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## **Indirect reports in Modern Eastern Armenian \***

### **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.

### **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.<sup>1</sup>

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\* The 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.

<sup>1</sup> Modern Eastern Armenian is the official language of the Republic of Armenia and Nagorno Karabakh. Western Armenian is the language spoken by the Armenian diaspora around the world.

In MEA there are two complementizers: *wor* and *t'e*. *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 upper subject coordinates with the speaker's ones. Following Giorgi (2010, 2016), we develop the hypothesis that the higher complementizer *t'e*, encodes the speaker's spatial and temporal coordinates, 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:<sup>2</sup>

- (1) Ara-n as-um ē **wor** Anna-n ut-um ē  
 Ara-ART say-PRES.PTCP AUX.3SG that Anna-ART eat-PRES.PTCP AUX.3SG  
 'Ara says that Anna is eating'

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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.

<sup>2</sup> In 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 six 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.

- (2) Ara-n as-um ē **wor** Anna-n ker-el ē  
 Ara-ART say-PRES.PTCP AUX.3SG that Anna-ART eat-PREF.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):<sup>3</sup>

- (3) Aran as-ac‘ **wor** Anna-n ut-um ē  
 Ara-ART say-AOR.3SG that Anna-ART eat-PRES.PTCP AUX.3SG  
 ‘Ara said that Anna was eating’
- (4) Aran as-ac‘ **wor** Anna-n ker-el ē  
 Ara-ART say-AOR.3SG that Anna-ART eat-PREF.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

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<sup>3</sup> Note 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-PRES.PTCP AUX.3SG  
 ‘Hakob is eating’

Analogously, in Italian:

- i. Gianni mangia  
 Gianni eats- PRES.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.

simultaneous with the saying, whereas in (4) it precedes it.<sup>4</sup> 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 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.<sup>5</sup>

In sentence (3) and (4), an embedded indicative imperfect could substitute for the other forms of the indicative, as in the following examples:<sup>6</sup>

(5) Ara-n as-ac' **wor** Anna-n ut-um ēr  
Ara-ART say-AOR.3SG that Anna-ART eat-PRES.PTCP AUX.PST.3SG  
'Ara said that Anna was eating'

(6) Ara-n as-ac' **wor** Anna-n ker-el ēr  
Ara-ART say-AOR.3SG that Anna-ART eat-PRF.PTCP AUX.PST.3SG  
'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*):

(7) Ara-n as-ac' **wor** Anna-n yerek das-er-ə sovor-el ē

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<sup>4</sup> The embedded verbal form in example (4) is constituted by a perfect participle and a present tense auxiliary. Hence, the literal translation would be *has learnt*, even if the interpretive value is just past. These issues will be more deeply investigated in further work

<sup>5</sup> In these contexts, Armenian normative grammars favor the imperfect. Speakers however, do not seem to have a preference in this direction.

<sup>6</sup> In examples (5) and (6), the participle is the perfective one and the auxiliary appears in the imperfect morphology.

Ara-ART say-AOR.3SG that Anna-ART yesterday lessons-ART learn-PRF.PTCP AUX.3SG  
'Ara said that Anna yesterday learned the lessons'

- (8) Ara-n as-ac' **wor** Anna-n das-er-ə sovor-el ē ays senyak-um  
Ara-ART say-AOR.3SG that Anna-ART lessons-ART learn-PRF.PTCP AUX.3SG this classroom-  
LOC  
'Ara said that Anna learned the 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.

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:<sup>7</sup>

- (9) Ara-n huys un-i **wor** Anna-n mrc'uyt'-ə hałt'-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 hałt'-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:

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<sup>7</sup> 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 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.

