

On Truth Persistence

Patrícia Amaral,^a Fabio Del Prete^b

^aUniversity of North Carolina at Chapel Hill

^bCLLE-ERSS (CNRS et Université de Toulouse le Mirail)

Abstract This paper analyzes a non-temporal interpretation of the adverb *sempre* ‘always’ in European Portuguese and Italian, in which the adverb expresses persistence of the truth of a proposition over time and displays specific contextual constraints (TP-*sempre*). Despite an overlap in the contexts in which TP-*sempre* may occur in both languages, we provide data showing that its distribution is not exactly the same in European Portuguese and Italian. In view of these data, we propose that TP-*sempre* is a modal operator of confirmation in both languages, but that it is more restricted in Italian in that it has a plan presupposition only in this language.

1. Introduction

In this paper we consider a non-temporal interpretation of the adverb *sempre* ‘always’ in European Portuguese (henceforth, EP) and Italian (I), exemplified in (1a,b):

- (1) a. Sempre vou ao cinema no domingo à noite. (EP)
Sempre go-PRES-1SG to-the cinema in-the Sunday at night
- b. Ci vado sempre al cinema domenica sera. (I)
there go-PRES-1SG sempre to-the cinema Sunday night
‘I’m *indeed / still* going to the movies this Sunday night.’

Sentences (1a,b) can be truthfully uttered in the following context: the speaker has planned on going to the movies on next Sunday night and has told the interlocutor about her plan; then the possibility that the speaker might end up not going to the movies becomes salient in the common ground of both interlocutors; finally, the speaker can reassure the hearer that her plan continues to be valid. These sentences have an episodic, non-generic interpretation: the present tense has a futurate interpretation, whereby it refers to a specific time in the future, and the temporal adverbials *no domingo à noite* and *domenica sera* refer to the first Sunday night following the utterance. By using *sempre*,

the speaker confirms the truth of a proposition that had already been accepted by the interlocutors and had later become uncertain.¹

The semantic contribution of *sempre* in (1a,b) differs greatly from the one of *always* in the English sentence (2):

(2) I always go to the movies on Sunday night.

This sentence means that the speaker goes as a habit to the movies on every Sunday night. The present tense is interpreted generically, and the temporal adverbial *on Sunday night* also receives a generic interpretation, as referring to whatever Sunday night within an unbounded time interval surrounding the utterance. The semantic contribution of *always* to the sentence meaning is quantificational: the adverb is used to universally quantify over Sunday nights explicitly,² not to convey that a plan of the speaker continues to be valid at utterance time.³

We will refer to the interpretation of *sempre* in (1a,b) as the *truth-persistence value* (TP-value), and will use the term *TP-sempre* to talk about the occurrences of this adverb that show this value. The TP-value is opposed to the more familiar interpretation that *sempre* exhibits in (3a,b), which correspond to the English sentence (2) above:

(3) a. Vou sempre ao cinema ao domingo à noite. (EP)

b. Vado sempre al cinema la domenica sera. (I)

‘I always go to the movies on Sunday night.’

In (3a,b), *sempre* shows its *quantificational value* (Q-value). This value has been

¹ This confirmatory aspect is at the basis of the terminology adopted by Âmbar, Gonzaga and Negrão (2004) in their study about Portuguese, where they refer to the meaning of *sempre* in (1a) as “confirmative interpretation”.

² For the sake of precision, this is true if the prosodic pattern is such that *on Sunday night* does not bear focal stress.

³ Notice that the semantic difference between (1a,b) and (2) could not depend on a difference in the semantic potential of the present tense, which would distinguish EP and I from English. It has long been recognized that the English present tense can have a futurate interpretation in contexts of planning (Jespersen 1931, Dowty 1979, Smith 2010): in principle, it could refer to a specific time in the future in (2). One would expect that if *always* had the same semantic potential in English as *sempre* in EP and I, it should be able to interact with the futurate present in (2) to yield a meaning similar to the meaning of (1a,b). But no such interaction takes place in (2): *always* can only contribute universal quantification and forces a generic interpretation of the present tense.

extensively discussed in the semantic literature since Lewis' (1975) work on adverbs of quantification, and has turned out to be of utmost importance in the study of the formal properties of generic sentences (e.g. Krifka et al. 1995). We will not have much to say about this value in what follows, apart from suggesting that the TP-value – our main target in this paper – is not reducible to it.

The rest of the paper is organized as follows. In section 2 we give a first description of the TP-value of *sempre* in EP and Italian. Section 3 broadens the empirical domain and discusses some differences between EP and Italian with regard to the distribution of TP-*sempre*. We argue that, contrary to what one might think on the basis of the intuitive equivalence between (1a) and (1b), TP-*sempre* does not have exactly the same semantic properties in EP and Italian. In light of such differences, in section 4 we present our analysis of TP-*sempre* for EP and Italian, relying on the hypothesis that in both languages TP-*sempre* denotes a modal operator yielding confirmation of a proposition, but in Italian it has a plan presupposition that the argument proposition *p* must satisfy for the utterance of *sempre(p)* to be acceptable. Section 5 provides concluding remarks.

2. The TP-value: Empirical data from European Portuguese and Italian

In Portuguese the TP-value of *sempre* is only found in the European variety, where it is syntactically restricted to the preverbal position (Lopes 1998, Brito 2001, Âmbar et al. 2004, Fiéis 2010).⁴ The attentive reader will have already noted that the EP examples (1a) and (3a) (repeated below as [4a] and [4b], respectively) differ with respect to the position

⁴ The naturally-occurring example (i), from Brazilian Portuguese, shows that there is no TP-value associated with the pre-verbal position in this dialect, unlike what happens in EP. This interpretation of *sempre* is not available in BP.

(i) ...eu não leio muito negócio de esporte, eu sempre viro as folhas.
(POA-45: 190, from Ilari 1992: 183, ex. 90)

'I don't read many news about sport, I always turn the pages [of the sports' section].'

