Abstract
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Keywords
Complementizers - dubitative - first person - indirect discourse - Modern Eastern Armenian - context shifting
Indirect reports in Modern Eastern Armenian

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Abstract In this work we consider the distribution of complementizers in Modern Eastern Armenian. There are two complementizers: *wor* and *t’e*. They both introduce complement clauses, but *t’e* also expresses a dubitative value, implying that the speaker has doubts on the content following the complementizer. Moreover, *t’e*, when embedded under verbs of saying, shifts the anchoring of indexicals, moving the anchor from the speaker – better called utterer – to the subject of the saying predicate. On the basis of this and further evidence coming from the analysis of sequence of tense and *if*-clauses, we will argue that the position of *t’e* in the left periphery of the clause occupies a high position in the syntactic hierarchy. The aim of this work is on one hand, a better understanding of indirect reports and their syntax and, on the other, a more precise characterization of indexicals across languages.

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1 Introduction

In this chapter we analyze the properties of complement clauses of *saying* verbs in Modern Eastern Armenian – henceforth MEA. We devote special attention to the distribution of indexical elements, such as the (non-imperfect) tenses of the
indicative – present, past and future – the personal pronouns – I, you, etc. – and temporal and spatial adverbs – yesterday, tomorrow etc. and here, in this room etc. 1

In MEA there are two complementizers: wor and t’e.2 Wor introduces both indicative and subjunctive clauses, whereas t’e can only introduce indicative ones. We argue, also on the basis of evidence provided by if-clauses, that t’e occupies a hierarchically higher position in the structure than wor. We will show that the complementizer t’e triggers special interpretations: it can either contribute in expressing a dubitative value, or, when embedded under say, introduce a (quasi) direct discourse, replacing the speaker’s coordinates with the upper subject ones.

Following Giorgi (2010, 2016), we develop the hypothesis that the higher complementizer t’e, is a context-shifter, giving rise to the expected pattern concerning the distribution of indexicals.

This chapter is organized as follows: in sections 2 and 3 we present the data concerning embedded clauses, in section 4, we discuss a theoretical account for these observations and provide a brief comparison with Hindi, which exhibits similar phenomena. In section 5 we draw some conclusions and suggestions for future work.

2 The Data: Embedded Complement Clauses Introduced by the Complementizer wor (that)

In the following discussion we analyze the distribution and interpretation of the embedded verbal forms in MEA. Consider the following examples:3

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1The two authors have elaborated every part of this research together. However, as far as legal requirements are concerned, Alessandra Giorgi takes official responsibility for sections 3.2, 4 and 5. Sona Haroutyunian for sections 1, 2 and 3.1. Modern Eastern Armenian is the official language of the Republic of Armenia and Nogorno Karabakh. Western Armenian is the language spoken by the Armenian diaspora around the world. In this work we will consider data from MEA. However, with respect to the phenomena discussed here, Western Armenian does not seem to differ in a considerable way.

2For the transliteration of the Armenian examples we adopt the system based on the works of the linguists Heinrich Hübschmann and Antoine Meillet as referenced in A. Meillet (1913:8–9). However, in order to be closer to MEA pronunciation, the complementizer is transliterated as wor (instead of or).

3In previous work – cf. Giorgi and Haroutyunian (2014, 2016) – we analyzed the verbal system and the position of the auxiliary. We argued that MEA is a Verb Second (V2) language, where V2 order is triggered by a left peripheral focus. We will not consider this issue in this work, because it is not immediately relevant to this topic. In the examples we will mostly use sentences exhibiting the basic word order, namely Subject-object-participle-auxiliary. Moreover, in MEA the verbal forms of the indicative, with the exception of the aorist, are periphrastic, present tense included, and are constituted by an invariable participle and auxiliary be. There are eight different participles. For a description of the participles, see Haroutyunian (2011, ch.1) Dum-Tragut (2009, pp. 201–214). On Armenian word order, see also Tamrazian (1991) and (1994). To help the non-native reader to go through the examples, we will write the complementizer in bold characters.
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(1) **Ara-n as-um ūe wor Anna-n ut-um ūe**

Ara-ART say-PRS.PTCP AUX.3SG that Anna-ART eat-PRS.PTCP AUX.3SG

‘Ara says that Anna is eating’

(2) **Ara-n as-um ūe wor Anna-n ker-el ūe**

Ara-ART say-PRS.PTCP AUX.3SG that Anna-ART eat-PST.PTCP AUX.3SG

‘Ara says that Anna has eaten’

In sentences (1) and (2) there is a main verb of saying in the present tense, followed by an embedded present – in (1) – and an embedded past in (2).

So far, the temporal interpretation is the same as in English, namely, in (1) the saying and the eating are simultaneous, whereas in (2) the eating precedes the saying. The complementizer introducing these clauses is *wor* (that).

The same holds in sentences (3) and (4):

(3) **Ara-n as-ac’ wor Anna-n ut-um ūe**

Ara-ART say-AOR.3SG that Anna-ART eat-PRS.PTCP AUX.3SG

‘Ara said that Anna was eating’

(4) **Ara-n as-ac’ wor Anna-n ker-el ūe**

Ara-ART say-AOR.3SG that Anna-ART eat-PRF.PTCP AUX.3SG

‘Ara said that Anna had eaten’

In sentence (3) the main verb has the aorist morphology, expressing a past value. The eating is simultaneous with the saying, whereas in (4) it precedes it.