- (11) Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə hałt‘-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 hałt‘-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 hałt‘-i  
 Ara-ART hope have-3SG that Anna-ART competition-ART win-SUBJ.3SG  
 ‘Ara hopes that Anna wins the competition’
- (14) Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə hałt‘-er  
 Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-SUBJ.PST.3SG  
 ‘Ara hoped Anna to win the competition’

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 hałt‘-er  
 Ara-ART hope have-3SG that Anna-ART competition-ART win-SUBJ.PST.3SG  
 ‘Ara hopes that Anna won the competition’
- (16) \*Ara-n huys un-er **wor** Anna-n mrc‘uyt‘-ə hałt‘-i  
 Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-SUBJ.3SG  
 ‘Ara hoped that Anna wins the competition’

Sentences (15) and (16) violate the basic rules of the *consecution 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:<sup>8</sup>

- (17) Gianni spera che Maria vinca la gara  
Gianni hopes that Maria win-SUBJ.3SG the race  
'Gianni hopes that Maria wins the race'
- (18) \*Gianni spera che Maria vincessesse la gara  
Gianni hopes that Maria win-SUBJ.PST.3SG the race  
'Gianni hopes that Maria won the race'
- (19) \*Gianni sperava che Maria vinca la gara  
Gianni hoped that Maria win-SUBJ.3SG the race  
'Gianni hoped that Maria wins the race'
- (20) Gianni sperava che Maria vincessesse la gara  
Gianni hoped that Maria win- SUBJ.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

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<sup>8</sup> 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-SUBJ.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-SUBJ.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 hałt'-el ē  
Ara-ART hope have-3SG that Anna-ART competition-ART win-PRF.PTCP AUX.3SG  
'Ara hopes that Anna has won the competition'
- iv. Ara-n huys un-er t'e Anna-n mrc'uyt'-ə hałt'-el ēr  
Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-PRF.PTCP AUX.PST.3SG  
'Ara hoped that Anna had won the competition'

in both languages the subjunctive morphology undergoes a *tense agreement* rule, barring past-under-present and present-under-past.<sup>9</sup>

### 3 The data: embedded complement clauses introduced by the complementizer *t'e*

#### 3.1 the 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'-ə hałt'-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'-ə hałt'-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 (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'-ə hałt'-i  
Ara-ART hope have-3SG that Anna-ART competition-ART win-SUBJ.3SG  
'Ara hopes that Anna wins the competition'
- (24) \*Ara-n huys un-i *t'e* Anna-n mrc'uyt'-ə hałt'-er  
Ara-ART hope have-3SG that Anna-ART competition-ART win-SUBJ.PST.3SG  
'Ara hopes that Anna won the competition'
- (25) \*Ara-n huys un-er *t'e* Anna-n mrc'uyt'-ə hałt'-i  
Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win- SUBJ.3SG  
'Ara hoped that Anna wins the competition'

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<sup>9</sup> For a similar perspective, see also Costantini (2006) and Laskova (2012, 2017).



- (26) \*Ara-n huys un-er **t'e** Anna-n mrc'uyt'-ə halt'-er  
 Ara-ART hope have-IMP.3SG that Anna-ART competition-ART win-SUBJ.PST.3SG  
 'Ara hoped that Anna won the competition'

Independently of any other consideration, with this predicate, a clause introduced by the complementizer *t'e* featuring a subjunctive is impossible. The ungrammaticality of examples (23) and (26) contrasts with the acceptability (13) and (14) above. Examples (24) and (25) would in any case violate the subjunctive agreement rule as well: in (24) a past subjunctive appears under a present and in (25) a present subjunctive appears under a past tense, but the ungrammaticality of (23) and (26) calls for an explanation.

Note also that the verbs *xndrel* (ask), *harc'nel* (ask), *uzenal* (wish), *kamenal* (want, wish), *c'ankanal* (wish, desire) only take an embedded subjunctive and are never compatible with this complementizer. Consider the following paradigm:

- (27) Ara-n c'ankan-um ē **wor** Anna-n mrc'uyt'-ə halt'-i  
 Ara-ART wish- PRES.PTCP AUX.3SG that Anna-ART competition-ART win-SUBJ.3SG  
 'Ara wishes that Anna wins the competition'