In (i), *sempre* precedes the verb *viro* '(I) turn', still the sentence has a generic interpretation: it means that every occasion in which the speaker reaches the sports' section of a newspaper is such that the speaker turns the pages (without reading them) on that occasion. In BP, regardless of the syntactic position occupied by the adverb, *sempre* always exhibits the Q-value, i.e. it universally quantifies over situations, as in examples (3a,b) in the main text. Although there is evidence that Medieval Portuguese behaved in a similar way (see Fiéis 2010), the synchronic situation is very different, as in contemporary European Portuguese the syntactic behavior of the adverb clearly distinguishes the two interpretations of *sempre*.

of *sempre* relative to the verb: the TP-value is associated to the preverbal position, while the Q-value is associated to the postverbal position.

- (4) a. Sempre vou ao cinema no domingo à noite.
'I am indeed going to the movies this Sunday night.'
- b. Vou sempre ao cinema ao domingo à noite.
'I always go to the movies on Sunday night.'

Syntactically, TP-*sempre* is further constrained in that the adverb must be adjacent to the verb. The only exception to this adjacency constraint is provided by clitic pronouns (Âmbar et al. 2004: 9). In order to account for the syntactic behavior of *sempre* in its “confirmative reading” (corresponding to our TP-value), Âmbar et al. (2004) propose a structure containing a functional projection AssertiveP. This projection is associated to properties of the illocutionary act.⁵ Although in our analysis we do not commit to a specific syntactic proposal concerning the TP-value, our proposal is compatible with this account.

A different scenario is found in Italian, where TP-*sempre* is not syntactically constrained to the preverbal position and normally occurs in postverbal position, exactly as the Q-value of *sempre*. Furthermore, in Italian the TP-value is not as widely attested as in EP, and it seems more easily available in interrogative sentences than in declaratives. Consider sentence (6):

- (6) Vai sempre al cinema?
'Do you always go to the movies?' [inquiring about your habitual activities on Sunday nights]
'Are you still going to the movies?' [checking about a specific plan of yours for this Sunday night]

This sentence is ambiguous between the Q-value and the TP-value of *sempre* and is

⁵ In this particular case, AssertiveP projects when “confirmative features” pertaining to the speaker’s attitude towards the proposition expressed must be checked. The derivation proposed by the authors ensures that by raising to AssertiveP, the adverb has scope over the whole proposition, hence accounting for the intuition that the “confirmative” interpretation of *sempre* provides a comment on the speaker’s assertion.

disambiguated in context: if we are speaking about what we habitually do on Sunday nights, it is likely that by uttering (6) I am asking you whether you always go to the movies on the relevant occasions (Q-value); if the topic of our conversation is instead our specific plans for next Sunday night, then by uttering (6) I am asking you whether you are still keeping to the idea of going to the movies on Sunday night (TP-value). Sentence (6) has yet another reading, which we'll discuss in sect. 3.4 in connection with the so-called “continuative” value of *sempre* – a value which is closely related to the TP-value.

Besides the restriction pertaining to the position of the adverb, found in EP only, there is a connection between the TP-value and a semantic feature of the preajacent proposition that we call *specificity*,⁶ which holds across the two languages. The TP-value naturally obtains in specific, non-generic propositions, the genericity of the containing sentence making it most likely that the Q-value is concerned. Specificity is related to the tense / aspect properties of the verb phrase and to the interpretation of the locating temporal adverbial. The different interpretations of *sempre* in (1a,b) *versus* (3a,b) are associated with lexical and syntactic differences between the locating temporal adverbials occurring in these sentences, relating to the specific / generic distinction. In EP, the temporal adverbial headed by *em* ‘in’ (*no domingo à noite*), on the one hand, introduces a unique interval in (1a): it refers to the Sunday night immediately after utterance time. On the other hand, the temporal adverbial headed by the preposition *a* ‘at’ (*ao domingo à noite*) represents a set of intervals.⁷ Concerning Italian, we find that the presence / absence of the definite article *la* ‘the’ strongly correlates with the generic / specific interpretation of the temporal adverbial: in imperfective sentences, *la domenica sera* is interpreted generically, as in (7a) below; the determinerless *domenica sera*, on the other hand, is interpreted specifically, as referring to the closest Sunday night in the past or in the future (according to the tense properties of the containing sentence), as in (7b):

- (7) a. La domenica sera andiamo / andavamo al cinema.
 ‘We habitually go / went to the movies on Sunday night.’

⁶ In the following, we will use the terms *preajacent* or *preajacent proposition* to refer to the proposition expressed by the smallest sentence in which *sempre* occurs.

⁷ An anonymous reviewer inquires about the interpretation of [1a] if *em* is replaced by *a* (*ao domingo à noite*). Exchanging the prepositions decreases the acceptability of the sentence. While we believe that the choice of the preposition in EP and the definite determiner in I play a role in the interpretation of the sentences, we leave the detailed analysis of the semantics of the temporal expressions for further work.

- b. Domenica sera andiamo / siamo andati al cinema.
'We are going / went to the movies on Sunday night.'

The interaction between the two interpretations of *sempre* and the distinction specific / generic makes sense if we make the following assumptions: (a) on the Q-value, *sempre* universally quantifies over situations, which makes it apt to contribute to the expression of generic propositions; (b) on the TP-value, *sempre* requires that the prejacent proposition remain true across a succession of times, what makes most sense pragmatically for a specific proposition – intuitively, generic propositions such as *that I generally go to the movies on Sunday night* do not allow for the same kind of variation in their truth-value as specific propositions about more contingent matters, such as *that I am going to the movies next Sunday night*.

2.1 Presuppositional properties of TP-*sempre*

Use of TP-*sempre* is subject to a contextual constraint. Consider example (8) from Italian:

- (8) Ascolta, vado sempre al cinema questa sera, vuoi venire?
'Listen, I'm still going to the movies tonight, wanna come?'

It would not be possible to utter (8) felicitously if the speaker had not previously mentioned to her interlocutor that she was planning on going to the movies tonight. In other words, we cannot use (8) to inform the hearer that we are planning on going to the movies tonight. For that, we would rather use (9), in which *sempre* does not occur and *questa sera* is preposed as the topic of the containing sentence:

- (9) Ascolta, questa sera vado al cinema, vuoi venire?
'Listen, I'm going to the movies tonight, wanna come?'

