2

The Speaker's Projection

2.1 Introduction

In this chapter I address some questions concerning the interpretation of an embedded verbal form in Italian. In this language, as in several other Romance and Germanic languages, the embedded verbal form exhibits a variety of morphological endings. Besides having the possibility of appearing with the same set of endings used in main clauses—i.e., the *indicative*—the embedded verb can appear with verbal endings which are not compatible with main assertions—i.e., the subjunctive and the infinitive. The main difference between subjunctive and infinitive is that the subjunctive is a finite form licensing a lexical subject. Here I will mostly consider the alternation indicative/subjunctive and show that it might be expressed by introducing in the embedded clause the representation of the temporal and spatial location of the *speaker*, which I will call from now on *the speaker's coordinates.*

I will compare Italian and English, where English does not distinguish between indicative and subjunctive in the same way Italian does. I will show that, in spite of the superficial differences, the representation of speaker's coordinates in embedded clauses holds in English as well and helps explain many facts concerning Sequence of Tense properties.[1]

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[1] On English subjunctive, see among the others Portner (1997) and Stowell (2008). In the cases I am going to consider here, however, English subordinate clauses do not exhibit an alternation in the verbal form, whereas Italian does, hence the two sets of phenomena do not overlap. For this reason, I will not deal here with the English data and will instead refer the reader to the cited references.

The fact that the two languages show similar abstract properties, in spite of the morphological differences, is especially interesting because it permits us to draw some theoretical conclusions on the mechanisms underlying the temporal interpretation and the way it is realized in natural language.

2.2 The Double Access Reading

2.2.1 *The issue*

In this section I briefly describe the phenomenon known as Double Access Reading. I will not give a full discussion of the literature dealing with the topic, but will only summarize the points which are relevant to the present discussion.

The classical problem discussed by the scholars interested in the semantics of temporal relations concerns the interpretation of a present tense under a past form. This issue is only an 'iceberg point' for a more complex question, which is actually at the core of the temporal interpretation of embedded clauses, namely, the type of temporal anchoring strategy adopted by the different languages. The question concerns the interpretation to be attributed to sentences like the following:

(1)   John said that Mary is pregnant

(2)   Gianni ha detto che Maria è incinta

In languages like English and Italian this sentence means that the pregnancy of Mary overlaps both the time of the utterance and the time of John saying it—and obligatorily so. In these languages, the sentence cannot mean that Mary was pregnant at the time John said it, but that she is no longer pregnant at the utterance time. By contrast, in languages such as Romanian and Chinese, this meaning is available. The sentence is interpreted as follows in English and Italian, respectively:[2]

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[2] Note also that in non-DAR languages the interpretation past-under-past of sentence (3)—i.e., the one in which the pregnancy of Mary precedes the saying—which is present in English, is not available. For some English speakers though this interpretation seems harder to obtain.

(3)   John said that Mary was pregnant

(4)   Gianni ha detto che Maria era incinta

In (3) and (4) the pregnancy does not necessarily extend to the present moment, even if this could be the case, in the absence of further specification. As a corollary, the following sentence is deviant in English (and Italian):

(5)   #Two years ago, John said that Mary is pregnant

(6)   #Due anni fa, Gianni ha detto che Maria è incinta

We know that pregnancy in human beings lasts nine months; therefore a sentence entailing that Mary's pregnancy lasted at least two years is deviant. However, it is well formed in the languages belonging to the other group.

Let me emphasize the fact that in sentences such as (3) in English—with the simultaneous reading—and (4) in Italian, the state *might* be holding at the utterance time. This is so, simply because states are, or at least might be, persistent, and in absence of any further temporal specification—as in sentences (5)–(6)—they might still be holding at the time the sentence is uttered. Therefore, even in non-DAR languages, in a sentence such as (3) it might be pragmatically plausible to suppose that the pregnancy is still holding *now*—i.e., at utterance time—but it is not necessary, as in DAR languages. The DAR is an *obligatory* interpretation, to the extent that examples (5) and (6) are not well formed in English and Italian.

So far I have distinguished between two language groups: DAR languages, where the embedded eventuality is *doubly* evaluated; and non-DAR ones, where it is temporally located only with respect to the main event.

No language has been discussed in the literature belonging to a third group, which should be possible, at least in principle, namely a language in which the *only* time to be considered for the interpretation of the embedded clause is the utterance time. For instance, in no language does a sentence such as (7) mean something like (8):

(7)   Two years ago John said that Mary is pregnant

(8)   Two years ago John said that Mary *be* pregnant *now*, at the time *I, the speaker,* am speaking

In other words, in no language does a complement clause have exactly the same range of interpretations it has in isolation: sentence (7) cannot mean that Mary is pregnant *now*—which is the meaning of the sentence '*Mary is pregnant*' used as a main clause—but that when John said it, she was not.

The conclusion that can be drawn from this observation is that the temporal location of the embedded eventuality cannot be identified exclusively on the basis of the indexical reference, and temporal anchoring to the main clause is obligatory. As a consequence only two language types can possibly exist. In non-DAR languages, the pregnancy holds at the time John—*the subject*—is speaking, whereas in DAR languages it holds *both then and now*.[3]

The same generalization also holds for the following example, where the embedded form is a past tense:

(9)   John said that Mary left

(10)   Today is the 27th, John *say* on the 24th that Mary *leave* on 25th

In no language does a sentence such as (9) mean something like (10). That is, it is not possible for a past tensed event to be interpreted as past only with respect to the utterance time.[4]

In the literature, it is possible to find suggestions that address at least some aspects of the problem I am considering here. For instance, with

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[3] See also Enç (1986, 1987). For completeness, consider again the following English sentence, which will be better analysed in section 2.2.2 below:

i.   John said that Mary was sleeping

In English, the sleeping time is perceived as being either past (backwards shifted reading) or simultaneous to the sayer's. The Russian counterpart of (i) only gives a backward shifted reading. That is, we find again the situation discussed above: English forces the consideration of both the utterance time and the time of the superordinate event, whereas only the latter seems to matter for Russian. Again, what is missing is a language in which the embedded past tense is interpreted as in matrix clauses—that is, as a mere indexical—allowing them to report about a *dictum* of John which for instance locates the sleeping simultaneously in John's future and the speaker's past.

[4] In Chapters 4 and 5 I will discuss some cases in English and Italian, which seem, under certain circumstances, to have a reading such as the one provided in (10). I will argue that those contexts are to be analysed in a DAR perspective as well and do not constitute an exception, but on the contrary, provide further support to the theoretical proposal of this book.

respect to the impossibility of sentence (9) being appropriate to express the temporal relations in (10), Ogihara (1995a, 1995b, 1996) and Higginbotham (1995) argue that the temporal orientation of the embedded clause expressing the content of a propositional attitude must be isomorphic to the content it expresses. In other words, a past verbal form, such as *left*, cannot be used to express a future relation. This way, the unavailability of the temporal relations expressed in (10) is accounted for. That reading, in fact, would express the future-oriented speech uttered by John—'*Mary **will** leave on the 25th*'—by locating the *leaving* in the speaker's past by means of the simple past *left*. Pursuing this line of reasoning, the lack of a pure indexical reading of the embedded present tense of (1) is accounted for in a similar way: the sentence would express a present-time perspective by the utterer, and a future perspective by the subject.

Let me point out that, as noted by Higginbotham in a later work (2002), the temporal isomorphism constraint might exhibit some problems. For instance, it requires some further working out to account for the acceptability of the following sentence (Higginbotham's (23)):

(11)   Maria will say on Sunday that Mario was here on Saturday

Suppose that the speaker expresses that content on *Friday*. Then the reported speech is past-oriented, from the standpoint of the subject (Mario), but future-oriented from the standpoint of the speaker. As such, it doesn't comply with temporal isomorphism, even if it turns out to be perfectly acceptable. I will not discuss these examples here, but will come back to this kind of problem in Chapter 5. Consider also that the principle in question looks rather stipulative and it is not clear why it should exist at all.[5]

Another relevant proposal to rule out (10) as a possible interpretation for a sentence such as (9) is discussed in Abusch (1997). Noticing the unavailability of the future-oriented reading of (2), she proposes

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[5] A reviewer notes that the temporal isomorphism constraint also seems problematic for the grammatical version of (10) using *would*, instead of *will*, where *would* is interpreted as *will* + past.

that this is due to a 'metaphysical' asymmetry between past and future times. Future temporal locations are intrinsically indeterminate, and this is reflected in a linguistic interpretive constraint to the effect that the local *now*, in Abusch's terminology, is an *upper limit* for tense reference. She proposes therefore the *Upper Limit Constraint*; such a principle applied to (9) would have the effect of ruling out the interpretation in which the embedded eventuality follows the relative now—i.e., the time of the *saying*—of the superordinate clause.

Irrespective of the merits or limitations of these proposals, the main point is that their perspective is different from the one developed by Giorgi and Pianesi (2001a, 2004a) and discussed here. The perspective, originally developed by Giorgi and Pianesi, is that the unavailability of mere indexical readings of tenses in embedded clauses is not a typological problem, but on the contrary, it reflects properties of the syntax/semantic interface. In other words, a grammar permitting indexical temporal reference in the embedded clause is an *impossible* grammar. Those properties arguably also explain the very existence of Sequence of Tense.[6]

Simplifying, the impossibility for tenses to behave as mere indexicals in embedded contexts is due to the fact that this would amount to making the expressed content a property of the speaker, whereas the speaker must share this responsibility with the subject.

Giorgi and Pianesi (2000, 2001a, 2004a) mainly discussed the necessity of representing the subject's temporal coordinates in clauses embedded under attitude predicates. This move permitted explanation of the obligatoriness of temporal anchoring and the contrast between attitude predicates, such as *believe* and *wish*, and non-attitude ones, for instance fictional predicates like *dream* and *imagine*, both in Italian and in English.

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[6] Let me point out for completeness that Giorgi and Pianesi's perspective is closer to Ogihara's and Higginbotham's position than to Abusch's. This is by virtue of their more or less explicit appealing to *subjects* (the speaker, the one whom a given context is ascribed, etc.). This is compatible with Giorgi and Pianesi's idea that all the behaviour of tenses in subordinate context is determined by the need to accommodate the different perspectives a speaker has about the content she ascribes to a given subject, with respect to that of the subject itself.

They also suggested that DAR phenomena were related to the representation of the speaker's coordinates in the embedded clause. Though in their analysis the existence of DAR languages—such as English and Italian—next to non-DAR ones—such as Romanian and Chinese—was not accounted for, still their idea that the indexical context had to be represented in the left periphery of the clause is a crucial one, and I will develop it in the following pages.

In this chapter I will provide syntactic and interpretive arguments in favour of the syntactic representation of the speaker's temporal (and spatial) coordinates in the C-layer. In Chapter 3 I will provide arguments in favour of a typology of language, able to distinguish on principled grounds between DAR and non-DAR languages.

2.2.2 *There is no* optional *Double Access Reading*

In this brief section I want to point out that the position I am taking here is that DAR is exclusively an obligatory phenomenon. This point will also be stressed elsewhere in the book, but it is important, for the discussion to go through, to bear it clearly in mind. In a language such as Romanian, as I pointed out above, there is no DAR, in the sense of its *obligatoriness*. Consider again sentence (6) in the introduction, reproduced here for simplicity:

(12)   (Acum due ani) Gianni a spus ca Maria e insarcinata
        Two years ago John said that Maria is(PRES IND) pregnant

When the temporal locution *acum due ani* (two years ago) is not present, it is *possible* for this sentence to be felicitous in a situation in which Maria is pregnant *now*, i.e., at the time of the utterance. This does not mean that the sentence is *optionally* a DAR one, but simply that certain states—hence, pregnancy—might be *persistent*, at least for a certain interval, and therefore that, since the sentence does not provide any cue, in this case we do not know for a fact whether Maria is still pregnant or not.