- (28) Ara-n c'ankan-um ēr **wor** Anna-n mrc'uyt'-ə halt'-er  
 Ara-ART wish-PRES.PTCP AUX.PST.3SG that Anna-ART competition-ART win- SUBJ.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'uyt'-ə halt'-um ē  
 Ara-ART wish- PRES.PTCP AUX.3SG that Anna-ART competition-ART win-PRES.PTCP AUX.3SG  
 'Ara wishes that Anna won the competition'

- (30) \*Ara-n c'ankan-um ēr **wor** Anna-n mrc'uyt'-ə halt'-um ēr  
 Ara-ART wish-PRES.PTCP AUX.PST.3SG that Anna-ART competition-ART win-PRES.PTCP  
 AUX.PST.3SG  
 'Ara wished that Anna wins 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 ē t'e Anna-n mrc'uyt'-ə halt'-i  
 Ara-ART wish- PRES.PTCP AUX.3SG that Anna-ART competition-ART win-SUBJ.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- PRES.PTCP AUX.PST.3SG that Anna-ART competition-ART win- SUBJ.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-PRES.PTCP AUX.3SG that Anna-ART eat-PRES.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-PRES.PTCP AUX.3SG that Anna-ART eat-PREF.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-PRES.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 (37) can be used by the speaker for reporting the following direct speech:

(37) Ara-n as-um ē: "Anna-n ut-um ē"  
 Ara-ART say-PRES.PTCP AUX.3SG: "Anna-ART eat-PRES.PTCP AUX.3SG"  
 'Ara said: "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 (33)-(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) Hakob-n as-ac' **wor** mekn-um ē  
 Hakob -ART say-AOR.3SG that leave- PRES.PTCP AUX.3SG.  
 'Hakob said that he is leaving'

(39) Hakob-n as-ac' t'e mekn-um em  
 Hakob -ART say-AOR.3SG that leave- PRES.PTCP AUX.1SG.  
 'Hakob said that he is leaving'

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

- (40) Hakob-n as-ac‘: “Mekn-um em”  
Hakob -ART say-AOR.3SG: “leave- PRES.PTCP AUX.1SG.”  
‘Hakob said: “I am leaving” ’

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 third person morphology. This is an almost literal translation of the English sentence.<sup>10</sup>

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 *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-PRES.PTCP AUX.1SG.  
‘Hakob said that I would 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) Erkušabt‘i Hakob-n inj as-ac‘ **wor** vałə mekn-um ē  
Monday Hakob-ART me say-AOR.3SG that tomorrow leave-PRES.PTCP AUX.3SG  
‘On Monday Hakob told me that he will leave tomorrow’

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<sup>10</sup> The lexical pronoun can also be used, as in the following example:

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

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

- (43) Erkušabt‘i Hakob-n inj as-ac‘ t‘e vaḷə 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 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 ē  
 Hakob-ART me say-AOR.3SG that this room-LOC sleep-PRES.PTCP AUX.3SG  
 ‘Hakob told me that he sleeps in this room’
- (45) Hakob-n inj as-ac‘ t‘e ays senyak-um k‘n-um ē  
 Hakob-ART me say say-AOR.3SG that this room-LOC sleep-PRES.PTCP AUX.3SG  
 ‘Hakob told me that he sleeps in this room’

In the sentence introduced by *wor*, i.e. (44), the locution *in this room* identifies the room where the utterer is located. On the contrary, in sentence (45) it identifies the room where *Hakob* is speaking.<sup>11</sup>

Concluding these brief remarks, the presence of *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.

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<sup>11</sup> Spatial adverbials in sentences such as (44) and (45) would be preferably located on the right. The word order given above is better 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 adv-part-aux.

## 4 Towards an explanation

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

Here we are going to argue that the licensing contexts for *t'e* are two outcomes of the same basic value. Our hypothesis is that in both cases *t'e* can be characterized as a *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 *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 projected in clauses where the verb is an indicative form, whereas in subjunctive clauses a lower complementizer position is realized.<sup>12</sup>

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:<sup>13</sup>

(46) Anna told me that she is pregnant

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

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<sup>12</sup> Actually, the issue is more complex than that, as discussed in Giorgi (2010), but for the present purposes this generalization is sufficient.