Example (8) can only be felicitously used to convey that the speaker's plan of going to the movies tonight remains valid at utterance time, while (9) is used to inform the hearer that what the speaker is doing tonight is going to the movies. A phonological fact which

is related to this contextual constraint is that prosodic stress in (8) is on *sempre*, while the remaining part of the embedding sentence is destressed, thus signaling that this part is presupposed by the interlocutors (it was already in the common ground before the utterance of [8]). On the other hand, prosodic stress in (9) is on the PP *al cinema*, where it marks focus on the VP *vado al cinema*, thus foregrounding the information that the speaker is planning on going to the movies (this information was not already in the common ground). The data above suggest that TP-*sempre* presupposes that the whole prejacent proposition has been in the common ground for a while as information shared by the interlocutors.

We observe similar contextual constraints on TP-*sempre* in EP; sentence (10) cannot be used to inform the hearer that the speaker is planning on going to the movies on Sunday night.

(10) *Sempre vou ao cinema no domingo à noite.*

In (10), *sempre* requires that the speaker's plan of going to the movies on Sunday night have been in the common ground since an earlier time.

We conclude that a main feature of TP-*sempre* in EP and I is its presuppositional character: the use of TP-*sempre* is felicitous only in a context in which the truth of the prejacent is presupposed to have been under discussion by the interlocutors. Note that the notion of presupposition that we are adopting is pragmatic in nature (it constrains the possible contexts in which TP-*sempre* may be felicitously used), while at the same time lexically based (it is triggered by the meaning of persistence which is lexically encoded by the adverb).

In the following section, we analyze in detail the differences in the distribution of TP-*sempre* in EP and Italian.

3. Differences between European Portuguese and Italian

3.1 Past tensed sentences

Almost all the examples of TP-*sempre* above are present tense sentences with future time reference. In EP, however, TP-*sempre* is also well-attested in past tensed sentences.

Let us consider the following context. On Friday I tell you that I am planning on going to the movies this Sunday night, and later I express doubt to you about the possibility of this plan. On Tuesday I meet you and say that I went to the movies on Sunday night, by uttering the following sentence in EP:

- (11) Sempre fui ao cinema no domingo à noite.
'After all I went to the movies on Sunday night.'

In (11), the verb *ir* 'to go' occurs in the Simple Past (*Pretérito Perfeito Simples*), and the temporal adverbial refers to a specific Sunday night, the one immediately preceding utterance time. As in (1a), the sentence refers to a unique specific situation. In (11), however, by using *sempre* the speaker does not confirm the present validity of a future plan, but rather the accomplishment of her plan in the past.

In Italian, with the past tense, TP-*sempre* doesn't seem as easily available as with the futurate present, and one would rather use the adverbial *alla fine* 'in the end' instead:

- (12) a. Alla fine ci sono andato al cinema domenica sera.
'In the end, I did go to the movies on Sunday night'.
b. Alla fine sono andato al cinema domenica sera.
R1 'In the end, I did go to the movies on Sunday night.' (with VP-focus)
R2 'In the end, it was to the movies that I went on Sunday night.' (with focus on the locative adverbial)
R3 'In the end, it was on Sunday night that I went to the movies.' (with focus on the time adverbial)

Sentence (12a) is a natural choice to express the reading of EP (11) in Italian. It must be remarked, though, that *alla fine* gives rise to ambiguities of interpretation, and that the

clitic pronoun *ci* for the locative complement plays a disambiguating role in (12a). As we'll see later on (sect. 3.5), *alla fine* can associate with sub-sentential focus: the minimally different sentence (12b), without the clitic *ci*, allows for other accentual patterns besides the one, characteristic of (12a), corresponding to focus on the VP, and the sentence interpretation varies depending on which constituent receives the focus accent, as indicated by the English translations provided in R1-R3 above.⁸

Notice that in the EP sentence (11) *sempre* refers to the whole prejacent, so the sentence does not imply that I was uncertain about where I would go on Sunday night, or that I was uncertain about when I would go to the movies; instead, (11) implies that I was uncertain whether or not to go to the movies on Sunday night.

The difference between (11) and (12a,b) shows that the adverbial *alla fine* is to be distinguished from TP-*sempre*, despite the fact that the two adverbs can be both used to give confirmations of the truth of backgrounded propositions with an uncertain truth value. In particular, they must be distinguished with respect to their ability to associate with subsentential focus. We will return to this issue in sect. 3.5.

Italian marginally allows for TP-*sempre* with the past tense, particularly in past tensed interrogatives that check on the accomplishment of a plan, as in (13):⁹

(13) Sei sempre andato al cinema domenica sera?

‘In the end did you stick to your plan to go to the movies on Sunday night?’

As suggested by the proposed English translation, (13) presupposes that the hearer had previously planned on going to the movies on Sunday night. We consider this issue in more detail in the next section.

⁸ Concerning the interpretation of (12b): if the focus accent is on *al cinema*, (12b) implies that before choosing the movie theater as the place where to go on Sunday night, I had alternative options of the type $\lambda w. I go to the opera on Sunday night in w$, $\lambda w. I go to the circus on Sunday night in w$, etc. (in this case the background contains the existential proposition $\lambda w. \exists x I go to x on Sunday night in w$), and the reading of the sentence is R2; if the accent is on *domenica sera*, (12b) implies that before choosing Sunday night as the time frame in which to go to the movies, I had alternative options of the type $\lambda w. I go to the movies on Friday night in w$, $\lambda w. I go to the movies on Saturday night in w$, etc. (in this case the background contains the existential proposition $\lambda w. \exists x I go to the movies at time x in w$), and the reading is R3; only if the accent is on the VP (as it *must* be in [12a]), does (12b) imply that I was uncertain whether or not to go to the movies on Sunday night, that is, before my choice I had two alternatives, $\lambda w. I go to the movies on Sunday night in w$ and $\lambda w. I do not go to the movies on Sunday night in w$, and the reading of the sentence is R1, the same as the unique reading of (12a).

⁹ Thanks to Sandro Zucchi (p.c.) for pointing this out to us.

3.2 Presence of a plan

A remarkable difference between EP and I is found by considering sentences in which there is no plan involved. We observe that TP-*sempre* is acceptable only in EP in such sentences – provided that some contextual conditions are met.

