicational, discursive and information oriented. As such, syntactic components take their conceptual status from a complex analysis of which the primary originating force is contextual.
- Syntax, information structure and prosody integrate in spoken language structure, forming a coherent unity.
- Prosody is a formal feature of spoken language no less than segmental features.
- Prosody is the main tool we use for spoken language segmentation.
- For the recipient, prosody is the lead to reach a correct interpretation of the segmental structure and consequently a sound interpretation of the information conveyed.

From the recipient's perspective, prosody is a *sine qua non* when trying to delimit units of spoken language (METTOUCHI *et al.*, 2007; IZRE'EL; SILBER-VAROD, 2009). Prosodic units encapsulate corresponding segmental units, which — together with their suprasegmental features — constitute information units. Information units in themselves can either overlap or interface with syntactic units. As our concern here is with basic clause structure, it will suffice to define two units in the prosodic hierarchy: *prosodic module* and *prosodic set*.

Prosodic module (henceforth: PM; aka “intonation unit”, “tone group”, “prosodic group”, or the like), which has been determined as having a coherent intonation contour (CHAFE, 1994, p. 57-60), encapsulates a segmental unit of language to be termed *segmental module*, forming together an *information module* (IM) (cf. TAO, 1996, §§9.1-2 for what he terms *speech units*). The boundaries of IMs are therefore defined by prosody. There are two main classes of boundaries: major (which indicates terminality) or minor (which indicates continuity). Both are indicated by their respective boundary tones. A major boundary is also the boundary of a *prosodic set*.

Prosodic set is defined as a stretch of speech ending – as its default manifestation – in a major boundary. A *prosodic set* can consist of one or more PMs of which the last one ends in a major boundary, whereas any (optional) previous PM ends in a minor boundary.⁶

Whereas a PM encapsulates a *segmental unit*, forming together with it an *information module* (IM), a *prosodic set* encapsulates an *information set* or an *utterance* (cf. MONEGLIA, 2005, §1.2). I take the *utterance* to be the basic discourse unit of spontaneous spoken language (IZRE'EL, forthcoming).

As regards syntax, it is suggested that the utterance is the default domain of the clause, whether it consists of a single IM or more. The utterance is the biggest information unit that can contain a clause. A clause cannot spread beyond the boundaries of a single utterance. In other words, a major prosodic boundary indicates the terminal boundary of a clause. When an utterance consists of more than a single clause, a clause can be encapsulated by a PM. An IM can consist of either a phrase, being a component of a clause, or of a complete clause. An utterance can include additional elements to a clause or consist of a *clause set*, or, rather, a *spoken sentence*; i.e., two or more clauses joined together, thus conveying a single, integrated message. An utterance can therefore be regarded as the domain of a clause set (consisting of a single clause or more) or a spoken sentence. Thus, a sentence — like a clause — is delineated by an utterance. The interface between prosodic and segmental units can be outlined as follows:

Prosodic units	Discourse units	Syntactic Units
Prosodic Module (PM) (one of two or more in a Prosodic Set)	Information Module (IM) (one of two or more in a an utterance)	Phrase / Clause (/ Spoken sentence)
Prosodic Set	Utterance	Clause / Spoken sentence

For further details see IZRE'EL, forthcoming.

⁶ For some exclusions and a more comprehensive study of these units, see IZRE'EL, forthcoming. See also below, note 12.

5 What is a clause? What is a predicate?

Like many recent approaches to clause structure, I take the predicate to be its core component. As mentioned, I do not regard arguments as necessary components within the syntactic structure. Therefore, the predicate is the only necessary component — and a sufficient one — to constitute a clause. In other words, a clause is defined as a syntactic unit consisting minimally of a predicate. A predicate can be either nuclear or extended; in other words, it can consist of either a single element (phrase, word or part of a word) or be seen as a domain. Since any part of speech can function as predicate; since the predicate cannot be defined as an attribute to an entity represented within the limits of the clause, or, more generally, as depending upon a subject; and since it need not be related to any arguments — a new perspective of what consists of a predicate is in order. As mentioned, a discourse-related approach is taken.

The predicate (or the predicate domain) is viewed as the element carrying the informational load of the clause within the discourse context, which by default will include a newly introduced element (cf. CHAFE, 1994, p. 108). By default, the focus of the clause will be found within the predicate domain. Essentially, the predicate carries the modality of the clause.

As taken here, modality is the means by which a proposition can be actualized. This view of modality as an inherent, indispensable characteristic of the clause, basically follows the path of francophone linguistic schools (BALLY, 1965, §§28, p. 46-49, 51-54; LE GOFFIC, 1993, ch. 4; LEFEUVRE, 1999, ch. 1; GOSSELIN, 2010; convenient surveys can be found in VION, 2001; JOHANSSON; SUOMELA-SAHNI, 2011).

As nicely put by Bally,

modality is the soul of the sentence; just as thought, modality is mainly realized through the action of the speaking subject. Therefore one cannot attribute the value of a sentence to an utterance unless one has discovered the expression of modality of the utterance. (BALLY, 1965, §28; translation by JOHANSSON; SUOMELA-SAHNI, 2011, p. 95)

Arrivé, Gadet & Galimiche suggest the following guidelines for the concept of modality:

1. On a strictly logical level (modal logic), *modality* is symbolized by a system comprising two values: *possibility* and *necessity*. ...
It is convenient ... to make a distinction between *epistemic* modalities and *deontic* modalities. ...
2. *Modality* defines the status of the sentence, taking account of the attitude of the speaking subject with regard to his utterance and the addressee. Generally, distinction is made between modalities of assertion (which in itself divides into affirmation and negation), interrogation, exclamation and command. Modalities can combine: a sentence can be both interrogative and negative (...), imperative and exclamative. But not all combinations are possible: there is necessarily a contradiction between affirmation and negation. (ARRIVÉ; GADET; GALIMCHE, 1986, p. 390; my translation).

