

Is subordination viable?

The case of Hebrew *še* ‘that’

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In this paper, patterns of clause combining that include the particle *še* (usually translated as ‘that’, ‘which’) in spontaneous Israeli Hebrew will be discussed. I will suggest a classification of the functions of this particle, which is considered as a subordination marker in Hebrew studies. After tracing the origin of the term subordination in grammar and reviewing some of its traditional and recent grammatical conceptions, I will outline some of the problematic issues in applying the notion of subordination to conversational data. The notion of subordinate clause will be re-examined in light of spoken corpus evidence, based on The Corpus of Spoken Israeli Hebrew (CoSIH)¹. I will then show what can be learned from the phenomenon of clause combining about the processes of formation of syntactic structures from pragmatic ones.

Keywords: subordination, clause combining, spontaneous speech, Hebrew conversation

1. The notion of subordination in grammar

Subordination in grammar is a principle of the hierarchical organization of linguistic units. Most frequently, the term subordination is employed in the context of syntax, and that is the context in which it is considered here. The literature on subordination is quite extensive; here I will sample only a portion of it, outlining the difficulties in identifying such a notion in spoken language grammar and tracing the origin of this term.

The term subordination came into use in the context of grammar from the field of logic, like many other grammatical terms (Sandmann 1950; 1979). Consequently, it might have been expected that the meaning of this term would be identical — or at least related — in both disciplines. Instead, as it will be shown

¹ Available from <http://cosih.com/english/index.html>

in this section, the grammatical usage of subordination is in large measure not a copy of the logical tradition.

Within the framework of conceptual logic, the term subordination denotes differences of rank within a conceptual order: sugar and snow are subordinated to the more general concept of white objects. In other words, the concept sugar or snow is classified as belonging to the class of white objects. According to Aristotle, the act of classification is involved in a simple proposition as well: Sugar is a white object. Sandmann (1979: 260) pointed out that the tools used in the traditional analysis of the logical (classifying) proposition had been adopted by the Greeks for other types of propositions, and that “in spite of the fact that this analysis has its shortcomings, our traditional sentence-analysis has been inspired by these logical conventions.”

In logic, the object of subordination is the concept that corresponds to the grammatical term word, whereas in grammar this term refers largely — though not exclusively — to the syntax of sentence groups and only secondarily to word groups (*ibid.*). The following brief review will hopefully assist in answering the question of how subordination is tied to the syntax of sentences.

According to Sandmann (1979: 259), in Aristotle’s time the relation between parts of a simple proposition, *onoma* and *rhema*², was considered to be identical to the relation of characterization between concepts within a conceptual order. In a simple proposition, words were considered as of different rank, as *determinandum* and *determinans* in the widest sense. Within the framework of conceptual logic, this relation was defined as subordination. In logic, the determined concept is subordinated because the determining word has a wider extension. In the simple proposition, however, it is the determining concept that is subordinated, since according to the contemporaneous grammatical tradition, the determined word constitutes the principal member of the proposition, *onoma*, and it is the attribute that is subordinated. Sandmann (1950: 28) pointed out that it looks like grammarians operating with the logical term are not aware of the fact that logicians hold a view diametrically opposed to grammatical theory.

In the late nineteenth century, neo-grammarian Hermann Paul suggested that all syntactic relationships are variations of the subject-predicate relation, with the exception of coordination (Paul 1920: 138). Consequently, the general view at that time, mentioned by Sandmann (1950: 25), was that relations between subject and predicate, noun and attribute, verb and object, and verb and adverb are recognized as subordination or hypotaxis.

² The Greek terms are ὄνομα and ῥῆμα (see Aristotle, *De interpretatione* = Περί Ἑρμηνείας / Aristoteles; recognovit Hermann Weidemann. Berlin; Boston: De Gruyter, 2014).

From the simple proposition, the term subordination was mapped into a syntax of sentence groups, where one of them (subordinate clause) characterizes the other in a broad sense. Sandmann (1950: 26) noted that there was a consensus among grammarians that subordination covers the whole range of what is otherwise termed as grammatical dependence.

As mentioned earlier, probably the most widespread application of subordination in grammar is the syntactic notion denoting relations between parts of a complex syntactic unit. In grammar, the term subordination is usually identified on the basis of a number of criteria, such as:

- Dependence — impossibility for a subordinate clause to occur in isolation (e.g., Lyons 1968: 178; Van Valin & LaPolla 1997: ch.8);
- Embedding — the subordinate clause is embedded into the main one as its constituent, and the two are linked by a part-whole relationship (e.g., Haspelmath 1995).

This view of subordination is essentially morphosyntactic in nature, and it was developed mainly on the basis of Indo-European languages (Cristofaro 2003). Although it is used as a working postulate in a number of recent studies, it turns out to be of quite limited applicability within individual languages, for example in Hebrew.

Dependence is divided by grammarians into grammatical (morphosyntactic) dependence (for example, subjunctive forms) and distributional dependence — that is, the impossibility for subordinate clauses to occur in isolation (Van Valin 1984). In addition, as shown by Van Valin, grammatical dependence does not universally entail distributional dependence. Grammatical dependence is mainly a dependence of the linked clause upon the main clause for the expression of grammatical categories that are part of its interpretation. This type of dependence is not found in spontaneous Israeli Hebrew³.