Consider the following scenario. You hear from somebody that João died, later this piece of information is put into question, and finally you obtain new evidence confirming that João has indeed died. Under these contextual premises, you can felicitously utter (14) in EP:

- (14) O João sempre morreu.
'João indeed has died.'

In this case, it is the truth of the proposition *that João died* that persists over time – more precisely, it persists over different epistemic states situated at subsequent times (see our proposal in sect. 4). Furthermore, the information concerning the persistence of the truth of that proposition must be shared by the interlocutors: the proposition must have been believed at some earlier point and is now reasserted, that is, confirmed, with a greater degree of certainty.

The case of Italian is different, as shown by the unacceptability of (15) in the scenario that we described for (14) above:

- (15) *Giovanni sempre morì / *Giovanni è sempre morto.
Giovanni sempre die-SPAST-3SG/Giovanni be-PRES-3SG sempre dead

If there is no plan leading to the event, the TP-value of *sempre* is unavailable in Italian. Given that the verb *morire* ('to die') is not compatible with plan-readings, (15) is out. The reading of (14) is expressed in Italian by using *davvero* 'really' instead, as in (16):

- (16) Giovanni è morto davvero.
'Giovanni indeed has died'

To sum up, in EP, TP-*sempre* can be used with past or future time reference indifferently, and no matter whether a plan is involved. On the other hand, in Italian TP-

sempre is more restricted, in that it requires that a plan have been established to bring about what is described by the prejacent.

3.3 Stative verbs

TP-*sempre* is possible in EP with stative verbs denoting stable properties. Consider the following context. I tell you that I believe that Micha is Russian, then someone casts doubt on Micha being Russian, then I see Micha's passport confirming my initial belief, and I tell you:

- (17) O Micha *sempre* è russo. (EP)
'Micha is indeed Russian.'

This sentence cannot be felicitously uttered to introduce the proposition that Micha is Russian as new information. Rather, it requires that the debate pertaining to the truth of this proposition be in the common ground of the participants in the conversation.

The corresponding sentence in Italian, however, is unacceptable:

- (18) a. *Micha è *sempre* russo. (I)
b. Micha è davvero russo. (I)
'Micha is indeed Russian.'

Sentence (18a) cannot mean 'Micha is indeed Russian', unlike (17). Rather, in Italian one would use *davvero* to convey this value, as in (18b).

It must be remarked that in Italian there are stative sentences containing *sempre*, where the adverb has a continuative meaning which might be viewed as closely related to the TP-value. Sentence (19) is a case in point:¹⁰

¹⁰ As Sandro Zucchi has submitted to us (p.c.), the semantic value of *sempre* in (19) could be regarded as being the same as the value that *sempre* has in (1b). According to this view, the interpretation of *sempre* in (1b) would not require a separate analysis with respect to the "continuative" value displayed by *sempre* in (19), as would be shown by the fact that both sentences can receive homologous paraphrases, e.g. *It continues to be true that I'm going to the movies on Sunday night* and *It continues to be true that Gianni lives in Rome*. We acknowledge that there are *prima facie* similarities between the TP-value and the aspectual continuative value of *sempre* in Italian. In section 3.4, however, we provide some reasons to believe that these two values are semantically distinct.

- (19) Gianni vive sempre a Roma.
'Gianni *continues* to live in Rome.'

Example (19) implies that Gianni presently lives in Rome, and that the state of Gianni living in Rome began in the past and extends up till the present. Therefore, *sempre* expresses a notion of persistence in (19) as well, though it is a concrete state that is said to persist in this case, not the validity of a plan (or the truth of a proposition). We'll discuss this continuative meaning of *sempre* in the next section. Crucially, the corresponding sentence of EP, given in (20), has a different interpretation, and imposes contextual requirements that are not shared by (19):

- (20) O Gianni sempre vive em Roma.
'Gianni lives indeed in Rome.'

Whereas in (20) TP-*sempre* presupposes that Gianni's place of residence has been under discussion for the participants in the conversation and the possibility of Gianni not living in Rome has been raised, this is not the case for (19), which simply presupposes that Gianni used to live in Rome and that this was previously known to the interlocutors. In EP a sentence roughly conveying the same meaning as (19) would rather contain the phase adverb *ainda* ('still'), which expresses continuation of some state or process:

- (21) O Gianni ainda vive em Roma.
'Gianni still lives in Rome.'

We turn now to a detailed analysis of this continuative interpretation of *sempre*.

3.4 Continuative value of *sempre*

An important difference between the two languages pertains to the interpretation of sentences like (21), from Italian:

- (21) Gianni è sempre a casa.
'Gianni is always at home.'
'Gianni continues to be at home.'

In Italian, example (21) is ambiguous and is disambiguated in context. The sentence can mean either that in every relevant situation, Gianni is at home (featuring the Q-value of *sempre*), or that Gianni continues to be at home, thus implying that the state of Gianni being at home held at a time prior to utterance time. In the following, we refer to this value of *sempre* as C-value (Continuative). Another example clearly showing the C-value of *sempre* is (22):

- (22) Gianni ama sempre soltanto Maria.
'Gianni continues to exclusively love Maria.'

For (22) the Q-value doesn't make much sense (it would be odd to say that in every relevant situation Gianni loves only Maria) and the most likely reading of the sentence is that Gianni continues to only love Maria, which shows the C-value of *sempre*.