As noted by Nuyts (2005a), the notion of modality is best viewed as a supercategory, since “the domain is usually characterized by referring to a set of more specific notions, each of which is defined separately, and which may be taken to share certain features motivating their grouping together under the label *modality*, but which differ in many other respects” (NUYTS, 2005b, p. 1). With this in mind, one will recall the use by some authors of the plural *modalities* (French: *modalités*), or *modality variants* (e.g., GOSSELIN, 2010; MARTIN, 2015, 68ff.). As noted by Kiefer,

[t]hree major approaches [to modality] can be distinguished.
(i) Modality is related to necessity and possibility, it is used to relativize the validity of propositions to a set of possible worlds. On this view, modality is not necessarily propositional, it may also include nonpropositional aspects of the sentence. (ii) Any modification of a proposition comes under the heading of modality. According to this view, volitional, emotive, evaluative modifications, too, belong to modality, in spite of the fact that these modifications are not related to necessity and possibility. (iii) Modality is what the speaker is doing with a proposition. This notion of modality includes (i) and (ii): in addition, it also covers illocution, in particular, the speech acts of imposing obligation and granting permission. (KIEFER, 2009, p. 179)

The approach taken here is indeed rather comprehensive and closer to Kiefer’s option iii. Modality has thus a much broader scope than

it is usually conceived by other schools, notably Anglo-Saxon linguistic schools (e.g., PALMER, 2001; BUTLER, 2003, ch. 9), and includes not only the commonly known, consensual types of epistemic, evidential, deontic, dynamic and their like, but also assertion (pace NARROG, 2005, §2.3.1; HACQUARD, 2011, p. 1484, among many others), polarity (cf. HALLIDAY, 2014, §4.5; BUTLER, 2003, ch. 9), and beyond. It further includes sentence (or clause) modalities as used in francophone linguistic schools, specified above. A wider perception of modality has been suggested also in non-francophone linguistics schools, including Anglo-Saxon ones. For Fillmore, modality is the non-propositional component of a clause, thus including tense, aspect, mood and negation (FILLMORE, 1968, p. 23-24). Using a more restricted view of modality, Frajzyngier (1985, 1987; FRAJZYNGIER; SHAY, 2016) defines *clause* as

the smallest formal unit that has a modal value, such as ‘assertion’, ‘negation’, ‘question’, ‘hypothetical’, etc., depending on what kinds of modalities are encoded in a given language. The expression ‘having modal value’ does not mean that the unit itself codes modality. In many languages there is an unmarked modality, which is usually the assertive or affirmative modality (FRAJZYNGIER; SHAY, 2016, p. 179).

For spoken language, prosody will be regarded as basic for modality *signata*. Already Bally claimed that prosody (for him: *intonation*) is primary among non-articulatory elements that can enable the production of a sentence. For Bally, “every sentence is pronounced with an autonomous intonation that corresponds to the nature of thought” (BALLY, 1965, §50; my translation). Of course, prosody is not the only means by which modality is being represented, although it seems to be a basic one (for French see LE GOFFIC, 1993, §§51-59; MARTIN, 2009, p. 86-92; 2015, p. 68-75). According to Martin,

[t]he prosodic structure being assumed (...) independent from the sentence text modality (i.e. the one possibly indicated in the text itself) is correlated with a modality without direct relation with other modality (syntactic, morphologic) markers eventually present in the sentence. (MARTIN, 2015, p. 68)

While there is a lot more to say about modality and its forms, for our needs here suffice is to say that prosody and modality are linked


so as to enable us to see the inherent bond between clause structure and prosody.

By default, the predicate carries with it assertive (or declarative) modality. The traditional notion of assertion has always been central to the definition of predication (GOLDENBERG, 1998, p. 156-157). The thesis advanced here is that a unipartite clause does not lean on a subject. Therefore, the load of assertion (at least in unipartite clauses) is carried exclusively by the predicate domain. The same can be said of other types of modality as it is conceived here, and indeed of modality in its entire gamut.

It will be noted at this juncture that one must distinguish between semantic or pragmatic levels and the syntactic level, which is the formal means language uses to represent meaning. As we have seen, every part-of-speech can become a predicate, so that a formal definition according to segmental features seems irrelevant, especially in unipartite clauses. The main formal features used for detecting a predicate (or a predicate domain) are therefore suprasegmental, notably segmentation, final prosodic contour, and accents. For example, utterances consisting of only a single word can be defined as predicates, and hence complete clauses, using prosodic criteria (see examples in §6 below), although informational features (message, new information) will be present as well. Other elementary examples are: basic declarative modality will by default be indicated by a final fall (MARTIN, 2015, p. 72; IZRE'EL, forthcoming); focus will be marked by prosodic accent, although segmental means can also mark focus. In any case, the terminology used here, viz., *predicate* and *subject*, are essentially syntactic, albeit their interrelationship with semantic and pragmatic notions.