<sup>13</sup> There is an ample literature on the Double Access Reading. See, among the others, Ogihara (1995), Abush (1997), Giorgi and Pianesi (1997), Schlenker (1999), Sharvit (2003) and Giorgi (2010).

In these cases, the embedded eventuality must be interpreted as simultaneous both with the time of Ann'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.PRES that Maria be.SUBJ.PRES pregnant  
'Gianni hopes that Maria is pregnant?'

(51) Gianni sperava che Maria fosse incinta  
Gianni hope.PST that Maria be.SUBJ.PST pregnant  
'Gianni hoped that Maria was pregnant'

(52) \*Gianni spera che Maria fosse incinta  
Gianni hope.PRES that Maria be.SUBJ.PST pregnant  
'Gianni hopes that Maria is pregnant?'

(53) \*Gianni sperava che Maria sia incinta  
Gianni hope.PST that Maria be.SUBJ.PRES pregnant  
'Gianni hoped that Maria was pregnant'

Sentences (52) and (53) where the embedded verbal form does not agree with the main one, are ungrammatical.

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.<sup>14</sup> 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 Indoeuropean languages, such as for instance Romanian.<sup>15</sup>

- (54) Anna-n inj as-ac' **wor** hli ē  
 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:<sup>16</sup>

- (55) Erku tari ařaj Anna-n inj as-ac' **wor** hli ē  
 Two years ago Anna-ART me say-AOR.3SG that pregnant AUX.3SG  
 'Two years ago Anna told me that she was pregnant'

In Armenian, the sentence, even when featuring a temporal adverb such as *two years ago*, is perfectly grammatical. Note that in Italian, to make (50) felicitous, the imperfect must be used:

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<sup>14</sup> Note 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.

<sup>15</sup> On cross linguistic issues concerning the Double Access Reading, see Giorgi (2008).

<sup>16</sup> In 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.



- (56) #Due anni fa Anna mi ha detto che era incinta  
 Two years ago Anna told me that she be.IMP pregnant  
 ‘Two years ago Anna told me that she is pregnant’

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

- (57) Erku tari ařaj Anna-n inj as-ac‘ **wor** hli ē  
 Two years ago Anna-ART me say-AOR.3SG that pregnant AUX.PST.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, native speakers of MEA, however, mostly use (55). Recall that as illustrated in the previous section, the complementizer *wor* introduces both indicative and subjunctive clauses, whereas these 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 exhibit 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 ařaj 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 was 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:<sup>17</sup>

- (59) Ara-n mtac-um ēr **t'e** inč elk' gtn-er.  
 Ara-ART think-PRES.PTCP AUX.PST.3SG that what solution find-SUBJ.PAST.3SG  
 'Ara was thinking what solution he could find'

- (60) Ara-n č-giti **t'e** ov k-halt'-i mrc'uyt'-ə.  
 Ara-ART NEG-know.3SG if who COND-win-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 *if*, for instance in the following case (where it appears in its augmented form *et'e*):

- (61) **Et'e** žamanak-in hasn-es gnac'k' k-nst-es  
 If time arrive.SUBJ.PR.2.SG train COND-sit-FUT.2SG  
 'If you arrive on time you'll catch the train'

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

- (62) Ara-n č-i hiš-um **t'e** Anna-n halt'-el ē mrc'uyt'-ə t'e woč  
 Ara-ART NEG-AUX.3SG remember-PRES.PTCP if Anna-ART win-PRF.PTCP AUX.3SG

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<sup>17</sup> 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 *if* or *whether*, further research is needed. Here we are only mentioning these data as an additional support to our hypothesis.

competition-ART or not

‘Ara doesn’t remember if Anna won the competition or not’

Finally, *t’e* can co-occur with *wor* and, as expected the order is *t’e wor* and not *wor t’e*, which would be ungrammatical:<sup>18</sup>