Note however, that in example (3) the embedded verbal form is the same as in example (1), hence it can be literally translated as *is eating*. In English, or in

4Irrelevantly to the present discussion, the present and past value of the embedded verbal form is due to the different participle used.
5Note that the present tense in MEA is a continuous verbal form, even with eventive predicates, like the Italian one and contrary to English. Consider the following examples:

(i) **Hakob-n ut-um ē**

Hakob-ART eat-PRS.PTCP AUX.3SG

‘Hakob is eating’

Analogously, in Italian:

(i) **Gianni mangia**

Gianni eat.3SG

‘Gianni is eating’

Hence, a simultaneous interpretation of the embedded verbal form is possible in MEA even with predicates such as *to eat*. Moreover, as in English, both in MEA and in Italian the present tense can also be interpreted habitually.

6The embedded verbal form in example (4) is constituted by a perfect participle and a present tense auxiliary. Hence, the literal translation would be *has eaten*, even if the interpretive value is just past. These issues will be more deeply investigated in further work.
Italian, a sentence such as John said that Anna is eating would have a Double Access Reading – henceforth, DAR – meaning that the eating takes place both at the time of the saying and utterance time. However, in Armenian this is not the case, in that the eating does not have to be going on at the time of the utterance as well. MEA in fact is not a Double Access Reading language. We will discuss this issue with more details in section 4.1 below.\(^7\)

In sentence (3) and (4), an embedded indicative imperfect could substitute for the other forms of the indicative, as in the following examples:\(^8\)

\[(5) \text{ Ara-n as-ac'} \, \text{wor} \, \text{Anna-n ut-um ēr} \]
\[\text{Ara-ART say-AOR.3SG that Anna-ART eat-PRS.PTCP AUX.IMP.3SG} \]
\[\text{‘Ara said that Anna was eating’} \]

\[(6) \text{ Ara-n as-ac'} \, \text{wor} \, \text{Anna-n ker-el ēr} \]
\[\text{Ara-ART say-AOR.3SG that Anna-ART eat-PRF.PTCP AUX.IMP.3SG} \]
\[\text{‘Ara said that Anna had eaten’} \]

The presence of the imperfect, however, does not significantly change the temporal interpretation and therefore these examples are not especially relevant to the discussion in this section. We will briefly consider them again in section 4.1.

The sentences given above are all simple assertions, reporting what Ara said. The interpretation of indexical adverbs is provided by the temporal and spatial location of the speaker uttering the sentence (which from now on, for reasons that will be clear in a little while we will call the utterer):\(^9\)

\[(7) \text{ Ara-n as-ac'} \, \text{wor} \, \text{Anna-n yerek das-er-} \, \text{@}\, \text{sovor-el ēr} \]
\[\text{Ara-ART say-AOR.3SG that Anna-ART yesterday lesson-PL-ART learn-PRF.PTCP AUX.3SG} \]
\[\text{‘Ara said that Anna yesterday learned her lessons’} \]

\[(8) \text{ Ara-n as-ac'} \, \text{wor} \, \text{Anna-n das-er-} \, \text{sovor-el ē ays senyak-um} \]
\[\text{Ara-ART say-AOR.3SG that Anna-ART lesson-PL-ART learn-PRF.PTCP AUX.3SG this classroom-LOC} \]
\[\text{‘Ara said that Anna learned her lessons in this classroom’} \]

Yesterday and in this classroom are interpreted with respect to the utterer’s temporal and spatial location, i.e. yesterday is the day before the one of the utterance and in this classroom refers to the classroom where the utterer is located. These observations will be relevant for the discussion in sections 3 and 4 below.

\(^7\)In these contexts, Armenian normative grammars tend to prescribe the imperfect. Speakers however, do not seem to have a preference in this direction.

\(^8\)In examples (5) and (6), the participle is the perfective one and the auxiliary appears in the imperfect morphology.
Consider now to hope – irrelevantly, in Armenian it is expressed by means of the locution to have hope. This predicate can either select for a subordinate indicative or a subordinate subjunctive.\(^9\)

(9) Ara-n huys un-i **wor** Anna-n mrc‘uyt‘-ə halt‘-elu ē
Ara-ART hope have-3SG that Anna-ART competition-ART win-FUT.PTCP
AUX.3SG

‘Ara hopes that Anna wins the competition’

(10) Ara-n huys un-i **wor** Anna-n mrc‘uyt‘-ə halt‘-el ē
Ara-ART hope have-3SG that Anna-ART competition-ART win-PRF.PTCP
AUX.3SG

‘Ara hopes that Anna won the competition’

In examples (9) and (10), the embedded verbal form is an indicative, and the main verb hope is a present one. The following ones are identical, with the only difference that the main verbal form is a past one:

(11) Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə halt‘-elu ē
Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-FUT.PTCP AUX.3SG

‘Ara hoped that Anna wins the competition’

(12) Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə halt‘-el ēr
Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-PRF.PTCP AUX.PST.3SG

‘Ara hoped that Anna won the competition’

The following examples, instead, exhibit an embedded subjunctive. In (13) the main verb is a present verbal form, whereas in (14) it is a past one:

(13) Ara-n huys un-i **wor** Anna-n mrc‘uyt‘-ə halt‘-i
Ara-ART hope have-3SG that Anna-ART competition-ART win-SBJV.3SG

‘Ara hopes that Anna wins the competition’

(14) Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə halt‘-er
Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-SBJV.PST.3SG

‘Ara hoped Anna to win the competition’

\(^9\)The difference between indicative and subjunctive in this case is the utterer’s commitment with respect to the embedded content. The utterer is more committed when there is an indicative, and less with a subjunctive. The implications of these judgments are not entirely clear and we will disregard this issue in this work. Also, the participle used in example (9) and (10) is the one expressing futurity, as shown in the glosses. However, the relevant point under discussion here is the tense and mood of the auxiliary. The analysis for the various forms of participles goes beyond the limits of this work.
So far, these paradigms are very similar to the Italian ones, with the only difference that in Italian, especially with an embedded past, *to hope* necessarily selects a subjunctive.