The crucial point, and the crucial difference from Italian and English, is that in Romanian the embedded present tense is perfectly compatible with the temporal locution in question, showing that it does not matter how far away the *saying* is located, since the embedded

state does not have to hold *now* even if it could. This is similar to what happens in the English sentence (7) from the introduction:

(13)   (two years ago) John said Mary was pregnant

In this case, if the temporal locution is not there, the embedded eventuality is *compatible* with a reading in which Mary is pregnant *now*. For a more detailed analysis of past tense combined with stative predicates, and of the Italian equivalent forms, see also Chapter 4 below.

2.2.3 *The Double Access Reading and Sequence of Tense*

Let's consider now the basic data concerning the distribution of verbal forms in English under verbs of saying in the past form.

Consider the following pairs in Italian and English, which I will treat as equivalent:[7]

(14)   John said that Mary left

(15)   Gianni ha detto che Maria è partita

(16)   John said that Mary will leave

(17)   Gianni ha detto che Maria partirà

(18)   John said that Mary would leave

(19)   Gianni ha detto che Maria sarebbe partita

In sentences (14)–(15) the embedded past is interpreted as locating the eventuality of leaving before the saying. In (16) and (17) the

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[7] In what follows the Italian present perfect is considered as equivalent to the English simple past. In Italian there is however a simple past—in this case *partì* (left). The distribution of the present perfect and the simple past in Italian is very different from in English. In English they are really two different *tenses*, exhibiting different properties and obeying different constraints. In Italian, in many contexts, they seem to be largely equivalent forms—even if this is undoubtedly an oversimplification—and their distribution varies according to the dialectal and regional linguistic background of the speakers. Even if the two forms are not perfectly equivalent—see Giorgi and Pianesi (1997, ch. 3 and references cited there)—here I will abstract away from the differences, given that they do not seem relevant to the end of this discussion. To translate the English simple past, I will therefore adopt the present perfect, which is the form mostly—even if not uniquely—present in my variety of Italian.

embedded future locates the leaving after the utterance time, whereas in (18) and (19) the future-in-the-past locates it after the saying, but not necessarily after the utterance time.[8]

The question that must be considered at this point is whether the temporal location of the embedded event in (14) through (19) is ruled by the same principles ruling its location in sentences (1) and (2). The answer depends on the theory one develops for the DAR. If one wants to attribute the peculiar effect found in (1)–(2) to the properties of the present tense as such, then the principles of SoT ruling (14)–(19), where other temporal forms appear, must be different ones.[9]

I will discuss first the theory considering the present tense effect as a *special* one, due to the present tense itself, and then an alternative theory—namely, the *Generalized DAR theory* originally proposed by Giorgi and Pianesi (2001a).

Under the first theory, it could be claimed that the present tense obeys some specific principles yielding the DAR effects observed in (1) and (2). Whatever these principles might be, then the distribution and interpretation of an embedded past tense and an embedded

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[8] The future-in-the-past is expressed in English by means of a periphrastic form including the auxiliary *would* which is often analysed as *will* + *ed*, i.e., a *past-future* auxiliary. In Italian the same meaning is realized by means of the perfect conditional. The other Romance languages are not like this, however. In Spanish, for instance, the simple conditional plays the same role. We are not going to investigate here what the correspondence between such, apparently, very different forms might be, but we are going to take for granted that at the relevant level, they are interpreted alike.

[9] An important issue is constituted by the differences in anchoring between eventive predicates and stative ones. Eventive predicates can only be ordered as preceding the superordinate event as is the case in example (14) in the text. English stative predicates, by contrast, can be interpreted both as preceding and as simultaneous with respect to the superordinate event. As noted by a reviewer, a sentence such as (ii) is in fact ambiguous. Note however that in Italian such a sentence would be translated by means of an embedded imperfect of the indicative:

i.   Gianni ha detto che Maria era(IMPF IND) incinta

ii.   John said that Mary was pregnant

On the properties of the imperfect in Italian and the corresponding forms in English, see Chapter 5 below. For a general analysis of the anchoring of stative vs. eventive predicates, see also Giorgi and Pianesi (1997, ch. 3).

future must follow different principles. According to Schlenker (2004), following Abusch (1997, see also Stowell 1996), for instance, the present tense is 'special' being *de re*.[10]

There are some considerations that might cast doubt on this proposal. The first one is conceptual: this view introduces a substantial difference between DAR and non-DAR languages. Non-DAR languages, in fact, must be claimed to have a non-*de re* present tense. By using a present tense—for instance in a sentence such as *Mary is happy*—a language like Romanian must be taken to express a different *meaning* than English or Italian. This might well be the case, but there is no independent evidence in favour of this view.

The second consideration has to do with the epistemological structure of the theory. In particular, if the present tense alone, due to its own intrinsic properties, exhibits the DAR, then the distribution and interpretation of an embedded past tense and an embedded future must follow from different principles. For instance, the past tense might be claimed to obey a general anchoring principle to the effect that the anchoring point of the embedded past is not the utterance time—as in *Mary left* taken as a main clause—but the time of the main eventuality—i.e., the time of the saying.

As for the embedded future, in the literature, which mostly considers Germanic languages, it is often regarded as a present *modal* form yielding a future interpretation. According to this perspective, its distribution obeys the same principles ruling embedded modals as in the following case:

(20) Mary believes that John can sing

Such a view concerning the future cannot however be trivially generalized to Romance languages, which, on the contrary, do have a *real* morphological future. In all Germanic languages the

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[10] Let me also comment that it is not crystal clear what *de re* exactly means as applied to a *tense*. The authors adopting this view leave it mostly to the intuition of the reader. Let me stress that it is crucial, for their argument to go through, that the *tense* itself, and *not* the eventuality with which it is associated, be interpreted *de re*. Though one might easily work out the technical operations scoping out the *de re* part, still it is not clear what lies beyond the technicality.

future tense is periphrastic, being constituted by a modal and a non-finite form. In many Romance languages, by contrast, it appears as a synthetic verbal form, with no transparent modal components.

Consequently, in this theory, some further *ad hoc* hypotheses must be proposed to the effect that the future of Italian-like languages, even if different with respect to its morphosyntax, should be considered equivalent to an English-like modal form.

Following this view, therefore, four different principles should be hypothesized to yield the correct Sequence of Tense for the embedded clauses above. In fact one should hypothesize a principle affecting the present tense in embedded contexts, an *ad hoc* anchoring principle concerning past-under-past forms, a hypothesis about the nature of Germanic future, and a further hypothesis about the morphosyntax of Italian-like future forms.

The other possibility would be to argue that the effects found with the present tense in (1)–(2) are not due to some principles of grammar at work only with the present tense, but that, on the contrary, the principles of SoT are the same for all the verbal forms appearing in the embedded contexts. The interaction between the morphosyntactic properties of the verbal forms and the rules of grammar determining the temporal location of the embedded event gives rise to the whole paradigm in (14)–(19). Such a hypothesis is more appealing than the one proposing a different principle for each tense, and I will develop it in the chapters that follow.[11]

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[11] See Fleischman (2009) for a discussion of the future in Romance and its diachronic development. Note that the *consecutio* in dependence from the future verbal form is in some respects the same as the one from a present verbal—as opposed to a past, as I will better discuss in section 2.3.1 below. In spite of this apparent similarity with the present tense, however, I show in Chapter 5 that the future has properties of its own, which differentiate it from the other tenses. Consider also that the issue concerning bi-partition of tenses vs. tri-partition might be somewhat misleading, given that the real empirical problem concerns the difference in the interpretation between examples (14) and (16). In (14) the embedded event must be past with respect to the main event—and redundantly with respect to *now*. In (16) it must be future *both* with respect to the main event and to *now*, crucially contrasting with example (18).

Let me now provide an empirical argument in favour of the double evaluation of the embedded tense. Suppose that on 28 May John says, 'Mary is happy' and that Mary continues happy for the next two days. On 30 May I can then felicitously utter the following sentence:

(21)   John said that Mary is happy

This sentence would be a faithful report of the situation: the happiness of Mary is understood as extending from the time of the saying up to *now*. With exactly the same interpretation I might utter:

(22)   On the 28th of May, John said that Mary is happy

In this case, it is simply made explicit that the day of the saying has to be located on 28 May and that the state of happiness extends from the 28th up to *now*.

Consider however that the following sentence is *not* a possible option, in that it would not be a faithful report of the situation:

(23)   *John said that on the 28th of May Mary is happy

Given that the utterance event—*now*—is located on 30 May, it is impossible to utter (23) felicitously.[12]

This piece of evidence is important because it shows that the DAR effect cannot stem out of a *single* evaluation of the embedded eventuality. As is clear from the grammatical status of example (21) above, in fact, it is possible to understand the sentence as mentioning a state of happiness attributed to Mary, extending from 28 May up to *now*. Therefore, on one hand, it is true that Mary is happy on 28 May, but, on the other, it is possible to locate the embedded state on that day only *derivatively*, by means of the location of the saying event, as in (22). On the contrary, locating the state *explicitly* on that day gives rise to ungrammaticality. In the next section I will provide a step-by-step derivation for such cases.

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[12] The following sentence is grammatical:

i.   John said that today, the 30th of May, Mary is happy

According to this sentence, however, John must have uttered 'Mary is happy' on the same day.

2.2.4 *A proposal on Sequence of Tense*

The hypothesis concerning DAR languages that I will argue for in this book is the following:[13]

(24)   The eventuality embedded inside a complement clause must be evaluated twice. Once with respect to the subject's—attitude bearer's—temporal coordinate and once with respect to the speaker's temporal coordinate.

In other words, in DAR contexts, the embedded event must be located once with respect to the superordinate event and once with respect to the utterance event. Therefore, a past, present, or future embedded verbal form will turn out to be past, present, or future with respect to the main event *and* with respect to the utterance time.[14]

As will become clearer in this book, the mechanism adopted to this end is theta-identification. Note that theta-identification can be recursively applied, as in the cases of *secondary predication*, such as the following one:[15]

(25)   John left angry

Both *angry* and the argument of *leave* are theta-identified with *John*.

The head of the tense projection, T, is a bi-argumental predicate of the following form:

(26) $e_1 \, R \, e_2$

R, which stands for *Relation*, is to be interpreted either as *precedes*, *follows*, or *overlaps with*, depending on the particular temporal form/morpheme associated with the verb. The first term of the predicate e_1 is identified with the embedded event by means of theta-identification; the second one, e_2, is a variable whose reference is determined locally.

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[13] Note that I am claiming here that the *same* morpheme is located twice with respect to the superordinate event and the Speech event, as I will show below in this section. Crucially, I am not hypothesizing the presence of two morphemes, one of which is covert.

[14] Giorgi and Pianesi (2001a).

[15] On the notion of predication see the seminal work by Williams (1980). On secondary predication see among others Legendre (1997).

Giorgi and Pianesi (1997) proposed that the present tense is a default value and not an actual predicate represented in T, the only predicate being *precedence*. Both *follow* and *overlap* could be dispensed with. The proposal advocated here is in principle compatible with that view. For simplicity, in this chapter I consider the present tense as well as a predicate, *overlap*, represented in T and will not discuss the issue any further, given that it is not immediately relevant for the questions discussed in this book. The same applies to the *follow* relation, which could be reduced to the *precedence* one.