6 Unipartite clauses

As mentioned, a unipartite clause is a clause that consists of only a predicate domain. Ex. 9 exhibits some typical unipartite clauses:

- (9) [1] sp2: 'moruʃ ||
Morush
'Morush,'⁷ 
- [2] sp1: ma 'motek ||
what sweetie
'What, sweetie?'
- [3] sp2: arba'a ja'mim |
four days
'(For) four days – '
- [4] 'ʃva = meot 'ʃekel le = 'zug ||
seven=hundreds shekel to=couple
'(the cost is) seven hundred shekels for a couple.'
- [5] sp1: bli 'kesef ||
without money
'(This is) very cheap.'
- [6] sp2: na'χon /
right
'Isn't that so?'
- [7] sp1: 'ejfo /
where
'Where?'
- [8] sp2: be = 'holidej in ha = χa'daʃ ||
in=Holiday Inn DEF=new
'At the new Holiday Inn.'
- [9] sp1: daʃ ||
enough
'Wow!'
(OCD_2_sp2_059-063; sp1_027-030)

⁷ In *CoSIH*, personal names (in this case, a nickname) have been changed in transcription and eliminated in sound for privacy. In the sound files, names have been replaced by the actual pitch contour, produced by Praat <<http://www.fon.hum.uva.nl/praat/>>.

In this exchange, none of the utterances conforms to the traditional view of *clause* as a unit consisting of both subject and predicate and therefore capable of being analyzed in terms of what is usually regarded as a canonical clause. However, each of the utterances in lines [1], [2], [5], [6], [7], [8], [9] (which in this case each consists of a single IM) meets the requirements of the definition of a predicate as suggested above (§5) and thus constitutes a (unipartite) clause, conveying new information and carrying modality: vocative (IM [1]),⁸ interrogative (IMs [2],⁹ [6], [7]), assertive (IMs [5], [8]), or exclamative (IM [9]). Also, all units have a focus indicated by prosodic features. IMs [3]-[4] make an interesting case. IM [3] recalls a short exchange regarding a weekend at a hotel which took place almost two minutes before returning to this issue here. At this point in the conversation, it is invoked not by repeating the exact phrase used before ('weekend') but by indicating the time span of the hotel stay, viz., 'four days'. Therefore, this IM seems to introduce a new piece of information into the discourse. The modality carried by this phrase is somewhat obscured by the minor boundary tone. Had it been a major

⁸ Vocatives pose difficulties for syntactic analysis (SONNENHAUSER; AZIZ HANNA, 2013). At times, they are being referred to as "extragrammatical" (e.g., DANIEL; SPENCER, 2009; for English vocatives see BIBER *et al.*, 1999, §14.4.1; HALLIDAY, 2014, §4.3.4, who describes vocatives as outside the scope of the Mood system; CARTER; MCCARTHY, 2006, §§116-118). That an address or calling attention like 'Jack!' or 'Sir!' should be regarded as modal will be clear if we realize that it is in fact a *request* or an *order* to pay attention. If an address like these ones forms an entire utterance or comprises in itself an IM, it would carry its own independent intonation contour, forming an independent PM. In such cases, the intonation contour will be observed as indicating the modality of the IM. Of course, such an IM carries informational load with it; if it forms a separate PM it will usually be focused; and in some cases it will manifest "newness" of the address form in terms of the discourse flow (cf. CHAFE, 1994, ch. 9). Chafe has observed that "a substantive intonation unit usually (*but not always*) conveys some new information" (p. 108; my emphasis; for substantive and regulatory units see n. 2 above). While Chafe has limited this observation to substantive units, the general analysis suggested here will be valid for many regulatory units as well, although not to all of them. The behavior of these two different types of units should be subject to further investigation (cf. TAO, 1996, p. 59). In any case, vocatives such as the one discussed here may well be regarded as unipartite clauses.

⁹ The predicate is the interrogative pronoun *ma*. Unlike the vocative in IM [1], the additional element does not conform to the requirements of constituting a predicate and is taken to be external to the clausal structure (cf. IZRE'EL, forthcoming, §3.5.1).

boundary tone, there would be no doubt about the assertion expressed by this IM, making it a clear declarative clause, meaning something like ‘(It is) four days’ or ‘(We have) four days (at the hotel).’ Nevertheless, the prosodic contour — with an especially strong accent on *jamim* ‘days’ — may well be seen as a modality signal. The minor boundary tone, which indicates continuity, is needed for signaling the link between this IM ([3]) and the following one (IM [4]), which in itself unmistakably conforms to the criteria suggested above for a unipartite clause.

It will be recalled that each utterance, being a stretch of speech encapsulated by a prosodic set, is by definition delimited by a major prosodic boundary, which accordingly indicates its terminal point. As such, an utterance is the largest discourse unit that can contain either a single clause or (in the case of IMs [3]-[4] in Ex. 9) a clause set (=a spoken sentence; IZRE’EL, forthcoming, §3.6). Looking at it from a different angle, a major prosodic boundary always indicates the end of a clause and therefore also the beginning of a new clause in the following utterance (prosodic set). As it is exemplified in Ex. 9, each utterance includes a predicate domain which carries the informational load of the clause within the discourse context; each includes a newly introduced element; all units are focused via prosody; and each one carries the modality of the clause, again, indicated by prosody.