Consider also the following examples:

(15) *Ara-n huys un-i **wor** Anna-n mrc‘uyt‘-ə halt‘-er
    Ara-ART hope have-3SG that Anna-ART competition-ART win-SBJV.PST.3SG
    ‘Ara hopes that Anna won the competition’

(16) *Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə halt‘-i
    Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-SBJV.3SG
    ‘Ara hoped that Anna wins the competition’

Sentences (15) and (16) violate the basic rules of the *consecutio temporum et modorum*, in that in (15) we have a main present followed by an embedded past subjunctive, and conversely, in (16), the main past is followed by an embedded present subjunctive. The same is true in Italian. Consider the Italian paradigm:

(17) Gianni spera che Maria vinca la gara
    Gianni hopes that Maria win.SBJV.3SG the race
    ‘Gianni hopes that Maria wins the race’

(18) *Gianni spera che Maria vincessa la gara
    Gianni hopes that Maria win.SBJV.PST.3SG the race
    ‘Gianni hopes that Maria won the race’

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This is the *consecutio* found in classical Latin as well. Note that in Italian, in order to express pastness of the embedded event with respect to the main predicate, a compound form must be used:

(i) Gianni spera che Maria abbia vinto la gara
    Gianni hopes that Maria have.SBJV.3SG win the race
    ‘Gianni hopes that Maria won the race’

(ii) Gianni sperava che Maria avesse vinto la gara
    Gianni hoped that Maria have.SBJV.PST.3SG win the race
    ‘Gianni hoped that Maria won the race’

In Armenian as well, a compound form must be used:

(iii) Ara-n huys un-i **t‘e** Anna-n mrc‘uyt‘-ə halt‘-el ē
    Ara-ART hope have-3SG that Anna-ART competition-ART win-PREF.PTCP AUX.3SG
    ‘Ara hopes that Anna has won the competition’

(iv) Ara-n huys un-er **t‘e** Anna-n mrc‘uyt‘-ə halt‘-el ēr
    Ara-ART hope have- PST.3SG that Anna-ART competition-ART win-PREF.PTCP AUX.PST.3SG
    ‘Ara hoped that Anna had won the competition’
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(19) *Gianni sperava che Maria vinca la gara
Gianni hoped that Maria win.SBJV.3SG the race
‘Gianni hoped that Maria wins the race’

(20) Gianni sperava che Maria vincessese la gara
Gianni hoped that Maria win.SBJV.PST.3SG the race
‘Gianni hoped that Maria won the race’

As can be seen, the paradigms are identical. As argued for Italian in Giorgi (2009), this shows that in both languages the subjunctive morphology undergoes a tense agreement rule, barring past-under-present and present-under-past.\(^{11}\)

3 The Data: Embedded Complement Clauses Introduced by the Complementizer \(t'e\)

3.1 Dubitative \(t'e\)

The complementizer \(t'e\) introduces finite complement clauses in the same contexts we illustrated in the preceding section. Let’s consider the clausal complement of to hope:

(21) Ara-n huys un-i \(t'e\) Anna-n mrc‘uyt’-\(\rightarrow\) halt’-elu ē
Ara-ART hope have-3SG that Anna-ART competition-ART win-FUT.PTCP
AUX.3SG
‘Ara hopes that Anna wins the competition’

(22) Ara-n huys un-i \(t'e\) Anna-n mrc‘uyt’-\(\rightarrow\) halt’-el ê
Ara-ART hope have-3SG that Anna-ART competition-ART win-PRF.PTCP
AUX.3SG
‘Ara hopes that Anna won the competition’

In examples (21) and (22) the embedded verbal form is an indicative, whereas in the following examples an embedded subjunctive is present:

(23) *Ara-n huys un-i \(t'e\) Anna-n mrc‘uyt’-\(\rightarrow\) halt’-i
Ara-ART hope have-3SG that Anna-ART competition-ART win-SBJV.3SG
‘Ara hopes that Anna wins the competition’

(24) *Ara-n huys un-i \(t'e\) Anna-n mrc‘uyt’-\(\rightarrow\) halt’-er
Ara-ART hope have-3SG that Anna-ART competition-ART win-SBJV.PST.3SG
‘Ara hopes that Anna won the competition’

\(^{11}\)For a similar perspective, see also Costantini (2006) and Laskova (2012, 2017).
In the following paradigm:

(27) *Ara-n c’ankan-um ē **wor** Anna-n mrc’yut’-∅ halt’-i
Ara-ART wish- PRS.PTCP AUX.3SG that Anna-ART competition-ART win-
SBJV.3SG
‘Ara wishes that Anna wins the competition’

(28) *Ara-n c’ankan-um ē **wor** Anna-n mrc’yut’-∅ halt’-er
Ara-ART wish- PRS.PTCP AUX.PST.3SG that Anna-ART competition-ART win-
SBJV.PST.3SG
‘Ara wished that Anna won the competition’