(63) **T’e wor** Anna-yin ls-er aydpes č‘-ēr lini

If Anna-DAT listen-SUBJ.PAST.3SG that way NEG-AUX.PAST.3SG be.SUBJ.FUT.3SG

‘If he had listened to Anna, it wouldn’t be like that’

(64) **T’e wor** daser-d lav sovor-es lav gnahatakan k-stan-as

If lesson-ART.POSS.2SG well learn-SUBJ.2SG good mark COND-get.FUT.2SG

‘If you learn your lessons well you’ll get a good mark’

Examples (62) and (63) show that, on the basis of the hypothesis that linear precedence mimics structural hierarchy, the complementizer *t’e* occupies a higher position with respect to *wor*.<sup>19</sup>

Concluding this section, we can say that the dubitative reading is instantiated by means of the complementizer *t’e*, which is higher in the structural hierarchy than *wor*. *T’e* can realize the utterer’s spatial and temporal coordinates in its specifier position, similarly to the Italian complementizer *che* introducing indicative clauses. When this happens, the embedded clause expresses an attitude of disbelief/ doubt by the utterer with respect to the embedded content and is incompatible with the subjunctive, even if the matrix verb would allow it. Moreover, even if MEA is a non Double Access Reading language, the marginality of examples such as (58) above tells us that our hypothesis is on the right track. The dubitative value can be realized by means of *t’e* in indirect interrogatives and hypothetical constructions. In these cases, as expected, the subjunctive

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<sup>18</sup> The reverse ordering is available as well in both cases:

i. Aydpes č‘-ēr lini **t’e wor** Anna-yin ls-er

that way NEG-AUX.PAST.3SG be.SUBJ.FUT.3SG if Anna-DAT listen-SUBJ.PAST.3SG

‘It wouldn’t be like that, if he had listened to Anna’

ii. Lav gnahatakan k-stan-as **t’e wor** daser-d lav sovor-es

good mark COND-get.FUT.2SG if lesson-ART.POSS.2SG well learn-SUBJ.2SG

‘You’ll get a good mark, if you learn your lessons well’.

<sup>19</sup> On the relationship between linear order and structural hierarchy, see the seminal work by Kayne (1994) and subsequent developments.

mood is possible as well.

## 4.2 The 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.<sup>20</sup> 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 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:<sup>21</sup>

(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 identify 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 (64) and (65), when the sentence is introduced by a complementizer:

(67) Gianni ha detto che partirò domani

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<sup>20</sup> 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.

<sup>21</sup> See Giorgi (2016) for an analysis of these cases in Italian and English.

‘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):<sup>22</sup>

(69) Acchī bāt hæ **ki** āpko nōkrī milī hæ  
Good thing is that you.HON.DAT job meet.PERF AUX.PRES.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) jōn ne kahā **ki** karīnā garbhvatī hæ  
John.ERG say.PERF that Kareena pregnant is.PRES.3SING  
‘John said that Kareena is/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:

(71) do sāl pahle jōn ne kahā **ki** karīnā garbhvatī hæ  
two years ago John.ERG say.PERF that Kareena pregnant is.PRES.3SING  
‘Two years ago John said that Kareena was pregnant’

In example (70) the embedded verbal form is a present tense, as in (69) and no Double Access Reading effect is observable.

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<sup>22</sup> These 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.

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

(72) *jɔn ne kahā ki mǎ bazār jāũgā*  
John.ERG say.PERF that I market go.FUT  
'John said "I will go to the market" '

(73) *jɔn ne kahā ki vo bazār jāegā*  
John.ERG say.PERF 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 *mǎ* (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'e*.

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) *jɔn ne kahā ki mǎ jitũ*  
John.ERG say.PERF that I win.SUBJ  
'John said that I (may) win'

Interestingly, in this case the first person pronoun *mǎ* (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'e* 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 off 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.