The original proposal that the embedded event must be located with respect to the superordinate one is due to Higginbotham (1995). According to his proposal, the main attitude predicate must be represented in the embedded clause. Giorgi and Pianesi (2001a) argued that this is the basis of the anchoring conditions. Namely, an event, complement of an attitude predicate, must be anchored to the superordinate one, as a general property of Universal Grammar.[16]

In this book, I will not consider this point any longer and will take it for granted. The focus of this chapter and Chapter 3 is mostly on identification of the second variable. The proposal is that this variable is identified twice: the first time in a lower position, and the second in a higher position in the C-layer.
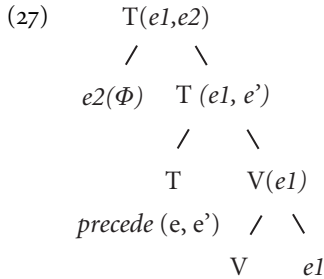
To make this view more precise, I propose here that, from a syntactic point of view, the anchoring to the superordinate event is implemented through the representation in the T-layer of the feature Φ of the event corresponding to the main attitude—i.e., the saying, thinking, etc. episode. Such a feature represents the temporal, and spatial, coordinates of the subject of the main clause—i.e., the bearer of the attitude. It can be thought of as an index that in the semantics is *expanded* to include all the variables necessary for the interpretation.

According to this perspective, the closest second argument, e_2, is the event defined by Φ in the T-layer. Therefore, the result is the establishing of a relation between the embedded event and the superordinate one.

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[16] For further discussion, see also Higginbotham (2002).

The relation can be *precede*, *follow*, or *overlap*. Let *e* be the subordinate event, and *e'* the event of the main clause. The precedence relation accounts for past—*e' precedes e*—and future—*e follows e'*—interpretation. The overlapping relation—*e ≈ e'*—is the one required by the present tense.

The following diagram gives a representation of the past tense relation:

(27)   T($e1,e2$)
            /   \
      $e2(\Phi)$ T ($e1$, e')
                /   \
            T   V($e1$)
      precede (e, e')   /   \
                    V $e1$

The same representation would hold with the predicates *follow* and *overlap*, giving rise to a future and present tense interpretation respectively.

This first step holds in both DAR and non-DAR languages. The machinery needed is minimal, the basic mechanism being exactly identical to theta-marking and theta-identification. So far, in fact, English/Italian and Romanian/Japanese do not differ. The differences between the two language groups concern the second step of the temporal interpretation, namely, the relationship between T and C.[17]

The bi-argumental temporal predicate in T, in fact, as suggested recently by many scholars, is then related to the C-layer. Giorgi and Pianesi (2001a), following Pesetsky and Torrego (2001), proposed that in the highest C-projection a feature τ requires movement/ internal merge of T to C and that in Italian such a movement takes place when the verb is in the indicative mood.[18]

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[17] For an application of the same model to long distance binding, see Giorgi (2006, 2007).

[18] On T-to-C, see also Pesetsky and Torrego (2004a, 2004b, 2006). In light of subsequent developments in the Minimalist approach to the theory of grammar, it might be proposed that (multiple) Agree is at work, where T and C must agree. I will discuss below apparent exceptions in English and the behaviour with respect to the anchoring mechanism of moods other than the indicative in Italian.

The only difference with respect to the previous step is that the second argument in this case is identified with the *speaker's* coordinate, which I will call here *U*, where *U* is reminiscent of *utterance*. Therefore, at this step the second event of the bi-argumental relation is the utterance event itself, *U*. The resulting configuration is as follows:

(28)　　C *(e1, e2)*
　　　　／　　　＼
　　e2 (U)　　C *(e1,e')*
　　　　　　　／　＼
　　　　　C　　　.....
　　　precede (e1,e')

This process takes place in DAR languages and is responsible for the interpretation of the embedded event, or state, as past, future, or simultaneous with the utterance event. The utterance event is defined on the basis of the speaker's temporal coordinate, exactly as past-ness or simultaneity with the superordinate event is defined on the basis of the subject's temporal coordinate.

According to the view just sketched, the embedded verbal form in DAR languages must be evaluated twice. The second argument of the tense predicate is in fact a variable identified locally with the super-ordinate event, defined by means of Φ, and again with the utterance event, defined by means of *U*. Technically, it is possible to look at the temporal morphology as bearing an uninterpretable unvalued feature, which is then valued in C.

The difference between DAR and non-DAR languages according to this perspective is that in DAR languages not only does the embedded T agree with C, but the main V agrees as well with them. In other words, the superordinate verb requires—and in some cases does not require—DAR to take place in the embedded clause.

This is the difference I will argue for in Chapter 6 with respect to Italian and Chinese, whereas for languages such as Romanian a more complex picture must be sketched.

In order to exemplify the proposal above, let me go through a simple derivation concerning assembly of the items relevant to

temporal interpretation of the embedded clause (details omitted). Consider a sentence in a DAR language such as the following Italian example:

(29)   Gianni ha detto che Maria ha telefonato
       Gianni said that Maria called

(30)   Gianni ha detto che Maria telefonerà
   Gianni said that Maria called

As I argued above, in example (29) the calling event must precede both the saying and the utterance event, and, as a mirror image, in example (30) it must follow both the saying event and the utterance one. At the first step, the Tense predicate—*e* precedes/follows *e'*, noted as *R*—is merged with V—i.e., the event *e1* of *calling*—and the first member of the temporal relation is theta-identified with *e1*:

(31)   T (e1, e')
   /   \
          T   V (e1)
      R (e1, e')

At the next step, the temporal coordinate of the *sayer*, i.e., the temporal location of the event of *saying by Gianni,* e2 (Φ)—recall that following Higginbotham (1995) and Giorgi and Pianesi (2001a), it is represented in the embedded clause—is merged in the tree. The resulting structure is the following:

(32)   T (e1, e2Φ)
          /   \
     e2 (Φ)   T (e1, e')
                   /   \
                 T   V (e1)
            R (e1, e')

At this point T is moved to C—internal merged—giving rise to the following structure:

(33)   C (e1, e')
          /   \
      C   T (e1, e2Φ)
    R(e1, e')   /   \
       e2 (Φ)   T (e1, e')
        /   \
       T   V(e1)
    ~~*R*(e1, e')~~
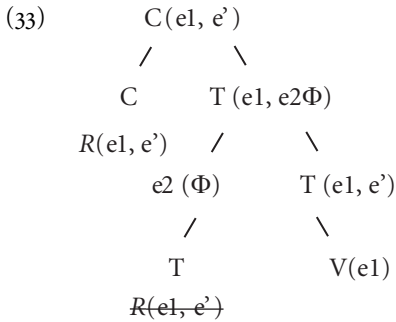
The temporal coordinate of the speaker, e2 (U), is now merged into the structure, and again theta-identification takes place between *e'* and *e2*:

(34)   C (e1, e2 U)
       /   \
   e2 (U)   C (e1, e')
             / \
         C   T (e1, e2Φ)
       R (e1, e')   .....
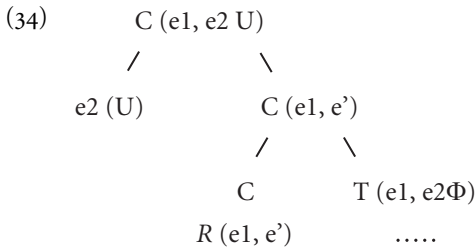
As a final result, both T and C must be interpreted, giving rise to a double evaluation of the past/future tense: once in T with respect to Φ—i.e., the features of the *sayer* Gianni—and once in C with respect to U—i.e., the features of the speaker. This derivation is just an example and does not take into account many relevant details. The chapters that follow should clarify at least some of them.

Let us go back now to the paradigm illustrated above in examples (21)–(23). These phenomena follow from the hypothesis proposed here. Let's hypothesize that the event combines with the temporal location present in its clause, giving rise in this case to the event of *being happy on 28 May*.

Consider first that under the alternative hypothesis, i.e., that the temporal morphology is interpreted only once, a sentence such as (23) should be perfectly grammatical even in DAR languages: the state should simply be taken to extend from the utterance time to 28 May. But this does not fit with the actual status of the sentence, which is bad.

Alternatively, let's hypothesize that the embedded tense is evaluated twice. In the ungrammatical example (23), *being happy on 28 May* is therefore evaluated in T, as overlapping with the subject's coordinates Φ. Since the saying event does indeed take place on 28 May, the first evaluation goes through. As a second step, the embedded eventuality must also be interpreted as overlapping with respect to the speaking event, defined on the basis of *U*. According to the given scenario, however, the utterance event does *not* take place on 28 May, being placed on the 30th. The second evaluation therefore gives rise to ungrammaticality in DAR languages.[19]

Notice also that sentence (22) is grammatical, given that the eventuality that is located on 28 May is not the *being happy*, but the *saying*.

Summarizing, the DAR effect is due to a double interpretation of the temporal morpheme: it is evaluated in T with respect to the subject's temporal coordinate, Φ, and in C with respect to the speaker's temporal coordinate, *U*. According to my hypothesis, the syntactic item responsible for the interpretation of an embedded verbal form with respect to the utterance time is located in the C-layer.

A piece of evidence in favour of this idea comes from the analysis of differences in the syntactic realization of the C. One would expect in fact that differences in the realization of the Complementizer correlate—at least in some cases—with a DAR/non-DAR interpretation of a complement clause. In the following section I will illustrate

[19] In non-DAR languages the equivalent of sentence (23) is grammatical. For completeness, consider also that the basic sentence might seem quite odd:

i.   John is happy on the 28th of May

I think however that this is so because of an informational failure. The 'normal' way to express the sentence would be:

ii.   John is happy today

The mentioning of the actual date becomes meaningful only if a *reason* is provided to this extent by the context, as for instance in the following case:

iii.   After a long period of unhappiness, on the 28th of May I am eventually happy again!

The day in question is indeed the day on which the utterance is located and the sentence is perfectly acceptable.

this point, comparing clauses featuring an indicative mood with those with a subjunctive verbal form.[20]

Two important questions that do not have an answer so far: Should the syntactic representation of the speaker's coordinates be considered universal? What makes languages different from each other?

In section 2.4 below I will return to questions connected with the technical implementation of the proposal.

2.3 The subjunctive

2.3.1 *Temporal dependencies with the subjunctive*

In some languages—for instance Italian, Romanian, Spanish, Catalan, German, Icelandic, and Modern Greek—besides an indicative mood there is a so-called *subjunctive* form. The subjunctive mood usually consists of a *present* and a *past*, with peculiar personal endings. In some languages, such as Romanian and Modern Greek, the subjunctive is distinguished from the indicative by means of a particle preceding a verbal form (almost) identical to the indicative. Moreover, in many languages the subjunctive exhibits a higher degree of syncretism in the expression of person morphology, a fact not yet completely understood. Bianchi (2003) considers the subjunctive as a fully inflected verbal form, exactly like the indicative. She argues that the indicative and the subjunctive pattern together, as opposed to the infinitive. On one side, this is obviously true in Italian, given that subjunctive and indicative clauses can have lexical subjects and infinitive clauses cannot. This point becomes particularly relevant when considering obviation phenomena. From the point of view of Sequence of Tense, however, the subjunctive patterns much more like the infinitive than like the indicative, given that both do not exhibit

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[20] See also Giorgi and Pianesi (2004a). A reviewer also points out that the crucial point in the derivation described above is that the tense is in a sentence complement of the main clause and not in an adjunct clause.

DAR phenomena. My proposal is that, though presumably related, the two phenomena—obviation and the absence of DAR—cannot be reduced to a single property and should to a certain extent be kept separate.[21]

The subjunctive is a dependent mood, in that it cannot be used in main clauses, and when used in non-dependent contexts it has a *modal* meaning—i.e., it cannot express assertions—and it is typically used in exclamative contexts, desideratives, optatives, and in certain forms of positive and negative imperatives. Consider for instance the following examples:

(35)   Gianni mangia un panino
        Gianni is eating(IND PRES) (lit: eats) a sandwich

(36)   *Gianni mangi un panino
         Gianni is eating(SUBJ PRES) (lit: eats) a sandwich

(37)   Gianni vuole che Mario parta
        Gianni wants that Mario leaves(SUBJ PRES)

(38)   Gianni credeva che Maria partisse
        Gianni believed that Maria left(SUBJ PAST)

A sentence such as (36) can be used only if modal, for instance as an imperative:[22]

(39)   Che Gianni mangi un panino!
        That Gianni eats(SUBJ PRES) a sandwich!