Examples (27) and (28) show the usual sequence of tense rule, where an embedded subjunctive must exhibit an agreeing form with respect to the main one. These examples minimally contrast with the following ones:

(29) *Ara-n c’ankan-um ē **wor** Anna-n mrc’yut’-∅ halt’-um ē
Ara-ART wish- PRS.PTCP AUX.3SG that Anna-ART competition-ART win-
PRS.PTCP AUX.3SG
‘Ara wishes that Anna wins the competition’

(30) *Ara-n c’ankan-um ēr **wor** Anna-n mrc’yut’-∅ halt’-um ēr
Ara-ART wish-PRS.PTCP AUX.PST.3SG that Anna-ART competition-ART win-
PRS.PTCP AUX.PST.3SG
‘Ara wished that Anna won the competition’
Examples (29) and (30) are ungrammatical because the embedded verbal form is an indicative and not a subjunctive. Finally, example (31) and (32) show that in these cases the complementizer *t’e* is impossible, due to its incompatibility with the subjunctive (obligatory here):

(31) *Ara-n c’ankan-um *t’e Anna-n mrc’uyt’-ə halt’-i  
Ara-ART wish-PRS.PTCP AUX.3SG that Anna-ART competition-ART win-SBJV.3SG  
‘Ara wishes that Anna wins the competition’

(32) *Ara-n c’ankan-um ēr *t’e Anna-n mrc’uyt’-ə halt’-er  
Ara-ART wish-PRS.PTCP AUX.PST.3SG that Anna-ART competition-ART win-SBJV.PST.3SG  
‘Ara wished that Anna won the competition’

The verbs listed above all follow this paradigm.

The interpretation to be assigned to *t’e* clauses, when they are available, is not the same as the one assigned to *wor* clauses. As pointed out above, the complementizer *t’e* in fact is used when the utterer wants to express an attitude, usually doubt, with respect to the embedded content. For instance, in the grammatical examples (23) and (26), the utterer wants to convey the idea that *Ara* had an inadequate opinion about *Anna*’s chances of victory, and that she, the utterer, doesn’t think such a victory possible. We can call this complementizer a *dubitative* one. The reason why the subjunctive is not available with *t’e* is addressed in section 4.

### 3.2 Reportive *t’e*

Consider now the distribution of *t’e* with saying predicates:

(33) Ara-n as-um ē *t’e Anna-n ut-um ē  
Ara-ART say-PRS.PTCP AUX.3SG that Anna-ART eat-PRS.PTCP AUX.3SG  
‘Ara says that Anna is eating’

(34) Ara-n as-um ē *t’e Anna-n ker-el ē  
Ara-ART say-PRS.PTCP AUX.3SG that Anna-ART eat-PST.PTCP AUX.3SG  
‘Ara says that Anna has eaten’

(35) Aran as-ac’ *t’e Anna-n ut-um ē  
Ara-ART say-AOR.3SG that Anna-ART eat-PRS.PTCP AUX.3SG  
‘Ara said that Anna was eating’

(36) Aran as-ac’ *t’e Anna-n ker-el ē  
Ara-ART say-AOR.3SG that Anna-ART eat-PRF.PTCP AUX.3SG  
‘Ara said that Anna has eaten’
In examples (33) and (34) the main predicate is a present verbal form, whereas in (35) and (36) it is a past. The distribution of the embedded verbal forms is the same we observed with the complementizer *wor*.

As is the case of examples (21) and (22) above, the presence of the complementizer *t’e* can give rise to a dubitative interpretation: the speaker implies that she does not (fully) believe what *Ara* said.

However, such an interpretation is not the only one, in that the sentences in question can also be interpreted as instances of direct discourse, reporting what *Ara* said, with her own words. A sentence such as (33) can be used by the speaker for reporting the following direct speech:

(37)  

\[ \text{Ara-n as-um ě: “Anna-n ut-um ě”} \]  
\[ \text{Ara-ART say-PRS.PTCP AUX.3SG: “Anna-ART eat-PRS.PTCP AUX.3SG”} \]  

‘Ara says: “Anna is eating”’

In this case, there is no dubitative interpretation, but simply a report of what was said. We dub this construction a reportive one. The same holds for examples (34), (35) and (36). Hence, these sentences are all in principle ambiguous between a dubitative interpretation and reportive one.

Here we consider the distribution of indexicals in clauses introduced by *wor* and *t’e*, when the embedded clause is a reported speech. Consider the following examples:

(38)  

\[ \text{Hakob-n as-ac’ *wor mekn-um ě} \]  
\[ \text{Hakob-ART say-AOR.3SG that leave- PRS.PTCP AUX.3SG.} \]  

‘Hakob said that he will leave’

(39)  

\[ \text{Hakob-n as-ac’ *t’e mekn-um em} \]  
\[ \text{Hakob-ART say-AOR.3SG that leave- PRS.PTCP AUX.1SG.} \]  

‘Hakob said that he would leave’

As pointed out above, both examples can be used to report the following direct discourse:

(40)  

\[ \text{Hakob-n as-ac’: “Mekn-um em”} \]  
\[ \text{Hakob-ART say-AOR.3SG: “leave- PRS.PTCP AUX.1SG.”} \]  

‘Hakob said: “I will leave”’

The sentences in (38) and (39), however, do it in very different ways. In example (38), where the complementizer *wor* is used, the subject is a null pronoun and the verb appears with the third person morphology. This is an almost literal translation of the English sentence.\(^12\)