In Ex. 10, the speaker tells a piece of gossip about a couple who takes breaks during working hours:

(10) [1] at mari'χa et = ha = 'reaχ ʃel = ha = ʃam'po ||
 you.SGF smell.PTCP.SGF ACC=DEF=smell of=DEF=shampoo
 ‘You smell the shampoo.’




[2] mi = ʃne'hem ||
 from=both.of.them
 ‘From both of them.’
 (OCD: 41’:32.5”-41’:35.2”)

PM [1] ends in a major prosodic boundary and forms an IM that constitutes a complete clause; IM [2] includes what is usually regarded as an “afterthought”. Prima facie, the term “afterthought” implies only that a stretch of speech follows another one, and seems not to differ from “right dislocation”, which seems to imply the same. However, Ziv & Grosz (1994, §2) have suggested that an “afterthought” and “right

dislocation” differ in function and in some formal characteristics, noting that an “afterthought” comes after a prosodic boundary¹⁰ and comprises a separate utterance. Decades before, Bally (1965, §§75), relying on the prosodic structure of such sequences, suggested that the two parts are autonomous, and compares them to coordinate sentences (§§102-103), very much like inserts (§§70,86). In an older article, he insists to call such units “sentences” (“j’insiste sur le mot «phrase»”; BALLY, 1941, p. 40-41). As we see in our Ex. 10, a major prosodic boundary indeed separates between the two speech stretches, thus forming two distinct utterances. Complying with the requirements for informativeness, newness, focusing and modality (assertive or declarative in this case), the prepositional phrase *mifnehem* ‘from both of them’ in IM [2], standing as an utterance on its own, will be regarded from the syntactical point of view as a predicate constituting a unipartite clause. Looking at it from the point of view of parts-of-speech classification, the structure of the word that constitutes this clause is one that will be defined as an adverbial phrase. Taking this point of view, as well as looking at the semantic structure of the utterances in both IM [1] and IM [2], one can see that the utterance *mifnehem* ‘from both of them’ in IM [2] is structurally related to the predicate nucleus *marixa* ‘smell’ in IM [1]. Of course, a virtual syntactic link between the predicate in IM [1] and the adverbial phrase in IM [2] can also be deduced, one that can be tested had the two occurred within the boundaries of a single IM (or clause). In that case, the adverbial phrase would not be regarded as a predicate of a new clause but as an adjunct, since it would not carry its own modality. One should recall that in Hebrew, one will find in the predicate position any part of speech, including prepositional phrases (see above, §3; for adverbial clauses as independent sentences see TESNIÈRE, 1966, 2015, ch. 77). In the framework proffered here, where prosody is taken as the basis for segmentation of both discourse and syntactic units, as well as on the basis of the analysis advanced above where the adverbial phrase *mifnehem* is taken to be a predicate, the relationship between the two utterances must be seen on an inter-sentential level (cf. MITHUN, 2005).

¹⁰ Ziv & Grosz claim that an “afterthought” follows a pause. As pause is not a necessary requirement of prosodic boundary (AMIR, SILBER-VAROD; IZRE’EL, 2004), I would rather rephrase this requirement to mean a prosodic boundary, probably a major one, as is the case here.

It will be noted, that not all defining features will always be present in a clause. In Ex. 11, a team of the civil guard are about to take off from their base.

- (11)[1] sp1: tsa'riχ lik'not ʃti'ja ||
 need to.buy drink
 'We have to buy drinks.' 
- [2] sp4: tik'ne ba'dereχ ||
 2SGM.buy in.the.way
 'Buy (them) on the way.'
- [3] nu /
 come.on
 'Come on!'
- [4] sp1: tov ||
 good
 'Okay.'
 ...
- [5] ani = ro'tse lik'not ga'dol ||
 I=want to.buy big
 'I want to buy a big (bottle).'
- [6] sp2: ga'dol /
 big
 '(A) big (one)?'
- [7] sp1: ga'dol ||
 big
 '(A) big (one).'
- (P311_2_sp1_398-404; sp4_105-106; sp2_126)


Sp1 says that he wants to buy a big bottle of soft drink (IM [5]), introducing the component 'big' into the discourse. Therefore, when sp2 asks a verification question, the adjective *gadol* 'big' (IM [6]) is no longer new. What is new is the interrogative modality, indicated by prosody. When sp1 repeats it, the modality is again assertive, as it is in IM [5].

In this case, the defining feature of newness is not fulfilled. Still, all other three features for defining IM [7] as predicate and clause are there: informativeness, (assertive or declarative) modality, and focus, signaled by prosody.¹¹ It should be noted, that both IMs are delimited each by major prosodic boundaries, thus constituting each an utterance. It will be recalled (§4) that an utterance is the domain of a clause. It should be emphasized, that a major boundary does NOT define a syntactic unit but an informational one, although prosody has a role also in the definition of predicate in that it may signal modality and focus. Predicates, and by consequence also clauses, are defined independently from utterances, albeit their interface and their correlation at the utterance terminal boundary.

Every discourse takes place in a specific location, occurs at a specific time, and has its direct interlocutors, indicated in the discourse by the first and second personal pronouns. This is the point of departure for all deixis, the *origo* ('origin'), to use Karl Bühler's (1934) term (ABRAHAM, 2011, p. xviii). An intricate system of means is used to refer to elements in the conceptual world by linguistic signs, whether such elements are external to the discourse or occurring within it. Discourse structure uses a variety of deictic and anaphoric elements to refer to these items, notably when reference recurs in the discourse. Recurrent reference may be called for by reduced referential expressions (e.g., independent pronouns, pronominal clitics or affixes) or may not be explicitly made at all. As mentioned above (§1), there are many languages which systematically avoid the use of referential expressions (see further KIBRIK, 2011, ch. 3). Within the boundaries of a clause, reference can be made in either the subject position or in the predicative domain or in both. Of course, our interest here lies with clauses where no subject is present. We shall see that unipartite clauses are not dependent on referential representation at the subject position.