Interestingly, in sentence (39) there is a sentence-initial Complementizer. In the same vein, consider also the following example:

(40)   Che ti prenda un colpo!
        Lit: That to you-CL takes(SUBJ PRES) a stroke!
        'Might you have a stroke!'

The analysis of these contexts is not the focus of the present work. Let me simply remark that, putting aside 'modal' usages, a subjunctive

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[21] For a recent discussion of Italian subjunctive obviation and its possible relation with SoT data, see Costantini (2005, 2006). For a general introduction to obviation phenomena, see Farkas (1992b) and Kempchinsky (1985, 2009). For a general overview of the state-of-the-art, see also Quer (2009).

[22] On these issues see, among others, Zanuttini and Portner (2003), Portner (1997).

verbal form is not admitted in main clauses, but only in subordinate ones.[23]

In examples (37) and (38), the subjunctive appears in a complement clause. It can also appear in clauses in subject position—preverbally or postverbally—as in the following cases:

(41)   Che Gianni sia malato, è una disdetta
       That Gianni is(SUBJ PRES) sick is a misfortune

(42)   Che Gianni fosse il vincitore sorprese tutti
       That Gianni was(SUBJ PAST) the winner surprised everybody

(43)   È una disdetta che Gianni sia malato
       It is a misfortune that Gianni is(SUBJ PRES) sick

(44)   Sorprese tutti che Gianni fosse il vincitore
       It surprised everybody that Gianni was(SUBJ PAST) the winner

The rules governing the appearance of the subjunctive forms are the same as above, independently therefore from the syntactic role played by the clause. In what follows I will describe the peculiarities of the distribution of this mood in Italian—and in Romance in general.[24]

As can already be seen in the previous examples, an embedded present subjunctive appears when the main verbal form is a present tense, and an embedded past subjunctive appears when the main verbal form is a past tense. This kind of Sequence of Tense is reminiscent of the classical Latin *consecutio temporum et modorum* (sequence of tenses and moods).

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[23] I will not consider in this work the distribution of the subjunctive mood in relative clauses:

i.   Un uomo che fugga davanti al pericolo è un codardo
     A man who runs(SUBJ PRES) in front of danger is a coward

The distribution of the subjunctive in these clauses is determined by a variety of factors, for instance indefiniteness, that are not under investigation here. Therefore, I will put this issue aside.

[24] I will leave aside the analysis of the Romanian subjunctive, which seems to follow a set of rules only partially overlapping with the ones adopted by the other Romance languages. Given the complexity of the judgements in question, the issue must be addressed by a native speaker.

A past form cannot be dependent on a present tense and conversely a present form cannot be dependent on a past one:[25]

(45)   *Gianni spera che Maria partisse
       Gianni hopes that Maria left(SUBJ PAST)

(46)   *Gianni sperava che Maria parta
       Gianni hoped that Maria leaves(SUBJ PRES)

In example (45), the embedded verb is in the past subjunctive, whereas in (46) it appears in the present tense. In both cases, the tense of the embedded form does not match that of the main one, and the structure is not grammatical. There are however some (apparent) exceptions to this generalization, which I will consider in section 2.4.3 below.

Notice also that the past-ness of the embedded verbal form cannot automatically be translated into a past relation with respect to the utterance time. Consider for instance the following examples:

(47)   Gianni sperava che Maria partisse ieri/oggi/domani
       Gianni hoped that Maria left(SUBJ PAST) yesterday/today/tomorrow

The leaving event can be placed at any time with respect to the utterance time, as indicated by the indexical temporal expressions, which are all compatible with the embedded past subjunctive.[26]

Sentence (47) means that Gianni had a hope concerning a past, present, or future event. Notice that the temporal adverbs are indexical ones—i.e., they identify a certain time with respect to the *speaker*.

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[25] Even in Latin the rules of *consecutio* were not without exceptions, even if quite rigid, particularly in the written non-classical style. See for instance Molinelli (2000).

[26] Notice that in this case, since *partire* (leave) is an achievement predicate, it is always interpreted as following the main predicate, even in the absence of a future temporal specification. In the case of a stative, by contrast, the interpretation is a simultaneous one:

i.   Gianni sperava che Maria partisse
      Gianni hoped that Maria left(SUBJ PAST)

ii.   Gianni sperava che Maria fosse felice
      Gianni hoped that Maria was(SUBJ PAST) happy

In (i) the leaving is located in the future with respect to the subject coordinate. In (ii) it is located in its present. These differences in interpretation are due to aspectual properties, which I will not discuss here. For simplicity, I will take in these cases the simultaneous reading to be the *standard* interpretation. On aspectual issues concerning the anchoring conditions, see among others, Giorgi and Pianesi (2001a).

This shows that the temporal location of the speaker and the subjunctive temporal morphology on the verb are not dependent on each other, as is the case with the indicative. The same phenomenon is observed with an anaphoric temporal modifier:

(48)   Gianni credeva che Maria partisse il giorno prima/dopo
       Gianni thought that Maria left(PAST SUBJ) the day before/the next day

Again, the leaving event can be placed by means of the adverbs either in the past or in the future, even if the form is always a *past* subjunctive.

   With the indicative, on the contrary, the temporal adverb and the verbal form must be coherent: if one expresses past-ness, the other one has to express it as well, and analogously with respect to futurity. [27]

(49)   Gianni ha detto che Maria è partita ieri/*domani
       Gianni said that Maria left(IND) yesterday/*tomorrow

(50)   Gianni ha detto che Maria partirà domani/*ieri
       Gianni said that Maria will leave tomorrow/yesterday

The temporal relation between the embedded event and the event of the main clause is simultaneity, as can easily be seen with embedded stative predicates. Consider for instance the following examples:

(51)   Gianni crede che Maria sia felice
       Gianni believes that Maria is (SUBJ PRES) happy

(52)   Gianni credeva che Maria fosse felice
       Gianni believed that Maria was(SUBJ PAST) happy

   [27] In the following examples I use the present perfect form of the indicative, instead of the simple past one, both in main clauses and in subordinate ones—i.e., *ha detto* (lit: has said) instead of *disse* (said) and *ha telefonato* (lit: has called) instead of *telefonò* (called). In Italian, especially the central and northern varieties, the present perfect serves approximately the same function as the simple past in English. See also fn. 7 above. With stative verbs, such as *credere* (believe) and *desiderare* (wish)—i.e., verbs expressing an attitude of the subject towards a certain content—the past form usually chosen is the imperfect of the indicative: *credeva* (believed) and *desiderava* (wished). The present perfect (*ha creduto, ha desiderato*) and the simple past (*credette, desiderò*) convey the meaning that the psychological state, or attitude, of the subject doesn't hold any more. This effect is presumably to be connected with the aspectual and actional properties of the predicates. Concluding this brief remark, these questions are intriguing and complex ones, but are not crucial for the issue considered in this paper, so I will not further consider them. See Giorgi and Pianesi (1997) for a comparative discussion about Romance vs. Germanic languages.

In Italian, *believe* predicates have a subjunctive in the subordinate clause. In both examples, the state of happiness is taken to hold at the time of the believing.[28]

Anteriority can be expressed by means of the periphrastic perfective form, as in the following cases:

(53)   Gianni crede che Maria abbia telefonato
        Gianni believes that Maria has(PRES SUBJ) called

(54)   Gianni credeva che Maria avesse telefonato
        Gianni believed that Maria had(PAST SUBJ) called

In this case, the leaving event might be prior to the utterance time. The appropriate morphology—a present or a past ending—appears on the auxiliary, followed by the past participle. The past participle carries the value of *perfectivity*—or *resultant state*—as it does in isolation. In this case, therefore, anteriority is derivative on aspectual properties (perfectivity), and not directly obtained by means of a *temporal* morpheme.[29]

To conclude, the presence of the past subjunctive does not seem to be connected with a *past* interpretation, either with respect to the utterance time or with respect to the superordinate predicate. The same holds with respect to the present subjunctive. In both cases, the default temporal interpretation of the embedded eventuality—i.e., in the absence of a temporal locution providing a temporal location—is simultaneity with respect to the main clause, and there is no *a priori* ordering with respect to the utterance event.

This paradigm contrasts with the indicative one in Italian-like languages. In particular, in subjunctive clauses, the utterance event seems to play no role in this process and the presence of a *past* morpheme on the subjunctive verbal form seems to have no pastness entailment whatsoever.

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[28] For a cross-linguistic analysis of the distinction subjunctive/indicative in embedded clauses, see Giorgi and Pianesi (1997), Schlenker (2004), Roussou (2009), Kempchinsky (2009), Giorgi (2009).

[29] See Giorgi and Pianesi (1997) for an analysis of the perfect form in Italian, compared with the English one.

Therefore, it can be concluded that the present or past morphology appearing on the verbal form is a pure agreement morpheme and that—at least so far—the only feature which matters is the tense of the superordinate clause. In section 2.4.3 below, however, I will show that this is too simplistic a view and that things are more complex, both empirically and theoretically. For the time being, however, let me state the following generalization:

(55)   The temporal morpheme of a subjunctive verbal form appearing in a complement clause agrees with the tense of the superordinate one.

The issue to be addressed next concerns the syntactic representation of the temporal properties of the subjunctive embedded clauses. What is needed is a representation of the anchoring of the embedded verbal form to the superordinate one; there is no need of the representation of the speaker's temporal coordinate, given that they are not relevant in this case. In other words, the subjunctive is not a form inducing the DAR, as far as it is correct to represent the DAR as the evaluation of a verbal form with respect to two sets of temporal coordinates: the subject's and the speaker's. The speaker's coordinate is not taken into account in this case.[30]

Consistently with what I proposed above, one might suggest that the difference lies in the C-layer. In what follows, I am going to argue that this is exactly the relevant consideration.[31]

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[30] The subjunctive in non-DAR languages, for instance Romanian, does not exhibit the same pattern as in Italian. In particular in a past-under-past structure, the interpretation of the embedded event with respect to the matrix clause is not a simultaneous one, but only a past one. That is, the embedded event is interpreted as a *real* past with respect to the superordinate one. Again, I will not address this issue in this work.

[31] A reviewer asks about the possibility of licensing indexical temporal expressions, such as *oggi* (today) in subjunctive complement clauses, given that the speaker's temporal location is supposed not to be syntactically represented. The answer is that a temporal morpheme in a language such as Italian is a predicate, whose arguments must be theta-identified in the syntax. A temporal expression such as *oggi* (today), on the contrary, can be taken to be immediately referential, hence no syntactic processing is necessary. The situation might be different in languages such as Chinese, where there is no morphology expressing temporal relations. On temporal locutions see also Chapter 5 below. For an analysis of indexicality in Chinese, see Chapter 4 section 6.

2.3.2 *The subjunctive and the DAR*

Let's now consider in more detail the properties of the embedded subjunctive. As pointed out above, the embedded verb must appear in the past or present form, depending upon the form of the superordinate verb: present under present and past under past. The temporal interpretation assigned to the event of the embedded clause is simultaneity with the main predicate—for instance, with respect to the interpretation of sentences (51) and (52) Maria's happiness holds at the time Gianni believed it.[32]

These considerations point to the conclusion that subjunctive morphology does not instantiate a relational tense—i.e., a temporal relation between two events—but only a sort of *temporal agreement* with the superordinate verbal form.

As a consequence, with respect to the DAR, there is no *a priori* possibility for it to arise in embedded subjunctive complements, given that the embedded event does not undergo an independent temporal evaluation at all.

Prima facie, therefore, one might conclude that the DAR is a property of the indicative and not of the subjunctive. I will argue however that this is not a precise characterization of what happens, given that in some cases we can detect DAR properties with subjunctive clauses as well. I will show that the morphosyntax of the subjunctive, together with the properties of the C-layer, gives rise to the complex phenomenology of the DAR.