Sentence (39), introduced by *t’e*, is quite different. The verb appears with first person morphology and cannot mean that the utterer is going to leave, but only that

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\(^12\) The lexical pronoun can also be used, as in the following example:
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Hakob is going to leave, so that the literal translation of the embedded clause in (39) would be ‘that (I) leave’. In order for the embedded verbal form to refer to the utterer, wor must obligatorily be used:

(41) Hakob-n as-ac ‘ wor mekn-um em
    Hakob -ART say-AOR.3SG that leave-PRS.PTCP AUX.1SG.
    ‘Hakob said that I will leave’

In other words, a first person embedded under wor identifies the utterer, when embedded under t’e it identifies the subject of the superordinate clause. Temporal indexicals exhibit a very similar behavior. Consider the following contrast:

(42) Erkušabti Hakob-n inj as-ac ‘ wor valə mekn-um ě
    Monday Hakob-ART me say-AOR.3SG that tomorrow leave-PRS.PTCP AUX.3SG
    ‘On Monday Hakob told me that he will leave tomorrow’

(43) Erkušabti Hakob-n inj as-ac ‘ t’e vale mekn-elu em
    Monday Hakob-ART me say-AOR.3SG that tomorrow leave-FUT.PTCP AUX.1SG
    ‘On Monday Hakob told me that he would leave tomorrow’

In sentence (42) with the complementizer wor, the verb appears with the third person morphology. Hence, the embedded subject can either refer to Hakob or to someone not mentioned in the sentence, as in the English translation, or in the Italian equivalent. On the other hand, in example (43) the embedded first person can only refer to the superordinate subject and not to the utterer. Interestingly the embedded temporal indexical tomorrow has two different interpretations: suppose that the utterer utters the sentence on Thursday, then in (42) tomorrow identifies Friday, i.e. the day after the one in which the sentence is uttered. In (43), on the contrary, tomorrow is Hakob’s tomorrow, namely, given the temporal specification in the main clause, it refers to Tuesday. Similarly with spatial expressions. Consider the following examples:

(44) Hakob-n inj as-ac ‘ wor ays senyak-um k’n-um ě
    Hakob-ART me say say-AOR.3SG that this room-LOC sleep-PRS.PTCP AUX.3SG
    ‘Hakob told me that he sleeps in this room’

(i) Hakob-n as-ac‘ t’e yes mekn-um em
    Hakob-ART say-AOR.3SG that I leave-PRS.PTCP AUX.1SG.
    ‘Hakob said that he would leave’

In this sentence, the first person pronoun yes appears in the subordinate clause, so that the literal translation would be ‘that I leave’. The presence of the lexical pronoun is emphatic/focused, as is usually the case in pro-drop languages such as Italian and Armenian.
In the sentence introduced by \textit{wor}, i.e. (44), the locution \textit{in this room} identifies the room where the utterer is located. On the contrary, in sentence (45) it identifies the room where \textit{Hakob} is speaking.\footnote{Spatial adverbials in sentences such as (44) and (45) would be preferably located on the right of the clause, hence as the last phrase. The word order given above is preferably associated with a focus on the predicate. The issue here however is not the basic position of adverbs, but their indexical interpretation, hence for uniformity with the other examples we adopt even in this case the order adverb-participle-auxiliary.}

Concluding these brief remarks, the presence of \textit{t‘e} determines a complete shift of the interpretation of the embedded indexicals, from the utterer to the subject of the main clause. In section 4.2 we show that this is not an isolated case across languages, in that the same distribution can be found in Hindi.

4 Towards an Explanation

As emerges from the examples discussed above, the sentences introduced by \textit{wor} are neutral from the point of view of their interpretation, in that \textit{wor} does not add any special interpretive flavor to the clause it introduces. The complementizer \textit{t‘e}, on the contrary, is licensed in two different contexts. On the one hand, it can express a dubitative meaning, implying that the speakers do not fully believe the embedded content. This function can be realized when embedded under verbs such as \textit{hope} and \textit{say}. On the other, it can also introduce direct speech under verbs of communication such as \textit{say}.

Here we are going to argue that the licensing contexts for \textit{t‘e} are two outcomes of the same basic value. Our hypothesis is that in both cases \textit{t‘e} can be characterized as a \textit{context shifter}, encoding the speaker’s temporal and spatial coordinates. In order to clarify this point, we have to briefly illustrate the properties of the so-called Double Access Reading in MEA.

4.1 The Double Access Reading and the Dubitative \textit{t‘e}

We are going to develop here the hypothesis discussed in Giorgi (2010), concerning the syntactic representation of indexicality in embedded contexts. She argues that in Italian the highest projection in the complementizer layer hosts the speaker’s temporal and spatial coordinates. In embedded contexts, this position is syntactically...
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Projected in clauses where the verb is an indicative form, whereas in subjunctive clauses a lower complementizer position is realized.\(^\text{14}\)

As we are going to discuss in a while, this hypothesis provides an explanation for the availability of the Double Access Reading in languages such as Italian and English. Consider the following examples:\(^\text{15}\)

(46) Anna told me that she is pregnant

(47) Anna mi ha detto che è incinta
   ‘Anna told that she is pregnant’

In these cases, the embedded eventuality must be interpreted as simultaneous both with the time of Anna’s saying and the Utterance time. If this condition is not met, the sentences are infelicitous:

(48) #Two years ago Anna told me that she is pregnant

(49) #Due anni fa Anna mi ha detto che è incinta
   ‘Two years ago Anna told me that she is pregnant’

The addition of the temporal adverb in these cases makes it impossible to interpret the embedded present tense as simultaneous both with the main predicate and the Utterance time.