In Ex. 12, a military commander (sp3) notices a telephone ringing while reciting instructions during a roll-call of his soldiers:

¹¹ Sp1 utters this utterance in an unnatural sound and prosodic contour, which seem to convey some sort of ridicule.

- (12)[1] sp3: jel= 'mi ha = |
of=who DEF=
'Whose is the' 
- [2] 'pelefon /
cellphone
'cellphone?'
- [3] spX: ets'l= i ||
at=1SG.GEN
'(It is) with me.'
- [4] b = a = 'tik ||
in=DEF=bag
'In my bag.'
- (P423_1_sp3_005-006; spX_001-002)

One of the soldiers responses first by saying *etsli* 'it is) with me' (IM [3]), then by complementing it by specifying where exactly the cellphone is (IM [4]), probably making an excuse as to why he was not aware of its being there or its being turned on. In any case, the first clause (IM [3]) illustrates a predicative use of the complex *etsli* 'with me' in an utterance constituting a unipartite clause, hence a predicate domain. Obviously, the pronominal clitic is the nucleus of the predicative domain, being the core of information given. The following IM also constitutes a complete utterance, being delimited by two major boundaries. This utterance too can be defined, by its own characteristics, as a predicate, and therefore as a clause: it communicates new information, it carries declarative modality, and the focus is indicated by the prosodic accent, which in this case correlates with the only word-stress found in this utterance, constituting of a single prosodic word, yet in a higher pitch and intensity than the expected ones, very much like the preceding one-word utterance, *etsli*. The anchor for both predicates is 'cellphone', mentioned previously by sp3. Note, however, that neither the clause in IM [3] nor the one in IM [4] has any structural relation (i.e., on the formal level) to the referential element *pelefon* 'cellphone', which, in any case, will not be regarded as subject for neither clause.

Many unipartite clauses are anchored in a previous discourse, notably in adjacent utterances, like questions and answers (see, *inter alia*, CULICOVER; JACKENDOFF, 2005, ch. 7; GINZBURG, 2012, ch. 7). These are, however, only a part of the variety of occurrences of unipartite clauses. Givón (1992 [=2017, ch. 2]; cf. 2001, v. I, §9.5) has shown a significant correlation between the occurrence of clauses without representation of the referent and referential distance, i.e., the gap between the current and previous representation of the referent in the discourse. From data collected in several languages, Givón shows that the mean distribution of clauses without an explicit representation of the referent (for him: “zero anaphora”) will reach up to 100% of the occurrences when they immediately follow a referential representation in a previous clause. On the other hand, referents tend to be overtly and explicitly represented in the discourse the larger the gap from a previous occurrence of the same referent becomes (see his table in GIVÓN, 1992, p. 21 [=2017, p. 45]). For a more complex view of referential choice see KIBRIK, 2011, part IV.

I have mentioned above (§2) that corpus data reflect the perceived language rather than the produced one. An interesting case showing the gap between the respective speaker’s and hearer’s grounds for communicative exchange is the excerpt presented as Ex. 13. Sp1 tells her interlocutor, sp2, about her forthcoming trip to Thailand, resulting in this short exchange:

- (13) sp1: ‘In a short while I am in Thailand.’
 sp2: ‘You didn’t mention it. When are you leaving?’
 sp1: ‘29th of July.’

Sp2 does not continue to enquire about the trip, and she says instead:

lo na'im li miske'na ||
 NEG pleasant to.me poor.PTCP.SGF
 ‘I feel uncomfortable; poor her (la pauvre!).’
 (Y111_sp2_154)



And she continues:

‘And well ... And what will they do? And what will they do?’

Sp1 does not understand and asks:

‘What is it that you feel uncomfortable about?’

There follows a side-talk, during which sp1 goes to prepare herself some coffee, and when she returns, she asks again:

‘What is it that you feel uncomfortable about?’

Sp2 responds:

hi hal'χ-a ha'bajta ||
she went-3SGF homeward
‘She went home (i.e., got fired).’
(Y111_sp2_158)




Sp1 finally understands that her interlocutor was speaking about a colleague who had been fired from work:


‘Yes. I know. I discovered it yesterday when she said goodbye.’

This exchange shows the difference in active memory between participants in the conversation and therefore the capability of anchoring. Whereas the referent for the adjective *miskena* ‘poor.SGF’ is found in the active memory of sp2, it is inactive in the memory of sp1. Whereas for sp2 the predicate *miskena* ‘poor.SGF’ is anchored to an extra-*origo* referent, for the recipient this unipartite clause is unanchored, so that she has to ask for explanation. Interestingly, when sp2 helps her by making the reference, she does not use a full reference but a reduced one (i.e., the pronoun *hi* ‘she’) which seems enough for sp1 to indicate to sp2 that the referent has now been raised to her active memory.