As a starting point, recall that, trivially, the existence of the DAR has nothing to do with the truth of the embedded contexts. In particular, both in the case in which the embedded clause appears with an indicative and in the case in which it appears with a subjunctive, the speaker is *not* endorsing the truth of the embedded clause. Both sentences can be continued with a disclaimer, as for instance in the following examples:

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[32] In this case as well, the simultaneous interpretation can be said to be the *default* one, given that it is the one obtained in absence of any further specification. If temporal adverbs intervene, the interpretation will vary according to the temporal specification carried by the adverbial modifier. I will discuss this point below.

(56) Gianni ha detto che Maria ha telefonato, ma non è vero
      Gianni said that Maria called(IND), but it is not true

(57) Gianni crede che Maria abbia telefonato, ma non è vero
      Gianni believes that Maria has (SUBJ) called, but it is not true

Furthermore, some factive verbs select the subjunctive mood, as in the following examples:

(58) Gianni rimpiange che Maria abbia vinto
      Gianni regrets that Maria has(SUBJ) won

In this case, contrary to (56) and (57), the truth of the embedded clauses is actually presupposed. The conclusion is therefore that the truth of a certain proposition is independent from the morphology on its predicate and is not connected with the presence of a certain mood—i.e., indicative vs. subjunctive.[33]

To conclude, let me capitalize on the following observations: a) the truth of an embedded clause is not at stake here and does not distinguish between the indicative and the subjunctive; b) the location in time of the speaker is relevant for the indicative verbal morphology, but not for the subjunctive one, as shown by the compatibility with time modifiers illustrated above.

Notice also that, coherently with the observations discussed so far, even in the case of factive complements, the subjunctive exhibits no compatibility requirement with respect to temporal expressions:

(59) A Gianni dispiaceva che Maria partisse ieri/oggi/domani
      Gianni was sorry that Maria left(PAST SUBJ) yesterday/today/tomorrow

The truth of the embedded clause is presupposed, but the location in time of the event with respect to the speaker—as specified by the indexical adverbs—has no relevance.

Let me now illustrate a last point. The so-called *past* subjunctive is also triggered by present tense verbs, which however appear with a non-indicative morphology, such as the conditional one. Consider the following pattern:

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[33] In this sense, the notion of *realis* vs. *irrealis*, often adopted to describe the properties of the indicative vs. the subjunctive mood, seems to be incoherent, in that it is reminiscent of the true/false dichotomy, which however seems to be inappropriate in these cases. See also Quer (2009) and papers published there.

(60)   Gianni vuole che Maria parta/*partisse
         Gianni wants(PRES) that Maria leaves(PRES SUBJ)/*left (PAST SUBJ)

(61)   Gianni vorrebbe che Maria partisse/*parta
         Gianni would like(PRES COND) that Maria left(PAST SUBJ)/*leaves (PRES SUBJ)

The main verbal form *vorrebbe* in example (61) is a present one. *Vorrebbe* (would want, lit: *want-pres.cond.*) in fact is simultaneous with the utterance event and expresses a present wish by the speaker, even if it appears in a modal form—i.e., in the *conditional mood*, thanks to the morphological ending *-ebbe*. Simplifying somewhat, this means that the wish is *removed* with respect to the real world. The object of the wish is understood, as usually happens with these verbs, as concerning the *future* of the speaker. The embedded subjunctive must, however, be a past subjunctive and cannot be a present one. This provides additional evidence in favour of the idea that the past morphology on the subjunctive does not mark any past-ness of the embedded event.

Consider now the following paradigm, which in some sense contrasts with the previous considerations:

(62)   Il testimone crede che *ieri alle 5* l'imputato fosse/*sia a casa
         The witness believes that yesterday at five the defendant was(PAST SUBJ)/*is(PRES SUBJ) at home

In this case the embedded verbal form must be a past subjunctive, and cannot be a present, even if the superordinate verb is a present verbal form.

Notice however that an explicit, or implicit, past time reference must be provided—i.e., in (62) the temporal locution *yesterday at five* cannot be omitted, or, if omitted, something of the same kind must be understood. If omitted, the only available form is the present subjective *sia* (is), whereas the past one, *fosse* (was), is ungrammatical. I discuss these cases in the following section.[34]

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[34]   Consider the following sentences:

i.   Gianni credeva che Maria abitasse/*abiti a Roma
       Gianni believed that Maria lived(PAST SUBJ)/* lives(PRES SUBJ) in Rome

ii.   Gianni credeva che Maria fosse/*sia incinta
       Gianni believed that Maria was(PAST SUBJ)/* is(PRES SUBJ) pregnant

To conclude this section, on one hand, it can be claimed that Sequence of Tense for the indicative verbal forms follows rules that are totally different with respect to those holding for subjunctive. On the other hand, the evidence discussed in (62) seems to show that the subjunctive can to a certain extent have an autonomous temporal status. I will consider this kind of examples again in section 2.4.3.

For the time being, note that, in spite of the fact that in most cases the subjunctive does not have an *independent* temporal interpretation of its own, it is not true that it is always immune from DAR effects. Consider the following cases:[35]

(63) Gianni ha ipotizzato che Maria fosse incinta
      Gianni hypothesized that Maria was(PAST SUBJ) pregnant

(64) Gianni ha ipotizzato che Maria sia incinta
      Gianni hypothesized that Maria is(PRES SUBJ) pregnant

The main verbal form is past in both cases, but in the complement clause the past and the present subjunctive are both available. The interpretation of the embedded clause in (64) is a DAR one. The following example is accordingly odd (the symbol '#' signals this):[36]

The embedded present subjunctive is ungrammatical. However, as far as its interpretation goes, it exhibits DAR effects. This might mean that, in order to interpret the embedded verbal form, the *wrong* C structure must be projected in the embedded clause, yielding ungrammaticality. On similar cases, which on the contrary turn out to be grammatical, see section? below.

  [35] See also Giorgi (2009).
  [36] Consider also the following sentence:

i.   *Gianni credeva che Maria sia incinta
     Gianni believed that Maria is(PRES SUBJ) pregnant

Even if ungrammatical, this sentence is still interpreted, and it turns out to have a DAR interpretation. This fact shows that the DAR is a property of a general syntactic configuration, given that in this case it seems independent both from the nature of the superordinate predicate and from the nature of the embedded verb—in this case a subjunctive, typically *not* exhibiting the DAR. It can be proposed in fact that ungrammaticality stems from the necessity of providing a subjunctive clause with the *wrong* Complementizer, i.e., the one containing the representation of the speaker's coordinate. See also fn. 34 above.

(65)   #Due anni fa, Gianni ha ipotizzato che Maria sia incinta
        Two years ago, Gianni hypothesized that Maria is(PRES SUBJ) pregnant

This piece of evidence therefore closely parallels the phenomena discussed in section 2.2 above. Concluding the discussion of this section: on one hand, subjunctive verbal forms seem to be *inert* from the temporal point of view. On a closer look, however, the subjunctive morphology does not seem totally devoid of temporal content—even if it *looks* like that, in most cases—and the subjunctive sometimes undergoes the same SOT rules which govern the indicative, as the DAR effects just observed.

In what follows, I will try to answer the following question: What is the relation between the subjunctive and DAR? And, more generally, what triggers subjunctive morphology? The answers to these questions will not only prove relevant to a better characterization of the subjunctive in itself, but will also help clarify what exactly determines the indicative/subjunctive distinction.

2.4 The left periphery and the speaker's projection

In this section I propose a syntactic representation of embedded clauses that can contribute to explaining the temporal phenomena observed above. The starting point is constituted by the analysis of the so-called Complementizer Deletion—henceforth, CD—phenomenon. I will show, following Giorgi and Pianesi (1997, 2004b), that there is a correlation between the (im)possibility of CD and the temporal interpretation of the embedded clause, in particular DAR phenomena. These observations strongly suggests that the Complementizer—or better to say, the *C-layer*—is crucially involved in the temporal interpretation of embedded clauses. I will argue in fact that the difference between indicative and subjunctive with respect to SoT phenomena can be explained by hypothesizing a different structure of their C-layer.

More precisely, indicative and subjunctive clauses are introduced by different Complementizers, having different properties. At the

interface, the indicative Complementizer is 'read' as an instruction to evaluate the embedded content with respect to the speaker's temporal coordinate. In the case of the subjunctive, the Complementizer does not provide the same information. In standard Italian, the two Complementizers are lexicalized by means of the same word, but projecting two different projections. In several Italian dialects, however, as in many other languages, the two Complementizers correspond to two different words as well.[37]

2.4.1 *Complementizer Deletion: a description*

The property I analyse in this section is the possibility of omitting the Complementizer in subjunctive clauses. Among Romance languages, this property seems to be limited to Italian, for reasons I will not investigate here. I will argue that this characteristic might shed light on the nature and the function of the Complementizer, by being systematically related to the presence of the DAR.

Italian subjunctive admits CD—as opposed to the indicative mood, which never allows it. Consider for instance the following sentences:[38]

(66)   Mario ha detto *(che) ha telefonato Gianni
       Mario said that has(IND) called Gianni
       'Mario said that Gianni called'

(67)   Mario credeva (che) avesse telefonato Gianni
       Mario believed (that) had(SUBJ) called Gianni
       'Mario believed that Gianni called'

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[37] On this point, see also section 2.3.1.

[38] Descriptively, among the major Romance languages, only Italian has CD and only Romanian is a non-DAR language. I will consider the DAR/non-DAR divide in more detail in Chapters 3 and 4. Consider also that in some varieties of the Florentine dialect, the omission of the Complementizer has a wider distribution than in 'standard' Italian, being available also with verbs of saying. It is not clear, however, to what extent the omission of the Complementizer in Florentine is related to discourse factors—as for instance question-answering strategies, epistemic expressions, corrections, etc.—and to what extent it can be considered a grammatical property analogous to the one discussed here. Further dialectological investigation is required.

In sentence (66) the embedded verbal form is an indicative, whereas in sentence (67) it is a subjunctive. In example (67) the subjunctive permits CD, whereas this is impossible in (66).[39]

English as well permits the Complementizer to be omitted in some contexts. Consider for instance the following examples in English:

(68)   John said (that) Mary left

(69)   John believes (that) Mary was happy

(70)   John hopes (that) Mary will win

In all these cases CD is allowed. One of the main differences between English and Italian lies in the fact that in Italian in the contexts created by verbs of saying the embedded verbal form is an indicative and CD is impossible. In English on the contrary there is no difference between the clauses complement of *say* and those under *believe* or *hope*, to the effect that the Complementizer can always be omitted.[40] As far as English is concerned, I endorse the traditional view according to which the empty C position is a *null* Complementizer and will not consider the issue any further.

In German the absence of the Complementizer occurs, mostly, in sentences showing embedded V2. Embedded V2 is available both with

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[39] Notice that though permitted, CD is never *obligatory*, in that the non-CD option is always available. Another important property is constituted by the disjoint reference effect, i.e., *obviativity*, with the subjunctive, but not with the indicative, as exemplified by the following examples:

i.   Gianni$_j$ crede che pro$_{j/*i}$ parta
      Gianni believes that he leaves

ii.   Gianni$_i$ ha detto che pro$_{i/j}$ partirà
      Gianni said that he will leave

A null embedded subject of a subjunctive complement clause cannot be coreferent with the main subject, whereas there is no ban if the embedded clause is an indicative one. For analysis of these facts, as well as of some relevant exceptions to this pattern, see Costantini (2005).