The C-value of *sempre* is also possible in the interrogative sentence (23), which was considered in sect. 2 above as example (6) in relation to the TP-value and the Q-value:

- (23) Vai sempre al cinema?
'Do you still have the habit of going to the movies?' [checking about the persistence of your habits]

Besides the Q-value and the TP-value readings that we described above, (23) has a third reading, paraphrasable as 'Do you still have the habit of going to the movies?'. On this (continuative) reading, *sempre* is semantically akin to the English adverb *still*, and the prejacent is interpreted habitually. This continuative reading shares properties with the two readings of the sentence that we discussed in sect. 2 but cannot be reduced to either one of them. On the one hand, the prejacent is generic, as it is in the Q-value reading 'Do you always go to the movies?'; on the other hand, *sempre* does not interact with this generic prejacent in the same way as it does on the Q-value (i.e. by contributing universal quantification over relevant situations), but contributes instead the meaning of continuation of a state, the hearer's habit of going to the movies, thus presupposing that this state was in the common ground. To sum up: on the one hand, the continuative

reading of (23) shares with the Q-value reading the fact that the prejacent is generic, and on the other, it shares with the TP-value reading the presupposition that the prejacent be in the common ground.¹¹

From the examples above, we see that the C-value, like the TP-value, is intuitively related to the idea of persistence of a state. For example, we could paraphrase (22)'s reading by saying that Gianni's exclusive love for Maria persists at utterance time. Thus, it is natural to look at the two values as being closely related to one another. That there is indeed a close relationship between the TP-value and the C-value of *sempre* in Italian can be shown by considering how external negation is realized for the two values. The sentence-pairs (24a,b) and (25a,b) show that in this language external negation is expressed by the same lexical and syntactic means for both values of *sempre*, namely using the preverbal negative adverb *non* in conjunction with the postverbal adverb *più* ('more').

- (24) a. Vado sempre al cinema domenica sera.
'I am still going to the movies on Sunday night.' [TP-value]
b. Non vado più al cinema domenica sera.
'I'm no longer going to the movies on Sunday night.' [TP-value]
- (25) a. Gianni è sempre a casa.
'Gianni is still at home.'
b. Gianni non è più a casa.
'Gianni is no longer at home.'

In EP, on the other hand, we find a different situation. Crucially, the C-value of *sempre* is not attested in EP. In (26), where the adverb occurs in postverbal position, *sempre* has the Q-value, and in (27), where it occurs in preverbal position, it has the TP-value:

¹¹ Notice that to translate *sempre* on this continuative reading we used the same aspectual adverb that was used to translate *sempre* on the TP-value reading.

(26) O João está sempre em casa. (cf. Gonzaga 1997: 164)
'In every (relevant) situation, João is at home.'

(27) O João sempre está em casa.
'Indeed, João is at home.'

Neither (26) nor (27) can mean 'João continues to be at home', unlike Italian (21). As said above, in EP this interpretation can only be conveyed by the phase adverb *ainda* 'still', as in (28):

(28) O João ainda está em casa.
'João continues to be at home.'

To sum up, in EP *sempre* may either have the Q-value or the TP-value, and the aspectual interpretation that we have called *C-value* for Italian *sempre* is associated to a different lexical item, *ainda*.¹² TP-*sempre* is externally negated by using the adverb *afinal* 'after all' in conjunction with the negative adverb *não*, as in (29b); the external negation of the continuative adverb *ainda* is instead realized by the complex adverbial *já não*¹³, as in (30b).

(29) a. Sempre vou ao cinema no domingo à noite.
'I am indeed going to the cinema on Sunday night.' [TP-value]

¹² Accordingly, in EP, the adverb *sempre* in the TP-value may co-occur with the adverb *ainda*, as in (i), uttered in the context below:

[**Context.** Maria and João are talking about a common friend, Pedro; Maria expresses her belief that Pedro lives in Porto and has not moved elsewhere yet, João says that he thinks that Pedro moved to Lisbon last year; Maria and João meet again on the following week and Maria says (26).]

(i) O Pedro sempre vive ainda no Porto: telefonei-lhe ontem e só vai mudar para Lisboa no ano que vem.
'Indeed Pedro still lives in Porto: I called him yesterday and he is only moving to Lisbon next month.'

Here, *ainda* conveys that the state of Pedro living in Porto continues to hold at utterance time, while *sempre* makes a different semantic contribution, namely it conveys that the truth of the prejacent (the proposition that Pedro continues to live in Porto, which encompasses the aspectual meaning of *ainda*) persists at utterance time.

¹³ It must be pointed out that in EP *já não* may sometimes occur in sentences with future time reference and with the TP-value (possibly co-occurring with *afinal*). But crucially, it cannot occur in sentences with past time reference, unlike *sempre* (e.g. **Já não fui ao cinema no domingo à noite*. Here, the TP-value must be expressed by *afinal não*: *Afinal não fui ao cinema no domingo à noite*.)

- b. Afinal não vou ao cinema no domingo à noite.
 ‘I am not going to the cinema on Sunday night after all.’ [TP-value]
- (30) a. O João ainda está em casa.
 ‘João is still at home’ [phase adverb ‘still’]
- b. O João já não está em casa.
 ‘João is no longer at home.’

To sum up, the fact that the external negation of TP-*sempre* in Italian is with *non più*, the same form which is used for the external negation of *sempre* in its C-value, provides evidence for the view that the two values are related in this language. On the other hand, the external negation of TP-*sempre* in EP is *afinal não*, which is different from the external negation of the aspectual continuative adverb *ainda*, realized as *já não*; furthermore, there is no aspectual continuative interpretation of *sempre* in EP. However, we regard the two values as formally distinct in Italian, for the following reasons:

- (a) On the C-value it is a state lexically denoted by a predicate in the sentence which is said to continue or persist at reference time, but on the TP-value it is the state of a proposition being true (after a possible temporary change in truth value) which is said to persist at reference time.
- (b) The C-value strictly requires an imperfective tense with an associated reference time t_R (the utterance time for the present) in order to predicate of the state s lexically denoted by the verb that s continues to hold at t_R . On the other hand, the TP-value is acceptable with overtly perfective tenses, as in (13) above, and normally occurs in perfectly understood (futate) present tense sentences, as in our example (1b).
- (c) Although *sempre* on the C-value can serve the conversational purpose of confirming the validity of some specific proposition across subsequent times,¹⁴

¹⁴ This might well be the case for the example (i), taken from the Italian translation of the Brothers Grimm’s fairy tale *Schneewittchen und die Sieben Zwerge*:

- (i) O mia regina dal bosco alla collina, la più bella sei sempre tu!
 ‘O my queen, from the wood to the hill, you are the fairest of all!’

this is not essential to the C-value, but it is essential to the TP-value. Furthermore, on the TP-value *sempre* typically confirms the truth of a plan-related proposition (see sect. 3.2 above), but on the C-value it does not have any requirement that its prejacent proposition be plan-related.

3.5 Focus sensitivity

As far as the Q-value is concerned, we observe that *sempre* is focus sensitive both in EP and in Italian. Consider sentence (31) from Italian:

(31) Gianni va sempre al cinema la domenica sera.