Following Lyons (1968: 180), the sentence has to be recognized, besides other grammatical criteria, as the domain of the phonological features summed up in the term intonation, and utterances should be segmented by the test of distributional dependence. Lyons (*ibid.*) suggested that “supplementary criteria of

³ The circumstantial clause (e.g., *xazaʔti habajta mutεʃet* ‘I came home exhausted’) would probably be an exception. Participles in Hebrew indicate only gender and number. Accordingly, the participle *mutεʃet* ‘exhausted’ indicates that it is singular and feminine. Its interpretation as a first person depends on the form of the verb *xazaʔti* ‘I_came_back.’ However, the status of the participle in this kind of constructions goes far beyond the scope of this paper.

potential pause and intonation will distinguish utterances in which two or more consecutive sentences are to be taken as clauses in a single sentence or as independent sentences.”

Izre’el (2005, 2012), focusing on spontaneous spoken Israeli Hebrew, proposed that the distribution of syntactic units leans mainly on prosody. Izre’el (In Press) suggested that the prosodic set, which can include a single prosodic unit or more, is (by default) determined by a terminal (or major) prosodic boundary⁴. The prosodic set encapsulates the corresponding clause set — spoken sentence — which by the same token would include a single clause or more than one clause⁵. The prosodic set delineates an utterance, which is an information unit. In accordance with this approach, it is justified to view the spoken sentence as a unit ending with a terminal boundary.

In spontaneous Israeli Hebrew, all kinds of clauses that are traditionally considered as subordinate clauses can occur in isolation — after a terminal prosodic boundary⁶:

- (1) *bimkɔm lɛhɛnɔt mɛ ha m |*
instead_of to_enjoy from the m |

mɛ ha pɛi ha zɛ ||
from the fruit the this ||

ʃɛ ɔvdim alav aɓba ʃanim ||
that work on_it four years ||

(Y311_sp1_187-189)

‘Instead of enjoying it, this fruit [baby], which they were working on for four years.’

- (2) *vɛ hahi jada /*
and that_one knew /

ʃɛ jɛʃ lɔ xavɛɓa /
that there_is him friend /

⁴ Prosodic boundaries fall into two main types: major prosodic boundaries, indicating terminality (including boundary carrying an “appeal” tone); and minor prosodic boundaries, indicating continuity (Du Bois *et al.* 1992).

⁵ In the present work, *clause* is defined as a unified predicate (Berman & Slobin 1994), and it is the basic unit of the analysis.

⁶ Here, major prosodic boundaries are marked by ||, major prosodic boundaries carrying an “appeal” tone by /, and minor prosodic boundaries by |.



(C514_2_sp1_294-295)

‘And did she know? That he has a girlfriend?’



(3) sp1: *zε tsavix lihjot pɔ ba salon al ha fulxan* ||
 this need to_be here in_the living room on the table ||

sp2: *kʃε jihjε fulxan* ||
 when will_be table ||

(C714_sp3_004; sp1_009)

sp1: ‘It should be here in the living room, on the table.’

sp2: ‘When there will be a table.’

In accordance with traditional grammar, relative clause (in Ex.1), complement clause (in Ex.2), and adverbial clause (in Ex.3) cannot stand on their own and presuppose another segment in the same utterance that they are dependent upon; together they compound one complex sentence. However, from a distributional point of view, the clauses in question are produced after a terminal boundary, and should therefore be taken as independent sentences. Nevertheless, as noted by Bolinger (1984, 1989) and many others, prosody and syntax are not necessarily isomorphic, although they can coincide to a great extent.

Furthermore, there is no agreement that the notion of subordination requires embedding. According to Van Valin (1984), subordination requires embedding and (morphosyntactic or distributional) dependence. However, he pointed out that the clause can be dependent without being embedded, considering these cases within the domain of *cosubordination*. Other researchers suggested that embedding is a separate structural category (Matthiessen & Thompson 1988; Halliday & Matthiessen 2014). The present study agrees with the latter approach, and I would suggest that embedding in Hebrew is a structural category that should not be confused with dependence or subordination.

Some grammarians connect the presence of particular conjunction words with dependence (e.g., Aarts 2006; for Hebrew Rodrigue-Schwarzwald & Sokoloff 1992). The particle *ʃε* is considered as a typical subordination marker, leading to the conclusion that any conjunction that includes this particle is a subordinate conjunction. According to this perception, subordination is defined by forming grammatical structures that usually include subordinate conjunctions; on the other hand, subordinate conjunction is defined as a conjunction that attaches a clause to another clause by subordinating the attached unit (Rodrigue-Schwarzwald & Sokoloff 1992: 217). Relying on the presence of certain words to define subordination will fail to do so and lead to circularity.

To complicate matters even further, subordination is considered as an asymmetric relation, and this asymmetry is typically correlated with importance or prominence. In defining subordination, the majority of grammarians tend to divide a sentence into main clause and subordinate clause, which is less important or less prominent (e.g., Aarts 2006). Matthiessen & Thompson (1988) discussed the general problem of subordination in terms of the structure of the discourse within which the subordinate clause appears. They pointed out that “important” is not the same as “main”, “principal”, or “nuclear”, and subordinate information may also be essential to the success of a discourse (*ibid.*: 312).