Furthermore, in subjunctive contexts, the Double Access Reading is not available, due to the fact that the relevant temporal configuration is never realized. In fact, as we illustrated above, the subjunctive realizes a purely agreement relation and not a real temporal one. Hence, in sentences such as the following ones, the interpretation is always a simultaneous one:

(50) Gianni spera che Maria sia incinta
   Gianni hope.PRS that Maria be.SBJV.PRS pregnant
   ‘Gianni hopes that Maria is pregnant?’

(51) Gianni sperava che Maria fosse incinta
   Gianni hope.PST that Maria be.SBJV.PST pregnant
   ‘Gianni hoped that Maria was pregnant’

(52) *Gianni spera che Maria fosse incinta
   Gianni hope.PRS that Maria be.SBJV.PST pregnant
   ‘Gianni hopes that Maria is pregnant?’

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\(^\text{14}\)Actually, the issue is more complex than that, as discussed in Giorgi (2010), but for the present purposes this generalization is sufficient.

Gianni sperava che Maria sia incinta
Gianni hoped that Maria be PRS pregnant
‘Gianni hoped that Maria was pregnant’

The hypothesis developed in Giorgi (2010) is that this is due to the properties of the complementizers introducing the indicative and the subjunctive. It is not possible to reproduce here the whole relevant discussion, because it lies outside the scope of this work. The basic idea is that, though homophonous in standard Italian, the two complementizers actually have different properties, in that, for instance, the subjunctive complementizer is deletable, but the indicative one is not. The indicative complementizer lies in a higher position in the syntactic structure, with respect to the subjunctive complementizer and carries in its specifier position a null demonstrative, referring to the utterer. Given the presence of the utterer’s coordinates, the embedded event must have an indexical interpretation in the embedded context as well. On the contrary, the subjunctive complementizer does not carry the utterer’s coordinates and this is why the Double Access Reading in Italian is available only in indicative clauses.

MEA is not a Double Access Reading language, contrary to English and Italian, but similarly to other Indo-European languages, such as for instance Romanian.

Anna-n inj as-ac’ wor hli ě
Anna-ART me say AOR 3SG that pregnant AUX 3SG
‘Anna told me that she is pregnant’

Contrary to the equivalent sentences in English and Italian, (54) does not imply that Anna is pregnant at utterance time. This point is further illustrated by the following example:

Erku tari afaj Anna-n inj as-ac’ wor hli ě
Two years ago Anna-ART me say AOR 3SG that pregnant AUX 3SG
‘Two years ago Anna told me that she was pregnant’

16Note that in many languages the indicative complementizer and the subjunctive one have a different lexicalization. See for instance Damonte (2011) for an analysis of Salentino, a Southern Italian dialect.

17On cross linguistic issues concerning the Double Access Reading, see Giorgi (2008).

18In Romanian, the judgment is the same as in MEA:

(i) Acum 2 ani Gianni a spus ca Maria e insarcinata
Two years ago Gianni has said that Maria is pregnant

The presence of the temporal adverb acum 2 ani (two years ago) does not give rise to ungrammaticality. See Giorgi (2008) for a discussion.
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In Armenian, the sentence, even when featuring a temporal adverb such as *two years ago*, is perfectly grammatical. Note that in Italian, to make the sentence with the adverb *two years ago* felicitous, the imperfect must be used:

(56)  
Due anni fa Anna mi ha detto che era incinta
Two years ago Anna told me that she was pregnant
‘Two years ago Anna told me that she was pregnant’

In Armenian as well the imperfect verbal form can be realized, as shown in the following example:

(57)  
Erku tari afaj Anna-n inj as-ac‘  *wor hli ēr*
Two years ago Anna-ART me say-AOR.3SG that pregnant AUX.IMP.3SG
‘Two years ago Anna told me that she was pregnant’

The difference however between (55) and (57) is only one of register, (57) being considered the “correct” form by normative grammars, whereas, in everyday life, native speakers of MEA mostly use (55). Recall that, as illustrated in the previous section, the complementizer *wor* introduces both indicative and subjunctive clauses, whereas the occurrences of dubitative *t'e* are incompatible with the subjunctive.

On the basis of these observations, our hypothesis is that *wor* is the syntactically low complementizer, corresponding to the one introducing Italian subjunctive clauses. As a matter of fact, even when an indicative is realized, no Double Access Reading is present in MEA. Hence, the difference between MEA and Italian is that *wor* never hosts in its specifier position the empty demonstrative referring to the utterer.

On the contrary, dubitative *t'e* does host the empty demonstrative and, as a consequence, it is incompatible with a subjunctive. Furthermore, dubitative *t'e* in these cases can exhibits the Double Access Reading as well, as shown by the strong marginality of the following example (the locution *How is it possible at 60?* has been added to provide a dubitative context):

(58)  
?*Erku tari afaj Anna-n inj as-ac‘  *t'e hli ē.* (Mit'e hnaravor ē 60 tarekanum?)
Two years ago Anna-ART me say-AOR.3SG that pregnant AUX.3SG. (How possible AUX.3SG 60 years?).
‘Two years ago Anna told me that she is pregnant. (How is it possible at 60?)’