R1 ‘Always, when it is Sunday night, Gianni goes to the movies.’

R2 ‘Always, when Gianni goes to the movies, it is Sunday night.’

Its most natural reading is reported above as R1, and corresponds to an intonational pattern in which the time adverbial *la domenica sera* is destressed. The sentence, however, marginally allows for another reading, reported above as R2, which is obtained when focal stress is placed on *la domenica sera*.

On the other hand, on the TP-value, *sempre* takes scope over the whole prejacent, so sentence (32) doesn’t seem to have different meanings related to different intonational patterns (the same observation holds for EP):

(32) Compri sempre l’auto rossa?

‘Are you still going to buy the red car?’

It seems that (32) can only be used in a context in which it has been known for a while that you have the intention to buy the red car. Accordingly, (32) serves the purpose of

Here the interpretation is based on the C-value of *sempre* (‘O my queen, you continue to be the fairest of all!’), but the conversational function of the mirror’s utterance is to reassure the queen that she is indeed the fairest of all. A similar example is discussed in Hansen (2004) for French *toujours*, in the context of a comparison between *toujours* and *encore* ‘still’.

checking if you still have this intention, i.e. if the truth of the proposition that you're going to buy the red car persists at utterance time.

This contrasts with the focus-sensitive character of *alla fine* 'in the end' (*afinal* in EP seems to have similar properties), which can associate with subsentential focus, as in the following question (capitals indicate focal stress):

(33) *Alla fine compri l'auto ROSSA?*

'In the end, are you going to buy the RED car?'

What is presupposed to be in the background in this case is not the proposition that you're going to buy the red car, but the less determinate proposition that you're going to buy *some* car (within a contextually given choice set, which may include, for example, a red car and a blue car), while it is an open issue whether you will eventually buy the red car or another previously considered car.

Our conclusion is that TP-*sempre* is generally associated with the whole proposition in both EP and I, and hence differs from similar adverbs such as *alla fine* / *afinal*, or *sempre* in its Q-value.

4. The analysis

Given the differences between EP and Italian that we have described in sect. 3, we propose separate analyses for TP-*sempre* in the two languages.

A fundamental assumption that we make is that propositions are temporally specified, namely they are functions from possible worlds to truth values (the True and the False), and they do not take a time argument. To illustrate this point, consider the following example from Italian¹⁵. Suppose that I tell you (34) on Friday, May 25th 2012:

(34) *Andiamo al mare domenica.*

'We're going to the sea on Sunday.'

¹⁵ The choice of language is not relevant here, and the same point could be illustrated by taking an example from EP.

Then on Sunday there happen to be rains everywhere in the country. I see you again on Monday and I tell you:

(35) Ci siamo sempre andati al mare domenica.

‘We stuck to our plan to go to the sea on Sunday after all.’

Although the sentence in (34) is present tensed and the one modified by *sempre* in (35) is past tensed, we assume that they express the same temporally specified proposition, namely the proposition that is true in a world w if and only if we go to the sea on Sunday, May 27th 2012 in w . On this view, (34) and (35) differ grammatically but involve the same proposition p , because the utterances of (34) and (35) are differently located with respect to the state of affairs described by p . The fact that (35) involves the same proposition as (34) explains how *sempre* in the former can apply to a proposition which is in fact old, in spite of the grammatical differences in the expression.

Starting from the common semantic core that Portuguese TP-*sempre* and its Italian counterpart share, we assume that TP-*sempre* is a modal operator in both languages, which applies to a proposition p and yields a confirmation of the truth of p . We propose to formalize the relevant notion of confirmation in terms of universal quantification over a domain of modal alternatives: the possible worlds compatible with what the conversational participants take for granted at a given point in the conversation. We call such worlds *epistemic worlds*. What is taken for granted by the interlocutors at a time t (henceforth, *the epistemic state at t*) may change over time, as knowledge about past facts and epistemic attitudes towards the future evolve. We represent the epistemic state at t , symbolized as Ω_t , as the set of worlds entertained by the conversational participants at t . Following Kratzerian analyses of modals, we assume that, for every time t for which an epistemic state Ω_t can be specified, there is a partial ordering relation \mathfrak{R}_t defined over Ω_t , which orders the epistemic worlds in Ω_t according to their likelihood. A crucial assumption concerns epistemic change: as new information comes in, the current epistemic state is updated by adding that information to it. However, the update from s_i to s_{i+1} (s_i and s_{i+1} being successive epistemic states), need not be such that there are possibilities w_i, \dots, w_j of s_i that are eliminated *tout court* in the passage to s_{i+1} (in classical theories of contextual update, such possibilities w_i, \dots, w_j would be those worlds that are

incompatible with the proposition representing the incoming information). Rather we allow for the case in which the new information makes previously entertained possibilities unlikely without bringing about their outright elimination. The possibilities at stake will survive in passing from a state s_i to a successive state s_j , but in s_j they will be ranked lower than other more likely possibilities according to the ordering relation \mathfrak{R}_j .

Given the assumptions above, the truth conditions of TP-*sempre* in EP can be given as in (36):

(36)

sempre(p) is true at time t_0 in world w_0 *IFF*

$$p(w_0) = 1 \ \& \ \exists t_1 \exists t_2 [t_1 < t_2 < t_0 \ \& \ \forall w_1 [[w_1 \in \Omega(t_1) \ \& \ \neg \exists w_2 [w_2 \in \Omega(t_1) \ \& \ \mathfrak{R}(t_1)(w_2, w_1)]] \rightarrow p(w_1) = 1] \ \& \ \exists w_2 [w_2 \in \Omega(t_2) \ \& \ \neg \exists w_3 [w_3 \in \Omega(t_2) \ \& \ \mathfrak{R}(t_2)(w_3, w_2)] \ \& \ p(w_2) \neq 1] \ \& \ \forall w_3 [[w_3 \in \Omega(t_0) \ \& \ \neg \exists w_2 [w_2 \in \Omega(t_0) \ \& \ \mathfrak{R}(t_0)(w_2, w_3)]] \rightarrow p(w_3) = 1]]$$

[in words: p is true in w_0 , p was true at all best epistemic worlds accessible at a past time $t_1 < t_0$, at a subsequent past time t_2 the interlocutors allowed for an epistemically high-ranked possibility w_2 in which p was false, and finally p is true at all best epistemic worlds accessible at the utterance time t_0]

In (36), both the information that the prejacent p was accepted as true at a previous time and the information that it was no longer certain that p at a subsequent time are treated as part of the truth-conditional content of *sempre*(p). This choice is uniquely due to a simplification, and we do not mean to imply that the information in question does not have presuppositional status. In fact, from the notion of confirmation which *sempre* encodes on our analysis, it follows that, for an utterance of *sempre*(p) to be semantically defined, p must satisfy two conditions at a time closely preceding the utterance:

- (a) p must be old;¹⁶
- (b) it must be uncertain whether p is actually the case or not.