In Ex. 14, the speakers are arriving in a place that they had not visited for a long time and try to locate the house. Following the request of sp1, who is the car driver, sp2 introduces a sign that will help the driver to find the place:

- (14) sp1: ‘Remind me where is the house.’
 ...
 sp2: jeʃ kazot e | kni'sa le =χana'ja ||
 EXT like.this uh entrance to=garage 
 ‘There is a sort of entrance to a garage.’
 (Sh5: 2h:59':50"-53")

The existential particle *jeʃ* is traditionally analyzed as predicate in all contexts (GLINERT, 1989, §16.9; SCHWARZWALD, 2001, p. 96; KUZAR, 2012, §155; ZIV, 2013). However, it is rather the new referent introduced into the discourse that is to be regarded as a predicate. In this and many similar contexts, the existential particle *jeʃ* is better viewed as a presentational particle, although without stripping it of its existential meaning (cf. JESPERSEN, 1924, p. 154-6; MCNALLY, 2011, p. 1833; among many others). Compare the use of the presentation particle *hine* ‘here, now’ in Ex. 15:


- (15) 'hine setʃu'an |
 PRES Sichuan 
 ‘Here (is) Sichuan,’
 (OCh_sp1_027)

Here, the speaker looks at an atlas and finds sites he had visited while he was visiting China. In both cases, the existential particle (Ex. 14) or the presentation particle (Ex. 15) introduce new element into the discourse. In both cases, all other criteria for establishing these phrases as predicates are also present.

Indeed, there are cases where either the existential particle or the presentational one will be regarded a predicate. This will be the case where the other component in the clause, the so-called pivot, will be given. In such cases, the focus will be on the respective particle rather than on the pivot. With the analysis given here, the uses and functions (presentational, existential, locative, possessive, etc.) of the particle *jeʃ* and related forms (notably its negative counterpart *ejn*) should be subject for further research (IZRE'EL, in preparation). In any case, the type of presentational-existential clause represented in IM [2] of Ex. 14 should be regarded as a unipartite clause.

There are cases where the predicate cannot be shown to have an anchor in elements that have explicit linguistic expression in the discourse; rather they are anchored in elements that are external to the discourse, either within the *origo* of this specific discourse or external to it (cf. GIVÓN, 1992, §6 [=2017, ch. 2, §4]).

In Ex. 16, the speaker interrupts the flow of the conversation, feeling that something went wrong with his recording mission. He utters:

- (16) ha = hakla'tot = jeli ||
 DEF=recordings=my 
 'My recordings.'
 (P423_2_sp1_433)

In this example, the predicate 'my recordings' has no previous or any other reference in the discourse. Rather, it refers to a situation in the physical world, in this case within the *origo*, where even the situation as felt by the speaker remains unmentioned.

Finally, there are predicates that are neither anchored in the discourse at all nor do they have any obvious, direct anchors – either internal or external. The most conspicuous case of unanchored clauses are those introducing a brand new topic – or referent – into the discourse via a presentational construction (cf., *inter alia*, LAMBRECHT, 1994, §4.4). One way of introduction brand-new referents into the discourse in Hebrew is by using the existential particle *jef* (cf. Ex. 14), as in Ex. 17:

- (17)[1] tiʃme'u da'var ||
 hear.PL thing 
 'Listen to this:'
- [2] jeʃ ma'kom |
 EXT place
 'There is a (certain) place'
- [3] ber'χov |
 in.street
- [4] le'vinski |
 Levinsky
 'in Levinsky Street'

- [5] be |
in
- [6] tela'viv |
Tel.Aviv
'in Tel-Aviv;'
- [7] 'mi'fei |
someone.SGF
- [8] fe |
that
- [9] o'sa |
make.SGF
- [10] tavli'nim |
spices
'(There is) someone (there) who makes spices,'
- [11] fe |
that
'who'
- [12] ro'kaχat |
concoct.SGF
'concocts ...'
- [13] lo ro'kaχat ||
NEG concoct.SGF
'not concocts,'
- [14] be'etsem marki'va ||
in fact put.together.SGF
'in fact, combines.'
- [15] kol = mi'nej |
all=sorts.of
'all kinds of'
- [16] e |
uh

- [17] tamhi'lim |
blends
'blends'
- [18] šel = kol = mi'nej tavli'nim be'jaħad ||
of=all=sorts.of spices together
'sorts of uh combinations of various kinds of spices together.'
(Sh2c: 38':35.3"-38':49.6")

Following a discourse-regulative comment (SG [1]), the speaker introduces her new topic by an existential clause (IMs [2]-[6]). As mentioned above for Ex. 14, the existential particle *ješ* should not be regarded in such contexts as predicate but rather as sort of a presentational particle. Thus, the existential clause in IMs [2]-[6] will be regarded as a unipartite clause, and since it introduces a brand new topic into the discourse, it will be classified as unanchored.

In this excerpt, after the initial reference to 'a place in Levinsky street in Tel-Aviv' is made, the speaker introduces another referent, this time not making use of the existential particle, perhaps because now the newly referential expression is anchored in the already presented location (IMs [7]-[18]). The utterance in IMs [7]-[18] is an expanded unipartite clause, which includes two subordinate clauses which are unipartite clauses all the same (IMs [9]-[10]; [12]-[18]), each embedded by the element *še* 'that' (IM [8], IM [11]) with an inserted parenthesis (IMs [12]-[14]).¹²

A preliminary, illustrative classification of predicates in unipartite clause, aiming at establishing their relational position in a linguistic or extra-linguistic context, has been offered in Izre'el (2018, §4).