Furthermore, according to Fabricius-Hansen & Ramm (2008: 2), this asymmetric relation is correlated with the notion of hierarchical structure in everyday life:

If A is subordinate to B, then B cannot be subordinate to A; but B may, in its turn, be subordinate to a third entity C, and so on. [...] In social hierarchies, this kind of asymmetry is typically correlated or associated with (social) “importance,” “prominence” and the like. [...] However, while importance and prominence may be quite transparent concepts with respect to social hierarchies, it is far from clear how the functional notions of prominence, salience or communicative weight can be mapped onto specific structural-syntactic categories as defined by grammars of different languages.

Traditionally, subordination is opposed to coordination. Recent studies focus on cases of clause combining that do not lend themselves well to this traditional dichotomy. New typologies that incorporate additional categories have been proposed (cf. e.g., Van Valin 1984; Culicover & Jackendoff 1997; Yuasa & Sadok 2002; Evans 2007; Halliday & Matthiessen 2014)⁷. Also, it has been suggested that it is perhaps best to treat the distinction between coordination and subordination as a continuum rather than a discrete opposition (e.g., Quirk *et al.* 1985; Givón 2001).

In summary, the term *subordination* is found in both logical and grammatical contexts. As shown in this section, the meaning of this term is most clearly understood within the framework of conceptual logic, where it denotes differences of rank within a conceptual order: Concepts are of unequal rank and thus subordinate. Nowadays, the term subordination has come to be used in the field

⁷ See Van Valin (1984) for a detailed discussion on *cosubordination*; Culicover & Jackendoff (1997) for *pseudocoordination*; Yuasa & Sadok (2002) for *pseudosubordination*; Evans (2007) for *insubordination*; Halliday & Matthiessen (2014) for *parataxis*, *hypotaxis*, and *embedding*.

of grammar in a variety of senses depending on the theoretical orientation, and there is no consensus among researchers on its meaning.

In the next sections, following a description of data and methodology, I will focus on the uses of the particle *ʃε*, which is considered as a typical subordination marker in spontaneous Israeli Hebrew.

2. Methodology

In the case of the Hebrew language, almost all traditional grammatical analyses and descriptions are based on the study of written language. There have been relatively few studies so far that attempted a characterization of spoken Hebrew syntax based on recordings of naturally occurring conversation (e.g. Izre'el 2005, 2012, In Press; Izre'el & Mettouchi 2015; Maschler 1997, 2009, 2011; Maschler & Nir 2014).

This study is based on ca. three hours (8,290 Intonation Units) of spontaneous speech selected from *The Corpus of Spoken Israeli Hebrew (CoSIH)*⁸. All occurrences of the particle *ʃε* were analyzed, and the examples were divided into two categories: (1) The particle *ʃε* precedes embedded clauses; (2) the particle *ʃε* follows the boundary of the sentence. Afterward, the structures, functions, and semantics of the examples in both categories were examined.

3. Prototypical uses of the particle *ʃε*

The consensus among Hebrew linguists is that *ʃε* is a subordination marker (e.g., Glinert 2004: 309; Coffin & Bolozky 2005: 11) or a nominalizer (e.g., Kuzar 1993: 87). It usually precedes embedded clauses that function as subject, predicate, attribute, or object within another clause:



- (4) *kəl ha dvaʕim ʃε ata ʃɔʔel ɔti | ani jɔdaat ||*
 all the things that you ask me | I know ||
 (C1624_sp1_219-220)
 ‘Everything that you ask me I know.’

In Ex. (4) the clause ‘you ask me’ has the syntactic function of an attribute to the phrase ‘everything’.

⁸ It should be noted that in the present study only *substantive* intonation units were analyzed (Chafe 1994).

- (5) *ʕau ʃɛ hi bɛ hɛʕajɔn |*
 they_saw that she in pregnancy |
 (C514_2_sp1_124)
 ‘They saw that she was pregnant.’



In Ex. (5) the clause ‘she is pregnant’ has the syntactic function of an objective of the verb ‘saw’.

- (6) *baʕuʕ ʃɛ zɛ nafal alɛa mɛ ɛyzɛ miʃɛhu gadɔl |*
 clear that this fell on_her from which someone big |
 (C711_0_sp1_201)
 ‘Obviously this came to her from someone high up.’



In Ex. (6) the clause ‘this came to her from someone high up’ serves as a subject of the matrix clause.

The preceding examples demonstrate the prototypical uses of the particle *ʃɛ* in Modern Hebrew that are considered as subordination. I suggest that in its original use, the particle *ʃɛ* is not a subordination marker, as seems to be the consensus in Hebrew studies, but a clause-projecting particle — that is, its function is to signal that a clause, and not any other syntactical unit, is expected to follow.

However, being the following unit a clause is insufficient for using this particle in its prototypical uses. Additionally, it should be any syntactic relation between that clause and another component of the matrix clause—any of the three basic types of grammatical relations, viz.: (1) predicative, (2) attributive, and (3) completive (objective)⁹. Karl Ferdinand Becker (1775–1849) strongly argued that a sentence can have only these three relations, and only by their recursive application can the sentence be expanded. Goldenberg (2013: 4, 140) pointed out that an important feature of Semitic languages is the capability of *actualizing*, in most of their representations, all three basic types of grammatical relations by both syntactical and morphological means. I suggest that when embedded clauses function as subject, predicate, attribute, or object, the syntactic relation between these clauses and another component of the matrix clause is explicitly marked by *ʃɛ*¹⁰.