In this example, the embedded verbal form is a present indicative and the sentence is ungrammatical. We are arguing that this is due to the fact that *t'e* carries the utterer’s temporal and spatial coordinates, which give rise to an indexical interpretation of the embedded present tense. The presence of the null demonstrative is connected to the dubitative value of this complementizer, because it expresses an evaluation by the utterer, which in this way is explicitly represented in the syntax.

Concluding, we can say that in these cases, the embedded context is shifted, because *t'e* introduces the utterer, which would not be there with *wor*.
As far as the interpretive properties of \( t'e \) are concerned, we propose that \( t'e \) carries a semantic, lexical, feature +dubitative, which is read off at the interface with the semantics.

Note finally that the dubitative value is independently realized by this particle in several contexts. Consider for instance the following examples:\(^{19}\)

(59) Ara-n mtac-um ěr \( t'e \) in-ć elk' gtn-er.
Ara-ART think-PRS.PTCP AUX.IMP.3SG that what solution find-SBJV.PST.3SG
‘Ara was thinking what solution he could find’

(60) Ara-n ě-git-i \( t'e \) ov k’halt'i mrc’uyt’-ǝ.
Ara-ART NEG-know.3SG if who win.COND.FUT.3SG competition-ART
‘Ara doesn’t know who will win the competition’

In these cases \( t'e \) introduces an interrogative clause. It can also express a value similar to English \textit{if}, for instance in the following case (where it appears in its augmented form \textit{et’e}):

(61) \textit{Et’e} žamanakin hasn-es gnac’k’ knstes
If time arrive-SBJV.PRS.2.SG train sit.COND.FUT.2SG
‘If you arrive on time you will catch the train’

Or, in the same vein, in the following one:

(62) Ara-n ě-i hiš-um \( t'e \) Anna-n hałt’-el ě mrc’uyt’-e t’e woć
Ara-ART NEG-AUX.3SG remember if Anna-ART win-PST.PTCP AUX.3SG competition or not
‘Ara doesn’t remember if Anna won the competition or not’

Finally, \( t'e \) can co-occur with \textit{wor} and, as expected the order is \( t'e \textit{wor} \) and not \textit{wor \( t'e \)}, which would be ungrammatical:\(^{20}\)

\(^{19}\)Interestingly, in example (59) \( t'e \) introduces a clause with a subjunctive. Note that in this sentence, the dubitative value is not due to an attitude of the utterer, but it expresses an evaluation of the superordinate subject, hence the presence of the subjunctive does not violate what said so far. For a complete analysis of all the values of this particle when equivalent to English \textit{if} or \textit{whether}, further research is needed. Here we are only mentioning these data as an additional support to our hypothesis.

\(^{20}\)The reverse ordering of the clauses is available in both cases, but the reciprocal distribution of \( t'e \) and \textit{wor} is the same:

(i) Aydpes č’-ēr lini \( t'e \textit{wor} \) Anna-yin ls-er
That way NEG-AUX.3SG be.SBJV.PST.3SG if Anna-DAT listen-SBJV.PST.3SG
‘It wouldn’t be like that, if he had listened to Anna’

(ii) Lav gnahatakan kstanas \( t'e \textit{wor} \) daser-d lav sovor-es
Good mark get.COND.FUT.2SG if lesson-ART.POSS.2SG well learn-SBJV.2SG
‘You’ll get a good mark, if you learn your lessons well’.
4.2 Reportive t’e and a Brief Comparison with Hindi

In section 3.2 we illustrated reportive t’e, i.e. the cases where it introduces complements of saying predicates. We have shown that in these cases the indexicals present in the embedded clause are not interpreted on the basis of the utterer’s spatial and temporal location, but on the basis of the speaker’s one, i.e. the subject of the main clause.

The hypothesis we discussed in the previous section, i.e. that t’e can be a context shifter, can account for these cases as well. The complementizer t’e hosts in its specifier position a null demonstrative referring to the main subject, i.e. the speaker who originally uttered the embedded content. Therefore, in the embedded clause

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21 On the relationship between linear order and structural hierarchy, see the seminal work by Kayne (1994) and subsequent developments.

22 In its reportive function, t’e does not carry the feature +dubitative we mentioned in the preceding section. We can look at it as a case of lexical ambiguity, or we could resort to a more complex theory, according to which t’e can be inserted even in this case with its interpretive features, which however are redundant and not interpreted in that the pragmatic context does not license them. Further study is indeed required to clarify this issue.
the spatial and temporal coordinates relevant for the interpretation of indexicals – indicative tenses, pronouns, spatial and temporal indexical adverbials – are those of the main subject. In a way, these contexts are similar to the Italian and English quotation cases, such as the following ones:23

(65) Partirò domani, disse Gianni
‘I will leave tomorrow, said Gianni’

(66) I will leave tomorrow, said John

In these cases, due to the presence of *disse Gianni* (said Gianni), the event is located in Gianni’s future, the first person pronoun *I* does not identifies the utterer, but the speaker Gianni, and *tomorrow*. The main difference between English and Italian on one side, and MEA on the other, is that in Italian and English it would be impossible to have the reference for the indexicals we see in (65) and (66), when the sentence is introduced by a complementizer:

(67) Gianni ha detto che partirò domani
‘Gianni said that I will leave tomorrow’

(68) John said that I will leave tomorrow

The event is located in the utterer’s future, not John’s, and analogously *I* and *tomorrow* refer to the utterer.