[40] See also Scorretti (1994), Giorgi and Pianesi (1997, 2004b), and Poletto (1995, 2000, 2001). In German, the absence of the Complementizer might be claimed to be part of V2 phenomena. Poletto proposes that Italian CD is an instance of embedded V2, on a par with in German. On this point, Giorgi and Pianesi (1997, 2004b) disagree.

sagen (say) and *glauben* (believe), resembling with respect to this property the English pattern, and diverging from the Italian one:

(71) Hans sagte, Marie hat das Buch gekauft
Hans said that Marie has(IND) bought the book

(72) Hans glaubte, Marie habe das Buch gekauft
Hans believed that Marie has(SUBJ) bought the book

I will not consider the issue of CD in German and English, since it is not immediately relevant to the topic analysed in this book. The only point I want to stress here is the consideration that Italian CD distinguishes among verb classes in a way in which neither English nor German do.[41]

Note finally that in German the distribution of the indicative and subjunctive follows different rules, with respect to the Italian pattern, being available both with *sagen* (say) and *glauben* (believe).[42]

Giorgi and Pianesi (2004b) argued in favour of an analysis of CD that I briefly summarize here, abstracting away from the technical details. Their proposal was elaborated in the minimalist framework sketched in Chomsky (1995). Their starting point is the observation that the subjunctive Complementizer is actually part of the subjunctive morphology, even if in Italian it happens to be homophonous with the indicative one. This consideration is supported by ample evidence coming both from languages other than Italian, for instance Romanian and Greek, and from Italian dialects such as Salentinian. In these languages, the only marker signalling the presence of the

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[41] There are some contexts in which CD is impossible both in Italian and English, such as complements of factive verbs and clauses appearing in the left or right periphery. See for instance the following examples:

i. Gianni rimpiange *(che) Maria sia partita
Gianni regrets *(that) Mary left(SUBJ)

ii. *(che) Maria sia partita preoccupa Gianni
(that) Mary left(SUBJ) worries John

In these examples CD is impossible, even if the verb is a subjunctive. This means that *something* else is working in these cases to the effect of inhibiting CD. Giorgi and Pianesi (2004b) propose that these facts have to do with the peculiar syntactic structure instantiated by factive predicates.

[42] See Chapter 5 for a brief discussion of some aspects of the German subjunctive.

subjunctive is a special Complementizer, peculiar to the subjunctive form, whereas the verbal ending is usually not distinguishable—or minimally distinguishable—from the indicative one.[43]

For this reason, the Italian subjunctive is a form with a sort of discontinuous morphology, constituted by the Complementizer and the verbal ending. Simplifying, the intuitive idea that Giorgi and Pianesi aim at capturing is that the subjunctive Complementizer, being rather uninformative in Italian, can be dispensed with, in which case its position is occupied by the verbal form itself.[44]

In other words, in Italian there is some property that shows up in CD cases, distinguishing the indicative from the subjunctive. This property is not there in English, where the complement clauses are not differentiated.

I want to argue here that the study of this property of Italian complement clauses might shed light on the general characteristics of the subjunctive mood in DAR languages. In particular, I claim that in Italian the speaker's coordinates are represented in the C-layer of the embedded clause in presence of the DAR, whereas they are not there in non-DAR sentences, which explains the different behaviour in CD of indicative and subjunctive clauses.

In other words, the speaker's temporal coordinate always intervenes in DAR contexts, typically selecting the indicative. In general, the subjunctive gives rise to a representation of the embedded clause in which the speaker's coordinate is not represented.

In this section I am going to illustrate the data concerning the correlation in Italian between the absence of the Complementizer—i.e., Complementizer Deletion (CD)—and the temporal interpretation

[43] On Romanian, see Dobrovie Sorin (1994), d'Hulst, Coene, Avram, and Tasmowsky (2003), Farkas (1985, 1992a). On Modern Greek, see Roussou (2009), Tsoulas (1996), and Iatridou (2002). On Salentinian, see Calabrese (1984, 1993). This is obviously not intended as an exhaustive bibliography, but as possible suggestions for readers.

[44] Giorgi and Pianesi (1996, 1997, ch. 3) elaborate the theory of *syncretic categories* to explain the distribution and the properties of Italian CD. I am not going to make use of this part of their proposal and therefore I do not summarize it here. Let me simply point out that I still endorse that view and that there is no contradiction with what I am suggesting here.

of the embedded clause. The contexts I will consider are mostly the ones where the sentence is a clausal complement of the verb. In Quer's (1998) and Stowell's (1993, 1996) terminology this is the so-called *intensional* subjunctive.[45]

Interestingly, for some Italian speakers—but not for me—a verb such as *credere* (believe) can either select for a subjunctive and, usually substandardly, for an *imperfect* indicative verbal form. However, only the subjunctive admits CD. Consider for instance the following example:[46]

(73)   (*)Gianni credeva *(che) aveva telefonato Maria
        Gianni believed that had(IND IMP) called Maria
        'Gianni believes that Maria called'

Modulo the marginality of the indicative, in this case CD is impossible, on a par with the verbs of *saying* such as *dire* (say), illustrated in example (66). I will consider these cases again in Chapter 5.

From this piece of evidence it follows that CD is not a property of the main verb—or at least *not only* a property of the main verb—but has to do with the indicative/subjunctive divide.

2.4.2 *The representation of the speaker's coordinate*

In this section I will briefly sketch a technical account of the phenomena just observed. The machinery needed for this purpose is minimal: I argue that in Italian the left-most position of the C-layer contains the speaker's temporal (and spatial) coordinates, which force the DAR interpretation in indicative clauses and in some subjunctive ones.[47]

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[45] The term *Complementizer Deletion* with respect to the Italian cases was first used in generative grammar by Scorretti (1994). Here I will adopt the same term, without implying however the existence in Italian of any *deletion* operation.

[46] This phenomenon might appear especially in Central and Southern varieties. Crucially the non-imperfect of the indicative is ungrammatical for all speakers:

i.   *Gianni credeva che Maria ha telefonato
      Gianni believed that Maria has(IND) called

This issue will be further discussed in Chapter 4.

[47] For a brief discussion of the relation between the position in the C-layer I hypothesize here and Rizzi's (1997, 2001, 2002) *Force*, see Chapter 3.

2.4.2.1 *In indicative clauses*   As illustrated above, the indicative Complementizer can never be deleted and always enforces the DAR. Therefore, it can be concluded that it must always be realized. This being the case, it is self-evident that unlike the subjunctive case, it is not part of the *morphology* of the verb, but a distinct lexical item with an interpretive function. Furthermore, the indicative can be characterized as a relational tense, instantiating an overlapping or preceding relation between two events. As an exemplification, analogous to the one given above in section 2.2.4 but with further details, consider a past under a past indicative clause:[48]

(74)   Gianni ha detto che Maria ha telefonato
        Gianni said that Maria has(IND) called

(75)   [.....[$_V$ detto [$_{C-\Sigma}$ ... che [$_{T-\sigma}$ ... T ... [... ha telefonato$_{\{\Sigma; \sigma\}}$...]]]]]]

The embedded past verbal form, *called*, is a relational tense: *e R e'*, where R is *precedence*. The event *e* is constituted by the calling event itself. It bears a pair of features: Σ and σ. In Italian, the verb is (I-) merged with T and the feature $\boldsymbol{\Phi}$ are (E-)merged with T at the next step. The feature σ must agree with the feature $\boldsymbol{\Phi}$ of the bearer-of-attitude's—i.e., with the main subject's temporal coordinate. As I argued for above, in fact, the T-layer of indicative clauses contains the temporal (and spatial) coordinates of the attitude bearer in its left-most position. At this point, the embedded event is interpreted as past with respect to the temporal location of *Gianni*.[49]

Going on with the projection, the complementizer is (E-)merged and T-to-C movement takes place. In the framework developed by Chomsky and scholars in (2001) and (2005), we can say that T is

[48]   I put aside the questions arising with the indicative imperfect, as in the following sentence:

i.   Gianni ha detto che Maria dormiva
      Gianni said that Maria slept(IMPF IND)

This question has been considered in Giorgi and Pianesi (2004b). I will not take it into account here, but see Chapter 4 below.

[49]   On the reason why the notion *bearer-of-attitude* is more appropriate than the notion of superordinate *subject*, see Giorgi and Pianesi (2001a) and Giorgi (2006, 2007). See also Costantini (2005, 2006).

copied in C, but pronounced in the lower position. Analogously to what I illustrated above for T, the feature *U* is (E-)merged to C. Finally, the features Σ on T, and U in C agree. The feature Σ can be considered as a pointer to the context, interpreted at the interface as the speaker's temporal coordinate—i.e., the utterance time *now*. Its presence determines in this case that the embedded event is interpreted as past with respect to the temporal location of the speaker as well, i.e., past with respect to the utterance time.

Let's now approach the core hypothesis of this chapter. I have already illustrated two contexts in which the DAR arises with the subjunctive, i.e., with verbs of cognition working as verbs of communication, such as *ipotizzare* (hypothesize). In this case the Complementizer cannot be deleted. Moreover, the verb appears in a verbal form not predicted by the Latin-like *consecutio*, which would allow only a temporal agreeing form to be realized. In these sentences in fact a present subjunctive appears under a past verbal form, which should in principle be disallowed.

2.4.2.2 *In subjunctive clauses*   Even if *most* DAR contexts are realized by means of an indicative verbal form, *some* subjunctive embedded clauses do indeed exhibit the DAR.

The syntax of subjunctive clauses with DAR effects will be shown to parallel the syntax of embedded indicative clauses. More precisely, DAR sentences are introduced by a Complementizer projection, C, which is not realized when the complement clause does not exhibit DAR effects.

Let's consider the distribution of CD with the *ipotizzare* (hypothesize) cases. I observed in section 2.3.2 that though selecting the subjunctive, *ipotizzare* (hypothesize) exhibits the DAR. Consider the following examples:[50]

(76)   Gianni ha ipotizzato (che) fosse incinta
        Gianni hypothesized (that) (she) was(PAST SUBJ) pregnant

(77)   Gianni ha ipotizzato *(che) sia incinta
        Gianni hypothesized (that) she is(PRES SUBJ) pregnant

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[50] For a detailed discussion of this topic, see Giorgi and Pianesi (1997, 2004b).

In sentence (76), where the embedded verbal form appears with the past subjunctive morphology—i.e., where the sequence of tenses is the *normal* one—CD is optional, as usual. In the other case, when the embedded verbal form is a present subjunctive—i.e., the sequence of tenses is anomalous with respect to the normal subjunctive distribution—CD is impossible. In sentence (77) the DAR in enforced, so that the sentence means that the pregnancy of Maria—as hypothesized by Gianni—holds both at the time of the hypothesis and at the utterance time. It clearly cannot be due to the presence of a present tense vs. a past *per se*, given that the following sentence is perfectly possible with CD:

(78)   Gianni ipotizza (che) sia incinta
        Gianni hypothesizes (that) (she) is (PRES SUBJ) pregnant

Notice also that there is a slight but systematic interpretive difference between sentence (76) and (78) on the one hand and (77) on the other. The speaker might decide to use the verb *hypothesize* to describe two different things. He might be talking about Gianni's *mental* processes—in which case, the sentence concerns a particular thought that appeared in Gianni's mind in a hypothetical form—or about Gianni's *behaviour*. In this case, the speaker is reporting a *communication* of some sort made by Gianni in a hypothetical way.[51]

In sentence (77) only the latter possibility is available, whereas in the other cases it is left unspecified. As remarked above, the verbs of communication in Italian are exactly those verbs that select the indicative. This does not seem to be a universal property, given that in many languages—French and Spanish, among others—verbs of *believing* select the indicative as well. However, this distinction is relevant in Italian.[52]

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[51] The verb *guess* in English seems to be sensitive to the same distinction. I thank J. Higginbotham for this observation. I will consider these cases in more detail in Chapter 4.

[52] A semantic parameter might perhaps be hypothesized to account for this point: some languages might be more sensitive to the speech act/mental state distinction—e.g., Italian. Others might be more sensitive to the peculiar modal properties of the contexts, as hypothesized in Giorgi and Pianesi (1997).