¹⁶ To be precise, the information must be Hearer-old (in the sense of Prince 1992): p may or may not have been discussed in the current conversation but the speaker assumes that p is known by the hearer.

Condition (a) implies that p was accepted as true, that is, it was part of the common ground, at some past time. Condition (b) implies that p is no longer accepted as true at a time closely preceding the utterance of $\text{sempre}(p)$, nor is $\neg p$.¹⁷

In view of these considerations, we specify the lexical entry for EP *sempre* in (37), where the denotation of this adverb is described as a partial function (defined only if conditions corresponding to (a) and (b) above are satisfied):

(37) **Lexical entry for TP-*sempre* in EP**

$$\begin{aligned} \llbracket \text{sempre} \rrbracket^{t_0, w_0} = \lambda p: \exists t_1 \exists t_2 [t_1 < t_2 < t_0 \ \& \ \forall w_1 [\llbracket w_1 \in \Omega(t_1) \ \& \ \neg \exists w_3 [w_3 \in \Omega(t_1) \\ \& \ \mathfrak{R}(t_1)(w_3, w_1) \rrbracket \rightarrow p(w_1) = 1] \ \& \ \exists w_2 [w_2 \in \Omega(t_2) \ \& \ \neg \exists w_3 [w_3 \in \Omega(t_2) \ \& \\ \mathfrak{R}(t_2)(w_3, w_2) \ \& \ p(w_2) \neq 1] \cdot p(w_0) = 1 \ \& \ \forall w_3 [\llbracket w_3 \in \Omega(t_0) \ \& \ \neg \exists w_2 [w_2 \in \Omega(t_0) \ \& \\ \mathfrak{R}(t_0)(w_2, w_3) \rrbracket \rightarrow p(w_3) = 1] \end{aligned}$$

As far as conditions (a) and (b) above are concerned, any type of proposition can provide a good argument for *sempre* in EP. Thus, for example, as long as we discussed and believed that John died of cancer, and later doubt about the truth of this proposition, it should be fine to say the equivalent of “John *sempre* died of cancer”. We saw in sect. 3.2 that EP does indeed allow for this possibility. But we also saw that Italian doesn’t allow for that. Thus, the analysis of Italian *sempre* must be more restrictive, so as to exclude the unacceptable sentence *John morì sempre di cancro*.¹⁸ To implement a suitable restriction to account for the unacceptability of the latter sentence, we draw on the intuition that *sempre(p)* in Italian requires previous knowledge of a plan to bring about what p describes (see sect. 3.2 above): we assume that Italian *sempre* has the presupposition that a plan to bring about the state of affairs described by p has been in the common ground for a while. For brevity, we call this the *plan presupposition*. Provided that we cannot plan to fall off a bike, whereas we can plan to go to the movies, our analysis explains why sentence (38a) below is acceptable in certain contexts, while (38b)

¹⁷ Assuming that it is appropriate to raise the question whether p exactly in those contexts which do not already entail either p or $\neg p$, condition (b) predicts that it would be appropriate to raise that question at a time closely preceding the utterance of $\text{sempre}(p)$.

¹⁸ We have seen above (sect. 3.2) that Italian would use the adverb *davvero* ‘really’ in this context, e.g. *John morì davvero di cancro*.

is bad in any context: while it is possible to have knowledge of a plan to go to the movies, it is not possible to have knowledge of a plan to fall off a bike, because there are no such plans in the first place.

- (38) a. Ci sono sempre andato al cinema domenica.
 ‘In the end, I did go to the movies on Sunday night.’
 b. ?Sono sempre caduto dalla bici.
 (Unacceptable in the reading: ‘In the end, I did fall off my bike.’)

We should stress that mere plannability of an event is not enough to satisfy the plan presupposition: an actual plan to make the event happen is required. This predicts that (38a) cannot be used to describe a situation in which I went to the movies on a last-minute decision. Also, the actual plan must have been mutually known by the interlocutors – (38a) cannot be used to describe a situation in which I went to the movies following a plan but I had never communicated my plan to the hearer.

In light of the discussion above, the lexical entry of TP-*sempre* in Italian can be given as in (39):¹⁹

(39) **Lexical entry for TP-*sempre* in Italian**

$$\begin{aligned} \llbracket \text{sempre} \rrbracket^{t_0, w_0} = \lambda p: \exists t_1 \exists t_2 [t_1 < t_2 < t_0 \ \& \ \forall w_1 \llbracket [w_1 \in \Omega(t_1) \ \& \ \neg \exists w_2 [w_2 \in \Omega(t_1) \\ \& \ \mathfrak{R}(t_1)(w_2, w_1)] \rrbracket \rightarrow [p(w_1) = 1 \ \& \ \text{PLANNED}(p, w_1)] \ \& \ \exists w_2 [w_2 \in \Omega(t_2) \ \& \ \neg \exists w_3 \\ [w_3 \in \Omega(t_2) \ \& \ \mathfrak{R}(t_2)(w_3, w_2)] \ \& \ p(w_2) \neq 1] \rrbracket. p(w_0) = 1 \ \& \ \forall w_3 \llbracket [w_3 \in \Omega(t_0) \ \& \ \neg \exists w_2 \\ [w_2 \in \Omega(t_0) \ \& \ \mathfrak{R}(t_0)(w_2, w_3)] \rrbracket \rightarrow p(w_3) = 1 \end{aligned}$$