⁹ For the terminology and history of this view of three *Satzverhältnisse*, see Goldenberg (1998).

¹⁰ It seems that in such prototypical instances the use of *ʃɛ* is obligatory. However, it calls for further research.

4. Non-subordinating $\text{ʃ}\epsilon$

In the following sections, I will present additional uses of the particle $\text{ʃ}\epsilon$ in Israeli Hebrew, in which some patterns are not definable by traditional syntax. I will show that all of them fall into two broad functional categories that can be derived from their original uses: clause projection and the indication of a syntactic relation¹¹. In recent uses, the particle $\text{ʃ}\epsilon$ can indicate a clause as a syntactic unit or syntactic relation separately.

4.1 Clause projection

The disjunctive particle *o* ‘or’ is usually used in Hebrew in the phrase constructions. In contrast, in the following example *o* occurs between two clauses, the second one being preceded by $\text{ʃ}\epsilon$:



- (7) $\text{ʃ}\epsilon\text{ʃ}$ ʔukim |
 there_is cock roaches |

o $\text{ʃ}\epsilon$ $\text{ʃ}\epsilon\text{ʃ}$ *maxala* *ka zot ve ka zot* |
 or that there_is disease like this and like this |

 (C612_4_sp2_065–066)
 ‘There are cockroaches or there are various diseases.’

This construction is very common in Israeli Hebrew, and according to the approach proposed in this paper, the particle $\text{ʃ}\epsilon$ indicates that the following unit is a clause and not a noun phrase as expected in this disjunctive construction.

The above example substantiates my claim that $\text{ʃ}\epsilon$ is not the subordination marker. This is a coordinate construction that uses a disjunctive conjunction *o* ‘or’ to indicate co-alternativity. Since both conjuncts have equal syntactic status, there is no need to indicate one of them as subordinated. If we were to consider $\text{ʃ}\epsilon$ as a subordination marker, it would be very difficult to explain the preceding example. The particle $\text{ʃ}\epsilon$ is not a nominalizer, either, since the clause $\text{ʃ}\epsilon\text{ʃ}$ *maxala ka zot ve ka zot* ‘There are various diseases’ is parallel to the clause $\text{ʃ}\epsilon\text{ʃ}$ ʔukim ‘There are cockroaches’ and not to any noun phrase.

¹¹ In section 4.3, one special construction will be discussed, which could hardly be connected to the proposed functional types, and likely was transferred into Hebrew from one of the substrate languages.

4.2 Syntactic relation indication: Complex clausal unit formation

4.2.1 *From discourse to syntactic relation*

The relations in discourse are essentially semantic or pragmatic relations. These relations can be indicated by various means or can be inferred from the context. When one clause characterizes another semantically or pragmatically, the characterized clause is an *anchor* in discourse. In such cases, discourse units are commonly divided into *nucleus* and *satellite* (e.g., Mann & Thompson 1988; Matthiessen & Thompson 1988) or *topic* and *comment* (e.g., Cresti 1995, 2014; Halliday & Matthiessen 2014).

The relation between topic and comment is comparable to the relation between subject and predicate. The predicative relation has been defined by its double function of cohesion and assertion (Goldenberg 2013: 150). Subject-predicate and topic-comment relations have in common an assertion in a broad sense, in which one unit characterizes another unit. As will be shown in the following sections, the particle $\int\epsilon$ can occur in these contexts and contribute to cohesion. In the following sections, I will show how grammatical constructions can be formed on the basis of this pragmatic relation.

4.2.1.1 *The particle $\int\epsilon$ outside the sentence boundary*

The consensus among Hebrew linguists is that $\int\epsilon$ is a subordination marker or a nominalizer and thus confined to the domain of the sentence. In the following example, the independent non-embedded unit that is preceded by $\int\epsilon$ ($\int\epsilon$ $z\epsilon$ $d\epsilon j$ $m\int aam\epsilon m$ ‘which is quite boring’) occurs following a terminal boundary:

- (8) $h\epsilon m$ $\epsilon\epsilon tsim$ $\int\epsilon$ ani $asim$ ϵt $z\epsilon$ $alaj$ | $\int\epsilon m.$ $\epsilon s\epsilon\epsilon$ $\int a\epsilon t$ ||
 they want that I I_will_put ACC this on_me | twelve hours ||
 $k\epsilon d\epsilon j$ | $axa\epsilon kax$ $laak\epsilon iv$ | ma ani ϵsa $\int\epsilon m.$ $\epsilon s\epsilon\epsilon$ $\int a\epsilon t$ ||
 in_order_to | afterward to_listen | what I do twelve hours ||
 $\int\epsilon$ $z\epsilon$ $d\epsilon j$ $m\int aam\epsilon m$ ||
 that this quite boring ||
 (C514_2_sp1_028-033)
 ‘They want me to put it on myself for twelve hours, so that afterward they can listen to what I was doing during those twelve hours, which is quite boring.’



This is not the case of a $\int\epsilon$ -marked clause functioning as a constituent within a particular matrix clause. In this context, the particle $\int\epsilon$ following a terminal boundary signals that there is a discourse relation between the $\int\epsilon$ marked utter-

ance and prior discourse. The particle \int_{ε} “creates a bridge” from prior discourse to upcoming discourse. It signals a relation across utterances, and contributes to the coherence of the discourse. I assume that this is one of the ways in which new clauses are integrated with preceding ones to construct a coherent mental representation.