Now briefly consider the distribution of indicative/subjunctive with this class of verbs. I have already shown that CD is impossible with the indicative, and therefore these sentences cannot undergo CD:

(79)   Gianni ha detto *(che) ha telefonato Maria
        Gianni said that has(IND) called Maria
        'Gianni said that Maria called'

When these verbs convey a *jussive* meaning—i.e., it represents an order or request—they select subjunctive. See also the discussion in Giorgi (2009):

(80)   Gianni ha detto *(che) partissero al più presto
        Gianni said that they leave(PAST SUBJ) as soon as possible
        'Gianni ordered that they leave as soon as possible'

(81)   Gianni ha detto *(che) partano al più presto
        Gianni said that they leave (PRES SUBJ) as soon as possible
        'Gianni ordered that they leave as soon as possible'

When conveying this meaning, *dire* (say) behaves like the verb *ordinare* (order):

(82)   Quel miliardario ha ordinato *(che) si comprasse quella villa
        That billionaire ordered that *si*-impersonal buy(PAST SUBJ) that villa
        'That billionaire ordered that they buy that villa'

(83)   Quel miliardario ha ordinato *(che) si compri quella villa
        That billionaire ordered that *si*-impersonal buy(PRES SUBJ) that villa
        'That billionaire ordered that they buy that villa'

In the embedded clauses in these cases, the verb can be realized either as a past subjunctive or as a present one and CD is always ungrammatical. The two verbal forms, however, correspond to different temporal interpretations.[53]

Let me try to explain the peculiar temporal interpretation of these sentences. In the examples given above the order concerns an event which, as naturally implied by this kind of meaning, is supposed to take place in the future with respect to its ordering. However, in sentences (80) and (82)—where the past subjunctive appears—the

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[53] Note that both verbs can also select the infinitive.

buying of the house must be future only with respect to the issuing of the order itself. Therefore, in this sentence the buying of the house might already have taken place at utterance time and the speaker might simply be reporting the issuing of the order, without any implication concerning the time of the buying.

In the other examples—sentences (81) and (83)—where a present subjunctive is realized, the buying of the house must follow the ordering but *also* the utterance time—i.e., it must be in the future with respect to the speech event itself.

The difference between the two cases can be considered as parallel to the one just described with respect to *ipotizzare* (hypothesize). The differences between (80)–(82) and (81)–(83) can be accounted for as a DAR effect. The nature of the predicate requires that the embedded event be interpreted as the content of the order, and therefore derivatively located in the *future* with respect to it. In other words, it is possible to conceive of the *content* of the order as simultaneous with respect to the *issuing* of the order. The *carrying out* of the order, due to the semantic and pragmatic properties of ordering, must lie in the future with respect to it.

According to this view, a double evaluation applied to the content of the order predicts exactly the judgements illustrated above. In these cases, the content of the order is simultaneous both with respect to the event of issuing the order, and with respect to the utterance time; the carrying out of the order lies in the future with respect to both.

The conclusions that can be reached on the basis of the previous analysis seem to be as follows: a) a present subjunctive under a past superordinate verbal form is admitted as far as the higher verb can be interpreted as a predicate of communication; b) in this case, the DAR is enforced; c) the Complementizer cannot be omitted. Therefore, jussive verbs constitute another case in which the subjunctive shows the existence of DAR effects.[54]

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[54] The opposite generalization however does not hold. That is, there are some contexts in which the Complementizer cannot be omitted and there is no DAR, for instance in sentences with left, or right, dislocation:

i.   *(che) Gianni fosse partito, Maria lo credeva
     That Gianni had left, Maria it-believed

At this point the question to be answered is the following: What is the relation between the Complementizer and the DAR?

Let's propose that the Complementizer introducing subjunctive clauses does not occupy the same syntactic position as the one introducing the indicative clauses.

The starting point is therefore that, even if in standard Italian the Complementizers are both realized by means of the word *che*, the indicative one and the subjunctive one fulfil different roles and occupy different positions in the syntactic tree—i.e., *che* (that) can head two different projections. Giorgi and Pianesi (1997, 2004a) addressed this question, and I will briefly summarize the issue here.

They proposed that the subjunctive verbal form is not a relational tense, in the sense indicative tenses are. As I showed above, the past or present forms of the subjunctive do not instantiate a simultaneous or a precedence relation between two events. The morphological appearance of the inflection is due to an *agreement* process between the superordinate and the embedded verbs.

As I briefly summarized in the previous section, the bulk of the hypothesis concerning the Complementizer in this case is that it is *part of* the subjunctive inflection. In other words, the Italian subjunctive exhibits a sort of *discontinuous morphology*, including both the verbal ending *and* the Complementizer. The two can either be realized together—i.e., *syncretically,* adopting Giorgi and Pianesi's terminology—or *scattered*, in which case the word *che* appears in the embedded clause.

Let's consider first the *scattered* realization. Giorgi and Pianesi claimed that the subjunctive verb carries both mood and tense-agreement features. In non-CD clauses, the features force movement of the verb at LF to the Complementizer-layer. The Complementizer in this case, as argued by Giorgi and Pianesi, lexicalizes the Mood features. Abstracting away from the distribution of embedded topic

Maria lo credeva, *(che) Gianni fosse partito
Maria it-believed, that Gianni had left

This topic is discussed in Giorgi and Pianesi (1997, 2004a), and I will not consider it here.

and focus, the structure of the embedded clause can be represented
as follows:

(84)   Gianni credeva che Maria dormisse
        Gianni believed that Maria slept(PAST SUBJ)

(85)   [.....[$_V$ credeva [$_{MOOD}$che$_{\{+mood\}}$ [$_T$ ... dormisse$_{\{+mood;\ +past\}}$...]]]]

The subjunctive verbal form *dormisse* bears two features: [+past]
and [+mood]. The feature [+past] must not be confused with the
bi-argumental temporal predicate discussed above. This feature
only identifies a peculiar morphological ending—in this case, *-isse*—
which must agree with the superordinate verbal form.

   With respect to the presence of the feature [+mood], in this case
the modal and temporal features of the subjunctive verb are realized
on two independent projections, one headed by the verb *dormisse*
and the other headed by the Complementizer *che*. Movement of the
verb to Mood, triggered by the mood feature on the verb, locates the
verb in the correct configuration for tense agreement with the main
verb. The interpretive result is that Gianni has a belief, located in the
past—given the past morphology on *credere*—concerning a call made
by Maria, which *morphologically* agrees with it. Given that in this case
the temporal location of the calling is not specified, the interpreta-
tion will be *simultaneity*. Recall also that, as illustrated above, temporal
modifiers, either anaphoric or indexical, can variously determine the
relation between the events. They can locate the embedded event in
the past or in the future with respect to the main one.

   The simultaneous interpretation is obtained following the proposal
discussed in Giorgi and Pianesi (1997). Simplifying somewhat, Giorgi
and Pianesi (2001a) propose that events can either be seen as bounded—
i.e., closed—sequences of sub-events, or as unbounded ones—i.e.,
open sequences of sub-events. In Italian, the *marked* value is *bounded*,
in the sense that the presence of a closed sequence of sub-events must
be overtly signalled in the morphology of the verbal form. With respect
to this property, a subjunctive form is *unbounded*—i.e., there is nothing
in its morphology marking the presence of a closed sequence.[55]

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[55] See also Franconi, Giorgi, and Pianesi (1994).

The crucial hypothesis discussed at length in Giorgi and Pianesi (2001a)—under the name of *punctuality constraint*—is that, to obtain a simultaneous interpretation of a subordinate event with a superordinate one, the subordinate one must be unbounded. Consequently, if there is no relational specification on the embedded form at all and the event is presented as an unbounded sequence, then a simultaneous interpretation obtains. This is the case with the embedded past subjunctive in example (84) above.

Let's consider now the other option—i.e., the *syncretic* one. Giorgi and Pianesi crucially suggested, in order to account for the word order properties of the embedded clause, that when the Complementizer is not realized—i.e., in CD clauses—the temporal and modal features are syncretically realized on the same verbal head. The structure obtained in this way is therefore the following one:[56]

(86)   Gianni credeva dormisse
        Gianni believed she slept(PAST SUBJ)

(87)   [.....[$_V$ credeva [$_{MOOD/T}$ dormisse$_{\{+mood;\ +past\}}$...]]]

In this case, there is no Complementizer in the head of the Mood projection. The verb itself occupies the MOOD/T position and verbal agreement with the superordinate verb *credeva* (believed) works as in the case illustrated above.

Therefore, in both cases, the morphology of the subjunctive form—past or present—is determined by a relation holding between the main verb and the embedded one.

The question arising in this connection is how it is possible for the present subjunctive morphology to be licensed in these configurations, where the main form is a past one. Consider again the example given above:

(88)   Gianni ha ipotizzato che Maria sia incinta
        Gianni hypothesized that Maria is(PRES SUBJ) pregnant

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[56] The data accounted for by this hypothesis concern the impossibility of a focus phrase in CD embedded clauses, the marginality of topic ones, and the peculiar distribution of the embedded subject. See Giorgi and Pianesi (2004a).

The hypothesis discussed by Giorgi and Pianesi (1997, 2004a) is that Mood and C in this case co-occur, giving rise to the following structure:

(89) $[.....[_V \text{ hypothesized } [_C \text{ che}_\Sigma [_{\text{MOOD}} \text{ sia}_{\{+\text{mood}; +\text{pres}\}}...]]]]$

Let's propose that the verb moves—either overtly or covertly, it does not matter for the purposes of this argument—to MOOD-P, given that it is a subjunctive form. The Complementizer *che*, occupying the head position of the C projection bears the feature Σ, which points to the speaker's temporal coordinate. As a consequence, the utterance time licenses the present form of the subjunctive. Tense agreement is instantiated exactly as in the cases given above, the only difference being that in this case the head-head configuration does not involve the main verb, but the Complementizer in C.

In other words, in this case, contrary to the indicative cases given above, since the verbal form is non-relational, the very presence of the Complementizer is enough to satisfy the requirements posed by the embedded verbal form.

Let's consider now the temporal interpretation of the clause. The embedded subjunctive is anchored to the superordinate verb—as is obligatory in all languages—and is, by default, interpreted as simultaneous with the main eventuality, even in the absence of temporal agreement. The presence of the feature Σ in C also forces the interpretation in which the embedded event is located with respect to the speaker's coordinate. Therefore, a (default) simultaneous interpretation with respect to the utterance event is assigned. The simultaneous interpretation is obtained by virtue of the same mechanism described above for example (84).

To conclude this section, a subjunctive verbal form embedded under communication verbs will give rise to the DAR by means of the same mechanism determining this reading in the indicative cases—i.e., by virtue of a double interpretation. The difference between the indicative and the subjunctive concerns the fact that the interpretation of the indicative is derived via the interpretation of a *relational* tense, locating two events one with respect to the other. The temporal interpretation of the subjunctive is always a

simultaneous one, by default. However, the necessity of assigning this simultaneous interpretation twice leads to the DAR. The embedded subjunctive is interpreted once as simultaneous with respect to the subject's temporal coordinate, and once as simultaneous with respect to the speaker's temporal coordinate.

Notice finally that, as pointed out above, the somehow *exceptional* merging of C in the DAR interpretation of *ipotizzare* contexts is due to the fact that in these cases there is a communication interpretation of the verbal form—something like *explicitly communicating an hypothesis*—which in Italian requires a non-deletable C.

2.4.3 *Temporal topics and other issues*

Let's consider now the case in which the past subjunctive seems to have an independent temporal reading. I repeat the relevant example here for simplicity:[57]

(90)   Il testimone crede che ieri alle 5 l'imputato fosse/*sia a casa
       The witness believes that yesterday at five the defendant was (PAST SUBJ)/*is(PRES SUBJ) at home

In this example the main verb appears in the present tense, whereas the embedded one carries the past morphology. In order to license an embedded past subjunctive, a temporal topic is necessary. Such a topic can be provided either overtly or by the context, but it must be given, otherwise the structure is ungrammatical.