7 On wheelless automobiles and one-room houses

We have started our endeavor to find out a different approach to clause structure because the gap between grammatical tradition and authentic linguistic data was too large to embrace (§1). Some discomfort from the allegedly safe, paved path of tradition has sometimes been

¹² Parenthetical utterances may interfere the sequence of a running utterance (IZRE'EL; METTOUCHI, 2015, §3.3). They can end in a major boundary, which, in such cases, does not mark the end of the matrix utterance (IZRE'EL, forthcoming, §3.7.2.1).

expressed. I have already cited (§1) Iwasaki's reservations regarding the use of the terms "ellipsis" and "zero anaphora" in the context of Japanese linguistics. For Kibrik (2011, p. 44), "zeroes are not a theoretical construct but rather a convention of representation." Nariyama (2007), trying "to bring more viable treatment of ellipsis particularly for NLP applications", suggests an opposite way to look at "ellipsis":

[E]llipsis can be viewed as any unexpressed information that can be drawn from context, This from the perspective of production means that any information that is inferable is made into ellipsis. (§3)

[I]t is not that sentences are produced with ellipsis, but rather those words/information that are not retrievable from contexts are being verbalized. (§3.2)

'Zero' form can mean one of two implications; 1) when something is *Understandable without saying* it is because it is anaphoric, inferable, default, or the identity is known from verbal semantics, context, situational/mutual/world knowledge, non-existent or uncertain of the existence, or 2) *no such slot exists*. (§4.1)

In generation, what should be made overt are those that are required by the syntax of a language, and are not understandable without, or for a special effect, so that known information is made overt generally when there is focus/emphasis, competing information in the context, signifying paragraph/story boundary, or treated as new information. (§4.4) (NARIYAMA, 2007; emphases in the original)

Similar or related views have been expressed time and again within linguistics, e.g., the already cited claim (§1) by Lee *et al.* (2009, p. 106), that "[i]f anything, overt subjects are 'additions' to English grammar." Lee *et al.* remind us of Ong's discussion of oral literature, where he compares the analysis of oral performance, genres and styles as "literature" to a description of horses as wheelless automobiles:

Imagine writing a treatise on horses (for people who have never seen a horse) which starts with the concept not of horse but of 'automobile', built on the readers' direct experience of automobiles. It proceeds to discourse on horses by always referring to them as 'wheelless automobiles', explaining to highly automobilized readers who have never seen a horse all the points of difference in an effort to excise all idea of 'automobile' out

of the concept ‘wheelless automobile’ so as to invest the term with a purely equine meaning. Instead of wheels, the wheelless automobiles have enlarged toenails called hooves; instead of headlights or perhaps rear-vision mirrors, eyes; instead of a coat of lacquer, something called hair; instead of gasoline for fuel, hay, and so on. In the end, horses are only what they are not. No matter how accurate and thorough such apophatic description, automobile-driving readers who have never seen a horse and who hear only of ‘wheelless automobiles’ would be sure to come away with a strange concept of a horse. The same is true of those who deal in terms of ‘oral literature’, that is, ‘oral writing’. You cannot without serious and disabling distortion describe a primary phenomenon by starting with a subsequent secondary phenomenon and paring away the differences. Indeed, starting backwards in this way — putting the car before the horse — you can never become aware of the real differences at all. (ONG, 1982, p. 12-13)

The idea that tradition can be a burden for linguists is not new and may find its first expressions already in the early history of linguistic observations. Back in the 2nd century CE, Sextus Empiricus expressed the following claim in his work *Against the Grammarians*:

In familiar intercourse, ordinary people will either oppose us about certain phrases or will not oppose us. And if they oppose us, they will at once correct us, so that we have good Greek from those who live ordinary lives and not from the Grammarians. And if they are not vexed but concur in the phrases we use as being clear and correct, we too shall abide by them. (SEXTUS EMPIRICUS, 1949, p. 113 *apud* WEILER, 1970, p. 143).

Interestingly, a vigorous call challenging the linguistic tradition comes from philosophy in recent times. In Wittgenstein’s *Philosophical Investigations* one reads the following scenario:

A is building with building stones: there are blocks, pillars, slabs and beams. B has to pass him the stones and to do so in the order in which A needs them. For this purpose they make use of a language consisting of the words “block”, “pillar”, “slab”, “beam”. A calls them out; B brings the stone which he has learnt to bring at such-and-such a call. — Conceive of this as a complete primitive language. (WITTGENSTEIN, [1953], 2009, 6^e, §2)

Later on, Wittgenstein discusses these forms of language:

‘... you can call “Slab!” a word and also a sentence; perhaps it could aptly be called a ‘degenerate sentence’ (...); in fact it is our ‘elliptical’ sentence. But that is surely only a shortened form of the sentence “Bring me a slab”, and there is no such sentence in example (2). — But why shouldn’t I conversely have called the sentence “Bring me a slab” a *lengthening* of the sentence “Slab!”?... Do you say the unshortened sentence to yourself? ... does ‘wanting this’ consist in thinking in some form or other a different sentence from the one you utter?’ (WITTGENSTEIN, [1953], 2009, 12^e, in §19; emphasis in the original)

At this juncture, Jespersen’s metaphor of a one-room house is worthy of mentioning:

It is, however, being more and more recognized by linguists that besides such two-member sentences as just mentioned we have one-member sentences. These may consist of one single word, e.g. “Come !” or “Splendid !” or “What ?”— or of two words, or more than two words, which then must not stand to one another in the relation of subject and predicate, e.g. “Come along ! | “A capital idea !” | “Poor little Ann !” | “What fun !” Here we must first guard against a misconception found in no less a grammarian than Sweet, who says (NEG §452) that “from a grammatical point of view these condensed sentences are hardly sentences at all, but rather something intermediate between word and sentence.” This presupposes that word and sentence are steps in one ascending hierarchy instead of belonging to two different spheres; a one-word sentence is at once a word and a sentence, just as a one-room house is from one point of view a room and from another a house, but not something between the two. (JESPERSEN, 1924, p. 306)

Looking back almost a century since these words were written, one will see irony in Jespersen’s note that “[a]n old-fashioned grammarian will feel a certain repugnance to this theory of one-member sentences” (JESPERSEN, 1924, p. 306). More recently, vacillating between syntax, semantics and pragmatics, debate over the analysis of so-called “subsenteses” or “fragments”, elliptical structures and their like has been going on especially since the outburst of generative grammar, putting aside what may be regarded as pre-structuralist statements over the nature of this type of units as forms of sentences (cf., in addition to

works already cited above, the discussions by SEGEL, 2008, §§1-3; HALL, 2009; HARNISH, 2009; with references to previous works).

The most recent attempt to challenge accepted views is Givón's *The Story of Zero* (2017), who suggests that

zero anaphora, rather than being an exotic feature of 'pro-drop', 'empty node', 'non-configurational' languages, is the most natural grammatical device for coding maximal referential continuity in human language. And that its gradual replacement by clitic pronouns, which eventually become obligatory pronominal agreement, is a natural, universal diachronic process. (GIVÓN, 2017, p. 155)

Thus, in evolutionary terms, unipartite clauses are viewed as more basic than bipartite ones. This idea too is not novel. One may cite Grace Andrew de Laguna, who, following observations of child language, suggested that

[t]he supposition that language had its beginnings in words would seem at first sight to be supported by reference to the speech of the little child. ... [W]hile the articulate utterances of the little child bear a resemblance to the words of his elders ... they are not ... true words. ... As the baby uses a word, it is ... a sentence-word. What the baby does from the beginning ... is to talk in complete, if rudimentary, sentences. ... The simple sentence-word is a complete proclamation or command or question The independence of the primitive word with respect to other words is paid for by its dependence on the practical situation. (DE LAGUNA, 1927, p. 86-91)

Similarly, more recent research argues that protolanguage capacity is not lost in modern languages. Support for this claim is brought forward, looking at linguistic traits drawn from child language before the age of two years; pidgin and creole languages; some types of aphasia; children prevented from acquiring language during the critical period; ad hoc 'homesign' systems used by deaf children with their hearing parents; and from emerging sign languages such as Nicaraguan Sign Language and Al-Sayyid Bedouin Sign Language (TALLERMAN, 2014, §3.2). A notable illustrative case for unipartite sentences as the first evolutionary stage in language emergence would be a story told by the oldest signer among the Al-Sayyid Bedouin Sign Language community, characterized

largely by one-word propositions, separated by pauses (i.e., prosodic signs) (SANDLER, 2017, p. 70-74). One may further recall the very first stages in second language acquisition, suggested to be the basic variety of language (JORDENS, 1997, p. 290).

Whereas a diachronic-evolutionary view of language may well see unipartite sentences as more primitive, it still remains to be seen whether this view can hold for synchronic analyses. Obviously, not all languages show the same tendencies (SAUVAGEOT, 1971; HAGÈGE, 1978; GIVÓN, 2017). Still, it seems that the view that bipartite sentences (or clauses) are more basic than unipartite ones needs to be challenged. In any case, one must look afresh at the view that unipartite sentences/clauses are elliptical or include empty ('zero') components. A revised analysis based on novel thinking is surely in place.

8 Conclusion

Adopting a framework of an integrative approach to the structure of spoken language that includes prosody, discourse structure, information structure and syntax, has resulted in our ability to account for what has been termed here *unipartite clauses*, syntactic units consisting of only a predicate domain, i.e., a nuclear or an extended predicate. The term *predicate* has been preferred over terms from other areas of investigation (e.g., "rheme", "comment", or the like), because I wish to adhere to the domain of syntactic level of investigation. By default, the predicate (or the predicate domain) is viewed as the element carrying the informational load of the clause within the discourse context, including a newly introduced element. By default, the focus of the clause will be found within the predicate domain. Essentially, the predicate carries the clause modality.

The research for establishing the notion of *unipartite clause* in spoken Israeli Hebrew was based on a rather small collection of data, which now forms *The Corpus of Spoken Israeli Hebrew (CoSIH)*. Further research, based on this corpus and on a larger collection of texts, will surely enhance our understanding of both the nature and the functions of unipartite clauses. It is my hope that research following the lines suggested here will be applied to other languages than Hebrew. As has already been mentioned briefly above, many other languages, spoken and written alike, attest similar structures in various degrees of frequency.

Hebrew, with its nature of constituting predicates from all parts of speech rather than confine it to verbs, has been productive to illustrate a fresh look at clause structure and the nature of predicate in spoken language in particular and in language in general (for some notes on similar structures in written Israeli Hebrew see RUBINSTEIN, 1968, ch. 6; SADKA, 1991; see further BERMAN, 1980).

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