In the above example, the particle \int_{ε} paves the way for the interpretation of the utterance $\int_{\varepsilon} z\varepsilon d\varepsilon j m\text{faam}\varepsilon m$ ‘which is quite boring’ as a speaker’s personal comment about a part of the first utterance. I suggest that this kind of relation is comparable to the subject-predicate relation, and therefore it can be represented by \int_{ε} .

In constructions like the one in the above example, we can see that the uses of the Hebrew particle \int_{ε} have been extended from the domain of the sentence, where it indicates the syntactic relations and precedes the embedded clauses, into discourse, where it signals the pragmatic dependence. Clauses marked by \int_{ε} can be seen as dependent not on another single clause but rather as embedded in a larger discourse unit¹². This development suggests that linguistic structure does not necessarily stop at the sentence. I suggest that \int_{ε} denotes syntactic relations either within the sentence or between parts of a complex syntactic unit larger than the sentence.

In such contexts, the particle \int_{ε} indicating the emerging predicative relation links two information units into one complex structure. In Ex. (9) we can see that such integration can be reinforced on prosodic grounds as well.



- (9) *ma kaʕa ∫_ε higaʔ /*
 what happened that you_arrived /
 (D631ND)
 ‘How come you (have) arrived?’

There are two grammatically independent clauses in Ex. (9): *ma kaʕa* ‘What happened?’ and *higaʔ* ‘You (have) arrived’. These clauses can, in principle, occur separately from a semantic and syntactic point of view. However, there is a topic-comment relation between them, which is comparable to a subject-predicate relation and is, therefore, indicated by \int_{ε} . In this example, two independent clauses are connected by \int_{ε} into one complex syntactic unit, and they constitute a single prosodic unit.

It should be noted that constructions like the one in Ex. (8) are defined in the literature as non-restrictive (continuative) relative clauses (e.g., Jespersen 1909;

¹² Similar discourse uses have been observed in other languages as well (e.g., Mithun 2008).

Fabb 1990; McDavid 1977; Cornilescu 1981; Yamashita 1994; Depraetere 1995; Tao & McCarthy 2001). According to Depraetere (1995), this type of clause provides additional relevant information, which is represented in the separate information unit from its antecedent.

Tao & McCarthy (2001: 662), in their corpus-based study of non-restrictive relative clauses, showed that there is a preferred communicative function that is associated with the use of these constructions. A large number of examples in their study were overtly evaluative, giving the speaker's attitude, opinion, or stance toward the message of the immediately preceding utterances. Cornilescu (1981) agrees that non-restrictive clauses provide some sort of comment on the discourse topic. Defining such a function is in line with the suggested approach.

In Hebrew, as shown in the following excerpt, the discourse topic can be separated from the comment by a side sequence. In Ex. (10), sp1 starts telling a story, but then her attention is diverted by a new item that sp2 possesses, which results in an off-topic sequence. After eight utterances that focus on the new item, sp1 resumes her original topic using $\int\epsilon$ which serves to link the utterance to the previous topic.

- (10) sp1: ϵ | *ani jεχola leagid lax* | $\int\epsilon$ *ani makiβa* |
 uh | I can to_tell to_you | that I know |
zug ε: | nasuj |
 couple uh | married |
hε: || jafε || titχadjfi ||
 hey || nice || enjoy_the_new_buy ||
 sp2: *zε ha banim kanu li* ||
 it the boys they_bought to_me||
 sp1: *jafε ||*
 nice||
 sp2: *εjzε χamudim ||*
 which sweet ||
 sp1: *naχon || maksim ||*
 right || charming ||
∫ε εm | ∫ε ∫nejhεm haju nesuim |
 that uhm | that two_of_them they_were married |
az hεm baalej otot intεβεs lifmδβ al zε bε=sδdijut |
 so they possessors same interest to_guard on it in=secrecy |
 (Y311_sp1_031-044; sp2_004,005)



- sp1: 'Uh, I can tell you, that I know, uh, a married couple, uh...
Oh! Nice! Enjoy!'
sp2: 'The boys bought it for me.'
sp1: 'Nice!'
sp2: 'They are cute.'
sp1: 'Right. Who, uhm, who both of them were married, so they had
a shared interest to keep it a secret.'

The unit that follows the side sequence begins with the (repeated) particle $\int\mathcal{E}$, showing its pertinence to the previous topic. The particle $\int\mathcal{E}$ establishes discourse continuity between the two separated sequences, and it indicates syntactic relation. This use of the particle in the discourse can be seen to continue its earlier syntactic function within the sentence, but in a larger domain.

4.2.1.2 *The particle $\int\mathcal{E}$ following epistemic expressions*

In this section, I will examine a family of constructions that, in the terms of traditional syntax, are analyzed as forms of complementation. These constructions contain $\int\mathcal{E}$ -marked clauses, which serve as the complements of certain kinds of matrix verbs (and expressions), such as those depicting immediate perception, knowledge, imagination, and evaluation. However, the patterns in which the main clause has epistemic meaning, e.g., 'I think' or 'I say', are not accounted for by traditional terms of *main clause* and *subordinate clause*.

In her highly influential work, Thompson (2002) drew attention to the fact that such epistemic "main" clauses serve to present the prominent information conveyed by the following "subordinate" clauses. She suggested that the epistemic clause is a topic, and the other clause is a comment.