My hypothesis here is that the temporal topic can license the temporal morphology of the embedded subjunctive in a way that is analogous to the cases seen above:

(91)   [.....[$_V$ crede [$_{MOOD}$che [$_{TOP}$ ieri alle 5 [$_T$ ... fosse$_{\{+mood;\ +past\}}$...]]]]]

Ieri alle 5 (yesterday at five) is interpreted as a past temporal reference—by virtue of the meaning of *ieri* (yesterday)—and therefore

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[57] Aspectual questions are put aside in this chapter, even if they are obviously relevant with respect to the final interpretation of the embedded verbal form. In the case of example (90), for instance, the interpretation of the embedded event is a continuous one, in that the being at home is supposed to have begun *before* and to be continuing *after* the temporal interval specified by the topic.

licenses the past feature on the verb. According to the proposal discussed in Rizzi (1997, 2001), left-peripheral temporal expressions are in a Topic position. The default interpretation locates the embedded event at the time specified by the topic. Further movement of the verb to Mood, required by the presence of the feature [+mood], does not modify this interpretation. Unlike the cases seen above, the speaker's coordinate is not represented in C. *Credere* (believe) is not a communication verb and, accordingly, it does not require the high C projection to be realized. Given that the past form on the embedded verb is licensed by the temporal topic, the temporal interpretation is completed, and the embedded eventuality is correctly located in the past, as specified by the time adverb.

Consider now the licensing of a past verbal form in sentence (61), repeated here:

(92)   Gianni vorrebbe che Maria partisse/*parta
        Gianni would like that Maria left(PAST SUBJ)/*leaves (PRES SUBJ)

The main verb is the present form of the so-called *conditional mood*. It is not therefore a past form and does not express a *past* meaning— i.e., Gianni's wish is located in the present, even if removed to a possible world. In the embedded clause, the subjunctive mood is licensed by virtue of being a complement of a volitional predicate, but in this case, the *modality* of the main verb, and not its tense, licenses the embedded past. Consider also that an embedded present subjunctive is ungrammatical—cf. the ungrammaticality of *parta* (leaves).[58]

The question is therefore how the past form is licensed in this context, given that no agreement process seems to be available, if we consider the feature as somehow connected to *past*. Several options come to mind. For instance, one might suggest that the feature on

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[58] The conditional mood has a compound past form, made by an auxiliary with conditional morphology and the past participle: *avrebbe voluto* (lit: have+COND wanted). The subjunctive verbal form found in subordinate clauses is always the past one:

i.   Gianni avrebbe voluto che Maria partisse/*parta
      Gianni would like that Maria left(PAST SUBJ)/*leaves (PRES SUBJ)

the past subjunctive has to be conceived of as [−actual], instead as [+past]. Another possibility would be to encode the difference between the present subjunctive and the past subjunctive as a binary feature [±present]. In this chapter I will leave the question open. What is important to stress here is that this observation constitutes additional evidence in favour of the absence of temporal specification in the subjunctive and therefore in favour of the theory according to which the subjunctive is a non-relational form.

There is another context where the past tense is available in the absence of a visible licenser. The context in question is the so-called independent subjunctive expressing wishes by the speaker:

(93)   (Che) ti pigliasse un colpo!
        That a stroke take(PAST SUBJ) you!

In this case, however, the past form alternates with the present quite freely, without giving rise to differences in meaning:

(94)   (Che) ti pigli un colpo!
        That a stroke take(PRES SUBJ) you!

Notice also that CD is optional in this case, as in ordinary subordinate contexts. From these data, one might conclude therefore that the sentences in (93) and (94) are projections of the modal Complementizer, and not the high Complementizer C. In this respect, these examples would be analogous to the ones discussed above.[59]

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[59] For an analysis of exclamative contexts, see Zanuttini and Portner (2000, 2003). At this point it might be relevant to say a few words on the relationship between the analysis of the C-layer proposed here and Rizzi's analysis (1997, 2001, 2002). In particular, the relation between the high C projection hypothesized here and Rizzi's *Force*.

Conceptually, they do not correspond to each other, in that Rizzi's Force is presumed to mark the *assertive force* and similar properties of the embedded clause. In the cases considered here, on the contrary, the high C projection is to be understood as a pointer to the speaker, independently of the nature of the clause—i.e., independently of its being an assertion, a question, etc. The role of C at the interface is to relate the content of the embedded clause—in particular the temporal interpretation of the event—with the speaker's *hic et nunc*. It seems to me, however, that the two approaches are certainly compatible, given that empirically this is not a counter-argument to Rizzi's work.

2.4.4 *On Sequence of Tense: the role of Agree*

Given the analysis provided above about the role of temporal topics in subjunctive clauses, it is possible now to express it in terms of Agreement.

The whole subjunctive licensing process can be viewed as a cyclic application of Agree. As an exemplification, consider the following:

(95)   Gianni credeva che Maria dormisse
        Gianni believed that Maria slept(PAST SUBJ)

The sentence can abstractly be considered as corresponding to the following schemata, where the highest verb is *credeva* (believed) and the lower one the subjunctive verbal form:

(96)   … [… V…[… MOOD … [… V…

The highest verb agrees with the Complementizer position, which in turn agrees with the embedded verb. As a result, only a past subjunctive can appear under a past main verb, or a past temporal topic, as in the following case:

(97)   […TOP… […MOOD… […V…

In other words, one could conclude that the properties of the Complementizer constitute the obligatory bridge between the superordinate clause and the embedded one: they are determined by the superordinate verbal form—or by a temporal topic—and select the embedded verbal morphology.

One might speculate at this point why Agree happens to have such a role in Sequence of Tense phenomena. The obvious answer is that the domain of the Complementizer is a *phase*—as proposed in Chomsky (2005)—and only Agree has the power of establishing a relationship with something lying beyond this point. However, speculations of this kind are outside the scope of this book.

2.5 A remark on the morphology of the subjunctive

In this section I sketch a brief morphosyntactic analysis of the subjunctive, which should provide the grounds for an understanding of its properties with respect to the syntax of indexicality.

Summarizing, the main hypothesis of this chapter, and of this book in general, is that subjunctive verbal forms differ from indicative ones in that they do not provide reference to the context identified by means of the speaker's coordinates. In this respect, the subjunctive patterns with the infinitive even if it admits the presence of a lexical subject. However, cases such as the one of *ipotizzare* (hypothesize) show that the subjunctive can exhibit indicative-like properties when forced by lexical factors. Concluding, therefore, it can be said that the subjunctive is a sort of intermediate form, occasionally permitting fully indicative-like behaviour, but in general being compatible with contexts banning it.

This analysis differs from the one provide by Bianchi (2003, 2006), who argues that in providing a position for a lexical subject the subjunctive differs crucially from the infinitive and therefore patterns with the indicative. I think that the analysis of the DAR proposed here provides evidence in favour of my account—namely that the subjunctive, but not the indicative, is compatible with non-indexical, non-DAR, interpretation of the embedded verbal form. The possibility for a subjunctive to license a lexical subject has to do with the presence of (a certain amount of) person specification on its morphological endings. The idea of this book is that having a subject is not enough in Italian-like languages to force a DAR of the embedded event.

Moreover, a brief analysis of the subjunctive morphology seems to point to the conclusion that as far as reference of indexicality is concerned, it is not the presence of a lexical subject *per se* that matters, but the intrinsic reference to the context.

Consider the following subjunctive paradigm, reported here as can be found in traditional grammars of Italian:

(98)   1st conjugation: Che io lodi, che tu lodi, che egli lodi, che noi lodiamo, che voi lodiate, che essi lodino
      That I praise (PRES SUBJ), etc.

(99)   Io lodo, tu lodi, egli loda, noi londiamo, voi lodate, essi lodano
      I praise (PRES IND), etc.

(100)   2nd conjugation: Che io veda, che tu veda, che egli veda, che noi vediamo, che voi vediate, che essi vedano
      That I see (PRES SUBJ), etc.

(101)   Io vedo, tu vedi, egli vede, noi vediamo, voi vedete, essi vedono
      I see (PRES IND), etc.

(102)   3rd conjugation: che io parta, che tu parta, che egli parta, che noi partiamo, che voi partiate, che essi partano
      That I leave (PRES SUBJ), etc.

(103)   Io parto, tu parti, egli parte, noi partiamo, voi partite, essi partono
      I leave (PRES IND), etc.

These remarks should not be viewed as a full morphological account of the subjunctive and do not incorporate any etymological analysis. Here I only aim at clarifying the role that the native speaker might attribute to the subjunctive in her own (synchronic) linguistic competence.

   From the paradigm given above, it can be seen that in the singular the subjunctive has no person distinction and that in the plural the first person is always identical to the indicative one. The third person plural is formed by adding to the singular verbal form the ending *–no* and the second plural has a peculiar ending of its own. Consider now the past paradigm:

(104)   1st conjugation: Che io lodassi, che tu lodassi, che egli lodasse, che noi lodassimo, che voi lodaste, che essi lodassero
      That I praised (PAST SUBJ), etc.
      Io lodai, tu lodasti, egli lodò, noi lodammo, voi lodaste, essi lodarono
      I praised (PAST IND), etc.

(105)   2nd conjugation: Che io vedessi, che tu vedessi, che egli vedesse, che noi vedessimo, che voi vedeste, che essi vedessero
      That I saw (PAST SUBJ), etc.
      Io vidi, tu vedesti, egli vide, noi vedemmo, voi vedeste, essi videro
      I saw (PAST IND), etc.

(106)   3rd conjugation: che io partissi, che tu partissi, che egli partisse, che noi
        partissimo, che voi partiste, che essi partissero
        That I left (PAST SUBJ), etc.
        Io partii, tu partisti, egli partì, noi partimmo, voi partiste, essi partirono
        I left (PAST IND), etc.

In the past paradigm, the first and second person singular are not distinguished.[60]

In both cases, therefore, but especially in the present form, the contrast with the indicative is striking, in that first and second person singular—speaker and hearer—are not specifically marked and in the present form are not even distinguished from the third person. In general, it can be said that subjunctive morphology tends to be more syncretic than indicative morphology and this property had already been observed long ago by typologists—cf. for instance Greenberg (1966).

The analysis provided in this chapter might shed some light on this characteristic, in that the Italian subjunctive is supposed to lack reference to indexicality, as opposed to the indicative, which always marks it in its verbal morphology. Therefore, under this approach, it might be expected that its morphological endings do not formally encode reference to the speaker and the hearer.

2.6 Conclusion

In this chapter I proposed that the obligatoriness of the Double Access Reading in certain embedded clauses has to be accounted for by means of the representation in the C-layer of the speaker's temporal coordinate. The speaker's temporal coordinate must be represented in the case of an indicative subordinate clause, and is usually not represented in the case of a subjunctive clause. Moreover, in Italian the presence of the indicative in a subordinate clause seems

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[60] The simple past of the indicative in Northern, and to a certain extent Central, Italy is however very rarely used in everyday speech. See also fn. 29 above. Note that I am abstracting away from the detailed analysis of the indicative past formation and the relevance of the verbal theme.

to be tied to the presence of a lexical meaning of *communication* of the main verb.

On a closer look, however, I showed that it is not the indicative *per se* that is required by communication verbs, but the presence of the speaker's coordinate. This makes the difference between the DAR and non-DAR interpretation of *ipotizzare* (hypothesize). Interestingly, non-DAR contexts are also those contexts that permit omission of the Complementizer—i.e., CD contexts. Therefore, I proposed to identify the position of the non-deletable Complementizer with the position where the speaker's coordinate is represented.

In conclusion, analysis of communication contexts (typically selecting the indicative, but not necessarily) vs. non-communication ones (typically selecting the subjunctive) provides an important argument in favour of an analysis of the highest position of the C-layer as the syntactic position devoted to *indexicality*.