Interestingly, we find a similar pattern in another western Indoeuropean language, namely in Hindi. In this language the particle *ki* introduces complement clauses of verbs of communication, such as say, perception, such as see and hear, thinking and belief etc., as in the following case (from Zanon, 2013, ex. 45): 24

(69) Acchê bêt hæ *ki* āpko nokri mili hæ
Good thing is that you.HON.DAT job meet.PRF AUX.PRS.2SING
‘It is good that you have found a job’

Moreover, like MEA, Hindi is not a Double Access Reading language, as illustrated by means of the following examples (from Zanon, 2013, exx. 19 and 20):

(70) jÔn ne kahâ *ki* karînâ garbhvatî hæ
time.ERG say.PRF that Kareena pregnant is.PRS.3SING
‘John said that Kareena was pregnant’

An embedded present tense is not interpreted with respect to the utterer’s temporal location, but only with respect to that of the speaker. Coherently, therefore, the presence of the temporal locution *two years ago* does not modify the status of the sentence, as illustrated in the following example:

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23See Giorgi (2016) for an analysis of these cases in Italian and English.
24These data are discussed in Zanon (2013). See also and Koul (2008), for a general perspective, and Manetta (2011), for a view of movement and subordination.
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(71)  do sâl pahle jôn ne kahâ ki karînâ garbhvatî hê
two years ago John.ERG say.PRF that Kareena pregnant is.PRS.3SING
‘Two years ago John said that Kareena was pregnant’

In example (71) the embedded verbal form is a present tense, as in (70) and no Double Access Reading effect is observable.

Let’s analyze now the distribution of indexicals in embedded contexts (from Zanon, 2013, exx. 65 and 66):

(72) jôn ne kahâ ki mæ˜b a zâr jâégâ
   John.ERG say.PRF that I market go.FUT
   ‘John said “I will go to the market” ’

(73) jôn ne kahâ ki vo bazâr jâégâ
   John.ERG say.PRF that he market go.FUT
   ‘John said that he would go to the market’

Examples (72) and (73) constitute a minimal pair, the only difference being the person – first vs. third – appearing in the embedded clause. The two sentences can have the same interpretation, in that both pronouns mæ˜ (I) in (72) and vo (he) in (73) can refer to John, i.e. the subject of the superordinate clause. This is exactly what happens in MEA, with the only difference that MEA has a dedicated complementizer for the meaning in (72), i.e. t’ê.

In Hindi the verbal form of the clause embedded under a verb of saying can also be realized as a subjunctive, when expressing a modalized meaning, as in the following case (from Zanon, 2013, ex. 73):

(74) jôn ne kahâ ki mæˇjitû
   John.ERG say.PRF that I win.SUBJ
   ‘John said that I (may) win’

Interestingly, in this case the first person pronoun mæˇ (I), must refer to the utterer and not to John. Again, this distribution resembles what we found in MEA. Hence, we can account for these cases by means of the theory discussed above. In Hindi, as in Italian, there is only one complementizer ki, which can occupy two different positions, a high one, hosting the null determiner pointing to the speaker, or a lower one where no such element is realized. In Hindi ki, like t’ê in Armenian, can work as a context shifter and appear also with a reportive function.

Finally, note that indexicals, such as first and second person pronouns, and temporal and spatial expressions, must be allowed to shift – in Italian as well in quotation contexts, or in Free Indirect Discourse, as discussed in Giorgi (2016) – depending on the reference of the null determiner in the high complementizer position.
5 Conclusions

In this chapter we analyzed the properties of two complementizers – *wor* and *t’e* – in MEA. We saw that *t’e* has two special functions when used in embedded contexts: it can express a dubitative meaning – i.e., it can be used by the utterer to express disbelief with respect to what the subject of the main clause said or believed – and can be used as a reportive complementizer, i.e. to introduce a sort of direct speech attributed to the subject of the main clause. In these usages, *t’e* is incompatible with the subjunctive, even in those contexts which might normally allow it and in the reportive cases it determines a complete shift of all the indexical elements: tenses, pronouns, spatial and temporal adverbials. We explained these properties by hypothesizing that *t’e* occupies a position in the syntax comparable to the one occupied by the Italian *che* when introducing indicative clauses. In Italian, this projection hosts in its specifier position a null demonstrative pointing to the utterer, giving rise to the Double Access Reading. We argue that in MEA the specifier position of *t’e* can host such a null demonstrative, which can either point to the utterer – as in the dubitative reading – or to the subject of the main clause – as in the reportive reading. We concluded with a brief comparison with the Hindi complementizer *ki*, which can be used in reportive contexts as well, determining a complete shift of the indexicals present in the embedded cause.

Our analysis shows that complementizers play an important role in the syntax-semantics interface, in that they aren’t just simple conjunction particles, but trigger the correct interpretation in the various contexts.

Further research is needed to clarify the relationship between the dubitative *t’e* and its usages in hypothetical constructions, meaning *if* and *whether*, and in indirect interrogatives. Finally, a closer look should be given to languages known to exhibit similar phenomena, especially for investigating the connections between these phenomena and the lack of the Double Access Reading.

The list of abbreviations The paper adopts interlinear morpheme-by-morpheme glosses according to Leipzig Glossing Rules (https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf), detailed below:

1 first person
2 second person
3 third person
AOR aorist
ART article
AUX auxiliary
COND conditional
DAT dative
FOC focus
FUT future
IMP imperfect
INF infinitive
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LOC  locative  486
NEG  negative  487
PL   plural  488
POSS  possessive  489
PRF  perfect  490
PRS  present  491
PST  past  492
PTCP  participle  493
SG  singular  494
SBJV  subjunctive  495

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