The following excerpt adopted from Maschler & Nir (2014: 529) demonstrates that, in some contexts, the epistemic clause can also serve as a comment, leading to the conclusion that any linguistic expression can serve either as a comment or a topic, depending on the context of its use. In Ex. (11) two students assess a professor upon exiting one of his lectures:

- (11) sp1: *hu lɔ jɔβɛd* |
he not come_down [on] |

vɛ lɔ pɔgɛa |
and not hurt |

vɛ lɔ -
and not -

- sp2: *kɛn* |
 yeah |
ani jɔdaat ʃɛ hu lɔ jɔʔɛd |
 I know that he not come_down [on] |
aval eh |
 but uh |
- sp1: *al af student* ||
 on any student ||
- sp2: *kɔdɛm.kɔl zɛ mɛviχ ɔti* ||
 first_of_all it embarrassing me ||
- sp1: 'He doesn't come down [on], and doesn't hurt, and doesn't...'
 sp2: 'Yeah, I know that he doesn't come down [on]...but, uh...'
 sp1: 'On any student.'
 sp2: 'First of all, it's embarrassing to me.'

Maschler & Nir (*ibid.*: 531) claim that the main-subordinate analysis is inappropriate in this case. According to their analysis, sp2 repeats sp1's previous utterance, *hu lɔ jɔʔɛd*, and this performs two functions: highlighting the behavior of the professor under discussion, and agreeing with the interlocutor. As such, the part of the utterance that is traditionally analyzed as the content clause is not merely a literal description of the content of sp2's knowledge.

Whether the epistemic clause is a topic or a comment, the function of the particle *ʃɛ* in such constructions has not been explained so far. It was mentioned, however, that the use of the particle in these contexts is optional (Thompson 2002; Ziv 2015). I suggest that the particle *ʃɛ* indicates a syntactic relation, and, as such, contributes to the coherence.

Different aspects of the speaker's position regarding the contents or status of the information provided can be expressed by particular adjuncts as well, e.g., *kaniʔɛ* 'probably' in Ex. (12), and *kamuvan* 'certainly' in Ex. (13).

- (12) *kaniʔɛ ʃɛ lɔ hɛvanta ɔti* |
 probably that not you_understood me |
 (<http://www.tapuz.co.il/> retrieved on July 28, 2013¹³)
 'You probably didn't understand me.'

¹³ Although most of the examples are from *The Corpus of Spoken Israeli Hebrew (CoSIH)*, a few of them were taken from other sources.

- (13) *kamuvan fε bihana tilbash sabig fakuf* |
 certainly that Rihanna she_will_wear sweater transparent |
 (<http://celebs.nana10.co.il/> retrieved on January 14, 2013)
 ‘Certainly, Rihanna will wear a transparent sweater.’

The use of the particle *fε* after these adjuncts is considered ungrammatical and, as far as I know, unexplained. By examining the grammatically anomalous occurrences of the particle *fε* in these contexts, I would like to underscore the dynamic nature of grammar. Moreover, I think that the necessity to distinguish between them and the clauses with epistemic meaning that were discussed earlier in this section is questionable for practical communicative purposes. Both structures function in conversational discourse mainly as an evaluative device, expressing the speaker’s opinions, attitudes, commentaries, etc. In other words, they constitute an assessment activity. Therefore, they should be explained in the same way.

4.2.1.3 *The particle fε in cleft sentences*

A cleft sentence is a construction traditionally defined as the result of the process of rhematizing one of the parts of the sentence, turning it into a predicate. Consequently, the former predicate is deprived of its rhematic position, being nominalized, and it thus becomes the subject of the new sentence. The particle *fε* occurs in some of these constructions in Hebrew. However, a more satisfactory explanation for its function in such constructions is required.

- (14) *ani fε bati* (Bar 2009: 337)
 I that I_came
 ‘It is I who came.’

According to the traditional analysis, Ex. (14) should be seen as a cleft transformation of *ani bati* ‘I came’ into *ani fε bati* ‘It is I who came’, with *ani* being the predicate and *fε bati* the subject. This analysis raises some questions, not the least of which is why the nominalized predicate necessarily becomes the subject of the new sentence. Also, since such nominalized constructions are understood in Hebrew discourse as relative clauses, it is not clear how they can form a nexus with their antecedents. Instances with the nominalized predicate adjacent to the element that is not nominal pose additional challenge to the accepted view. This is especially evident when such element is a negator (see Ex. 15 below).

- (15) *lɔ ʃɛ hajta lanu haʔbɛ bʔɛɛa* ||
 not that was to_us much choice ||
 (D933_sp2_151)
 ‘It is not that we had much choice.’



There is an agreement in recent Hebrew studies that this structure was created as a result of a pragmatic need to put the word *lɔ* ‘not’ as a predicate (Zewi 1998: 45-46; Bar 2009: 349; Shor 2014: 27). Examination of the context and intonation reveals that the negation is indeed the locus of the new information, carries the focus, and thus is a comment. Similarly to the cases described in the previous sections (4.2.1.1-4.2.1.2), I suggest that the particle *ʃɛ* in cleft sentences should be seen as indicating the syntactic relation, which is based on the topic-comment relation.