Let’s sum up. On our analysis, the differences between EP and I are explained on the assumption that Italian *sempre* has what we have termed *plan presupposition*: it does not simply presuppose that *p* be old for the interlocutors (and no longer accepted as true),

¹⁹ In providing a lexical entry for TP-*sempre* in Italian, we make use of a primitive two-place predicate ‘PLANNED’ as part of our semantic meta-language. This predicate is defined over pairs of a proposition *p* and a possible world *w* and denotes the property that *p* has been the object of a plan in *w*. For example, the statement “PLANNED(that I go to the movies on the night of June 18th 2012, @)” intuitively means that the proposition that I go to the movies on the night of June 18th 2012 has been the object of a plan in world @. We will not discuss the relevant concept of plan in this paper.

but it also presupposes that a plan to bring about p have been in their common ground. TP-*sempre* in EP, on the other hand, only has the two requirements that (a) p be old and (b) no longer accepted as true. This means that, even in a case like our initial example (1a), in which a plan-related proposition is involved, in EP the plan is not there because required by the lexical semantics of *sempre*, but only accidentally, and the utterance is felicitous since the other presuppositions of *sempre* in EP are satisfied. On the other hand, in the Italian example (1b) the plan is lexically required by *sempre*.

The analysis of *sempre* that we have proposed for EP and I enables a simple unified account of the differences that were described in section 3. The unacceptability of TP-*sempre* in I with stative predicates denoting stable states, e.g. *to be Russian*, and with predicates like *to die* or *to fall off a bike* is uniformly accounted for by the claim that the plan presupposition cannot be satisfied in these cases, because it is not possible for an agent to form corresponding plans in the first place. Our analysis also explains the acceptability in I of sentences with past-tensed verbs that denote planned events, as in (38a), as such examples meet the lexical requirements specified in (39). The Italian examples in which *sempre* modifies a stative sentence, like (19) and (21)-(23) above, in which *sempre* intuitively denotes persistence or continuation of some state, do not represent a counterexample to our analysis of TP-*sempre* in terms of the plan presupposition, since they involve an interpretation of *sempre* which has been argued to differ from the TP-value.

5. Conclusion

In this paper we have compared a non-temporal interpretation of *sempre* in EP and Italian, which we call the TP-value. We have shown that in both languages this value serves a particular conversational purpose and hence is associated with contextual restrictions, which we have captured in terms of lexical presuppositions of *sempre*. In the analysis that we have proposed, the TP-value is accounted for in terms of a modal operator universally quantifying over epistemic worlds, and presupposes epistemic change, i.e. a change with respect to the likelihood of possibilities entertained by the speaker and the hearer (instead of the outright elimination of possibilities). We have

argued that EP and Italian differ in that in the latter language the event described by the preajacent proposition must have been known to have been planned (hence, it must be plannable in the first place), while in the former language the modal operator denoted by TP-*sempre* may combine with any proposition whatsoever.

Hence, our analysis explains the presuppositional behavior of TP-*sempre* underlying its felicitous use in both languages.

The empirical data presented, in particular the interaction with information about tense, aspect, and the linguistic expression of continuation of habits and states, suggests that there are complex relations between the meaning of this modal operator and the meaning of phasal adverbs like *ancora* and *ainda* ‘still’. We leave a detailed analysis of such relations for future work.

References

- Âmbar, Manuela, M. Gonzaga and E. V. Negrão. 2004. Tense, quantification and clause structure in EP and BP. In *Romance Languages and Linguistic Theory 2002*, vol. 265, Reineke Bok-Bennema, Bart Hollebrandse, Brigitte Kampers-Mahne and Petra Sleeman (Eds.), 116. Amsterdam: John Benjamins.
- Brito, Ana Maria. 2001. Clause structure, subject positions and verb movement: About the position of *sempre* in European Portuguese and Brazilian Portuguese. In *Romance Languages and Linguistic Theory 1999*, vol. 221, Yves D'hulst, Johan Rooryck and Jan Schroten (eds.), 63–85. Amsterdam: John Benjamins.
- Dowty, David. 1979. *Word meaning and Montague grammar*. Dordrecht: Kluwer.
- Fiéis, Alexandra. 2010. On the position of *sempre* in Medieval Portuguese and in Modern European Portuguese. *The Linguistic Review* 27, 75-105.
- Fraenkel, J.-J. 1989. *Etude de quelques marqueurs aspectuels du Français*. Genève: Droz.
- Gonzaga, Manuela. 1997. *Aspectos da sintaxe dos advérbios em Português*. MA dissertation, University of Lisbon.
- Hansen, Maj-Britt Mosegaard. 2004. La polysémie de l'adverbe *toujours*. *Travaux de Linguistique* 2, 49, 39-55.
- Ilari, Rodolfo. 1992. *Gramática do Português Falado. Vol. II: Níveis de Análise Lingüística*. Campinas: Editora da Unicamp.
- Jespersen, Otto. 1931. A new science: Interlinguistics. *Psyche*, 11, 57–67.
- Krifka, Manfred et al. 1995. Genericity: An Introduction. In G.N. Carlson and F.J. Pelletier (eds.), *The Generic Book*, Chicago and London: University of Chicago Press, 1-124.
- Lewis, David. 1975. Adverbs of quantification. In E. Keenan (ed.) *Formal semantics of natural language*. Cambridge: CUP, 3-15.
- Löbner, Sebastian. 1989. German *schon – erst – noch*: an integrated analysis. *Linguistics and Philosophy* 12, 167-212.
- Lopes, Ana C. M. 1998. Contribuição para o estudo dos valores discursivos de *sempre*. In M. A. Mota & R. Marquilha (orgs.), *Actas do XIII Encontro Nacional da APL*. Lisboa: Colibri, 3-14.

- Prince, Ellen. 1992. The ZPG Letter: subjects, definiteness, and information-status. In S. A. Thompson and W. C. Mann (eds.), *Discourse Description: Diverse Analyses of a Fundraising Text*. Amsterdam/Philadelphia: Benjamins, 295-325.
- Smith, Carlota. 2010. The Temporal Reference of the English Futurate. In *Text, Time, and Context*, Studies in Linguistics and Philosophy, Volume 87, 2, 147-160.