## References

- Abusch, Dorit. (1997). Sequence of tense and temporal de re. *Linguistics & Philosophy* 20. 1–50.
- Costantini, Francesco (2006). Obviation in Subjunctive Arguent Clauses and the first-personal Interpretation, in M. Frascarelli (ed.), *Phases of Interpretation*, Mouton De Gruyter, Berlin, pp. 295-320.
- Damonte, Federico, (2011), Mood Concord between CP and IP in Salentino and Southern Calabrian

- Subjunctive Complements, in Benincà, P. and N. Munaro (eds.), *Mapping the Left Periphery*, Vol. 5., Oxford University Press. pp. 228-256
- Dum-Tragut, Jasmine (2009), *Armenian: Modern Eastern Armenian*, John Benjamins Pub., Philadelphia
- Giorgi, Alessandra (2008), Reflections on the Optimal Solution: On the Syntactic Representation of Indexicality, in Di Sciullo A.M. and C. Boeckx (eds.), *The Bilingualistic Enterprise*, Oxford University Press, pp. 392-416.
- Giorgi, Alessandra (2009), Toward a syntax of the subjunctive mood, *Lingua*, 118, pp. 1837-1858.
- Giorgi, Alessandra (2010), *About the Speaker: Towards a Syntax of Indexicality*, Oxford University Press. Oxford, UK.
- Giorgi, Alessandra (2016), Integrated Parentheticals in Quotations and Free Indirect Discourse, in Alessandro Capone, Kiefer, Ferenc, Lo Piparo, Franco (eds.), *Indirect Reports and Pragmatics, Perspectives in Pragmatics, Philosophy & Psychology 5*, pp.471-488.
- Giorgi, Alessandra and Sona Haroutyunian (to appear), “Il verbo secondo in armeno moderno orientale”. *Proceedings of the SLI Conference*, Malta, 2016.
- Giorgi, Alessandra and Sona Haroutyunian (2016). Word order and information structure in Modern Eastern Armenian, *Journal of the Society for Armenian Studies (JSAS)*, California State University Fresno, 25, pp.185-200.
- Haroutyunian, Sona (2011), An Analysis of Dante’s Tenses in the Armenian Translations of the *Divina Commedia*, *PhD Dissertation*, Ca’ Foscari University of Venice, Italy.
- Kayne, Richard (1994), *the Antisymmetry of Syntax*, MIT Press, Cambridge MA.
- Koul, Omkar, (2008), *Modern Hindi grammar*. Dowdy Press, USA.
- Schlenker, Philippe. 1999. Propositional attitudes and indexicality: A crosscategorical approach, *PhD. Dissertation*, MIT, Cambridge MA.
- Ogihara, Toshiyuki. 1995. Double-access sentences and reference to states. *Natural Language Semantics* 3. 177–210.
- Laskova, Vesselina, (2012), Subjunctive mood, epistemic modality and Main Clause Phenomena in the analysis of adverbial clauses, in Loebke Ailbrecht, L. Haegeman and R. Nye (eds.), *Main Clause Phenomena*, John Benjamins Pub., Philadelphia, pp-385-404.
- Laskova, Vesselina, (2017), On the Nature of the Subjunctive, *Lingua*, 189, pp.19-45.
- Manetta, Emily, (2011), *Peripheries in Kashmiri and Hindi-Urdu: the Syntax of Discourse Driven Movement*. John Benjamins Pub., Philadelphia.
- Sharvit, Yael. 2003. Embedded tense and universal grammar. *Linguistic Inquiry* 34(4). 669–681.
- Tamrazian, Armine (1991). “Focus and WH-movement in Armenian”, *Working papers in*



*Linguistics*, University College London, 3, pp. 102-121.

Tamrazian, Armine (1994). *The Syntax of Armenian: Chains and the Auxiliary*, PhD, University College London, UK.

Zanon, Jacopo (2013), Interpretation of the I-pronoun in contexts of subordination in the Hindi language and indexicals, *MA Dissertation*, Ca' Foscari University of Venice, Italy.  
<http://dspace.unive.it/handle/10579/2589>.