4.2.2 *From semantic to syntactic relation*

Adverbial clauses are commonly seen as dependent clauses with an adverb-like function with respect to the predicate of the main clause, as opposed to complements that function as noun phrases saturating the valence of the main predicate (e.g., Longacre & Thompson 1985; Kortmann 1997; Bossaglia 2015). Such clauses are typically introduced by specific conjunctions carrying the lexical information specifying the kinds of semantic relation existing between the two clauses (e.g., Van Valin 1984; Hengeveld & Wanders 2007). In spoken Israeli Hebrew, adverbial clauses can be introduced by the particle *ʃɛ*:

- (16) *ndabɛɛ al zɛ ʃɛ nipagɛʃ* ||
 we_will_talk on it that we_will_meet ||
 (<http://www.haaretz.co.il/> retrieved on October 24, 2013)
 ‘We will discuss it when we meet.’

- (17) *ani kʔɛa ɛt zɛ axaʔɛ xatsi ʃaa* |
 I interrupt ACC it after half hour |

ʃɛ lɔ jɛʔaɛ jʔɛɛ midaj mugzam ||
 that not it_will_be_seen more too exaggerated ||
 (P423_2_sp1_166-167)
 ‘I leave it in half an hour so I don’t look to keen.’



- (18) *ma.zɛ hitatsbanti ʃɛ lɔ haja li ka zɛ* ||
 very I_got_angry that not was to_me like this ||
 (C711_0_sp2_114)
 ‘I was so angry because I didn’t have one like this.’



There is a temporal relation in Ex. (16), purpose relation in Ex. (17), and causal relation in Ex. (18). These semantic relations between clauses can be made more explicit with the use of conjunctions like *kʃε* ‘when’ in Ex. (16), *kədɛi* ‘in order to’ in Ex. (17), and *ki* ‘because’ in Ex. (18). Instead, in the above examples, the particle *ʃε* indicates a more general relation between the clauses: syntactic (completive) relation, and semantic relations can be inferred from the context¹⁴.

4.2.3 *Two paths of grammaticalization*

To conclude, the use of the particle *ʃε* following the sentence boundary in order to link the utterance to the previous topic is a grammaticalization of the rhetorical organization of the discourse. The particle *ʃε* establishes discourse continuity between the two separate sequences, and it builds one complex syntactic structure. This use of the particle *ʃε* is the result of a diachronic increase in structural scope: continuation of its earlier syntactic function within the sentence, but in a larger domain.

As it was noted by Mithun,

[i]n our understanding of the ways in which grammatical structures can develop over time, considerable attention has been focused on processes by which larger, looser patterns are crystallized into tighter, more compact ones. (Mithun 2008: 69)

The grammatical development presented above, however, has resulted in increases in structural scope from syntax to discourse and pragmatics. Mithun pointed out that

[d]evelopments of this type have often gone unnoticed, perhaps in part because of the traditional focus on the sentence as the maximal domain of grammatical structure. [...] An awareness of the existence of such changes and their effects can provide explanations of certain seemingly arbitrary but recurring arrays of structural patterns. (*ibid.*)

Another development that was observed in the previous section is a use of the particle *ʃε* that indicates syntactic dependence instead of the conjunctions that indicate the specific semantic relations. This development from specific adverbial conjunctions to a more general marker of syntactic dependence shows a

¹⁴ The same phenomenon was found by Mithun (2008:77). The general marker of syntactic dependency can form adverbial clauses, such as temporal, locative, manner, reason, and conditional.

property typical of grammatical change in general: a shift from more concrete to more abstract meaning (*ibid.*: 75).

4.3 Other uses of the particle $\mathcal{J}\varepsilon$

We can find the particle $\mathcal{J}\varepsilon$ in one special construction that can express a variety of modal meanings: desires, wishes, prohibitions, volitions, curses, commands, etc. This construction consists of an independent sentence introduced by the particle $\mathcal{J}\varepsilon$ followed by an imperfective verb form. For example:

- (19) $\mathcal{J}\varepsilon$ *lɔ taki li ba ɔɔ ||*
 that not throw_up to=me in_the car ||
 (OCD_1_sp3_060)
 ‘Don’t throw up in the car!’



- (20) $\mathcal{J}\varepsilon$ *ani ɛnakɛ ɛt ha fulxan /*
 that I I_will_clean ACC the table /
 (Ariel 1978: 79)
 ‘Should I clean the table?’

Ariel (1978: 79) claimed that Modern Hebrew prefixes $\mathcal{J}\varepsilon$ to any declarative or interrogative sentence that includes an imperfective verb form, in order to change its illocutionary force. According to Ariel’s analysis, the clause in Ex. (19) without $\mathcal{J}\varepsilon$ has illocutionary force of warning, whereas the $\mathcal{J}\varepsilon$ -marked clause actually conveys a threat rather than a warning. In Ex. (20), $\mathcal{J}\varepsilon$ is used to create a suggestion from a question.

Schwarzwald & Shlomo (2016) proposed that spoken Judeo-Spanish (one of the substrate languages of the first users of Modern Hebrew in Israel) is the source for this widely used Israeli Hebrew construction¹⁵. The Judeo-Spanish correspondent of the construction under discussion is *ke* with the present subjunctive form, and it can also stand alone as a matrix clause with the relevant set of meanings. The following example taken from Schwarzwald & Shlomo (2016) highlights the resemblance between Hebrew and Judeo-Spanish constructions (cf.20):

¹⁵ In fact, similar constructions are to be found in a whole range of Balkan and southern European languages (see Ammann & van der Auwera 2004).

- (21) *ke vos kante: kwando el rey Nimrod /*
 KE DAT.2PL sing.PRES.SUBJ.1SG when the king Nimrod /
 (Schwarzwald & Shlomo 2016: 98)
 ‘Should I sing for you [the song beginning with] *When the King Nimrod?*’

Schwarzwald & Shlomo (*ibid.*) noted that the particle *ke* (sp. *que* ‘that’) in Judeo-Spanish is used in subordinate clauses in the same way as $\int\epsilon$ in Hebrew, but “in addition, it is used with the present subjunctive form to express modality in independent clauses.” They added (*ibid.*: 101) that Hebrew verb forms in these constructions carry modal meanings, and that they are parallel in meaning to the subjunctive verbal forms in Judeo-Spanish. Schwarzwald & Shlomo (*ibid.*) contend that the syntax of this structure was naturally transferred into Hebrew from the substrate language of the first adopters of Modern Hebrew at the end of the nineteenth century and the beginning of the twentieth century.

Another potential explanation for the occurrence of these constructions involves the speakers’ tendency to shorten their utterances; hence, instead of *ani matsia $\int\epsilon$ ani enake et ha fulxan* ‘I suggest that I will clean the table’ speakers omit the preceding words and just say *$\int\epsilon$ ani enake et ha fulxan*. The explanation in favor of the omission fits Evan’s (2007) analysis in terms of *insubordination*, i.e. “the conventionalized main clause use of what, on *prima facie* grounds, appear to be formally subordinate clauses.” However, Debaisieux & Martin (forthcoming) showed that the reconstruction of the process that leads to this final step of reanalysis of the formally subordinate clauses as main clause structure raises some problems. For example, it would not be easy to explain how the insubordination process can result in such unexpected differences between the full and the reduced pattern as a shift of illocutionary force.

Furthermore, as noted by Schwarzwald & Shlomo:

The process of change from a subordinate clause to an independent clause by the omission [...] leaves one question unsolved: Why were these constructions absent in biblical and early rabbinic literature, until they started being used sporadically in the Middle Ages, especially in Romance-speaking areas, and began to flourish in spoken and written Modern Hebrew as early as the beginning of the twentieth century? (*ibid.*: 100)

Finally, such use of the particle $\int\epsilon$ could hardly be derived from any of the other uses presented in this paper. These $\int\epsilon$ -initial sentences are not embedded and do not relate to any other clause in the discourse. There is no topic-comment relation, and it is obvious that in these contexts this is the clause that follows the

particle $\int_{\mathcal{E}}$ and not another syntactic unit. The fact that this use of the particle $\int_{\mathcal{E}}$ couldn't be connected to other uses discussed in this paper may lend further support to the claim of Schwarzwald & Shlomo that this construction entered Modern Hebrew through another language.

5. Conclusion

In this paper I have attempted to understand the functions of the particle $\int_{\mathcal{E}}$ by investigating how it is actually used in everyday conversational data. The use of the particle $\int_{\mathcal{E}}$ in which it precedes the embedded clauses that function as subject, predicate, attribute, or object within the matrix clause is a prototypical use that is recognized as subordination. It was suggested, however, that this use of the particle can be analyzed in a different way. I proposed that the particle $\int_{\mathcal{E}}$ that precedes embedded clauses has a clause projecting function, and it marks the syntactic relations within the matrix clauses. This double function can be seen as a source of various different patterns that include the particle $\int_{\mathcal{E}}$ and are not accounted for by the traditional terms.

Some uses of the particle can be explained by the extension of the constructions from syntax into discourse. It was shown, for example, that topic-comment relations outside sentence boundaries (as well as within the sentence), that are comparable to subject-predicate relations, can be represented by the particle $\int_{\mathcal{E}}$. In these contexts, the particle $\int_{\mathcal{E}}$ specifies relations within sentences to larger stretches of discourse and indicates an emerging predicative relation. I propose that this is one of the ways to form complex syntactic units. Defining such constructions supports a more fluid, Emergent Grammar approach.

Furthermore, the particle $\int_{\mathcal{E}}$ can replace conjunctions that indicate specific semantic relations, such as temporal, purpose, or causal. In this use a more abstract syntactic relation is overt, and a more concrete semantic relation can be inferred from the context. Additionally, the structural function of clause projecting allows us to embed the particle $\int_{\mathcal{E}}$ within other syntactic patterns, for example in a disjunction construction.

Although the grammatical developments examined in this paper have received relatively little attention, they seem more pervasive than previously recognized. These developments show how speakers modify and manipulate entire syntactic constructions as they exploit their meaning potential. What is more, it seems that some of the recent uses of the particle $\int_{\mathcal{E}}$ do not reflect sloppy performance or poor planning, as often claimed within traditional syntax, but appear to be highly systematic.

In summary, it is possible to describe clause combining in spoken Hebrew without using the term *subordination*. This can confirm that the positing of crosslinguistically valid labels may be misleading, and that if grammatical forms may in fact be unique to the language in which they appear, we should try to unfold the language-specific grammatical forms instead.

Grammar seems to have been largely emancipated from traditional logic with its conceptual structure. So why should we not be emancipated from the logical terms that make it difficult to describe the natural language and constrain us from its full understanding?

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