THE MEANING OF APPROXIMATIVE ADVERBS:
EVIDENCE FROM EUROPEAN PORTUGUESE

DISSEYATION

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By

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ABSTRACT

This dissertation presents an analysis of the semantic-pragmatic properties of adverbs like English *almost* and *barely* ("approximative adverbs"), both in a descriptive and in a theoretical perspective. In particular, I investigate to what extent the meaning distinctions encoded by the system of approximative adverbs in European Portuguese (EP) shed light on the characterization of these adverbs as a class and on the challenges raised by their semantic-pragmatic properties. I focus on the intuitive notion of closeness associated with the meaning of these adverbs and the related question of the asymmetry of their meaning components.

The main claim of this work is that the meaning of approximative adverbs involves a comparison between properties along a scalar dimension, and makes reference to a lexically provided or contextually assumed standard value of comparison.

In chapter 2, I present some of the properties displayed by approximative adverbs cross-linguistically and more specifically in European Portuguese. This chapter discusses the difficulties raised by their classification within the major classes assumed in taxonomies of adverbs. In chapter 3, I report two experiments that were conducted to test the asymmetric behavior of the meaning components of approximative adverbs and the role that they play in interpretation.

In chapter 4, I describe the range of interpretations contributed by approximative adverbs by analyzing the meaning of EP *quase* ‘almost’. I show that the possible
interpretations described correlate with the scope of the adverb; when the adverb has sentential scope, it receives a modal interpretation, whereas in its use as a focus adverb, it evaluates the applicability of the modified predicate. In chapter 5, I build on this approach to flesh out the comparison introduced by *quase* and how it underlies the asymmetry of its meaning components, and I compare the interpretation of *quase* with the interpretation of the more restricted adverbial *por pouco* ‘almost, lit. by little’. In chapter 6, I exemplify the cross-linguistically attested relation between approximative adverbs and negation by analyzing the meaning of *mal* ‘barely’. In particular, I describe the comparison introduced by this adverb and its scalar properties. In chapter 7, I show that the co-occurrence restrictions of *mal* can be accounted for on the basis of the scalar analysis proposed in chapter 6. I describe both the co-occurrence restrictions of the adverb with respect to the aspectual class of the predicate and the co-occurrence restrictions that pertain to polarity. Finally, I compare the meaning of *mal* with the meaning of *por pouco* in post-verbal position. Chapter 8 provides concluding remarks and suggestions for further research.
to my parents

to Lino
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CONVENTIONS

Abbreviations for Corpora Sources


cp Cetempúblico Corpus
Available at: www.linguateca.pt/cetempublico/
Each example is followed by the extension (Ext) number:
e.g. (CP Ext 1234)

BNC British National Corpus

List of labels used in glosses

1 First Person
2 Second Person
3 Third Person
FEM Feminine
MASC Masculine
SG Singular
PL Plural
ACC Accusative
DAT Dative
CL Clitic
SUPERL Superlative degree (adjectives)
PRES Present Tense (Presente do Indicativo)
SPAST Past Tense with perfective aspectual value (Pretérito Perfeito Simples)
PPC Present Perfect (Pretérito Perfeito Composto)
IMPF Past Tense with imperfective aspectual value
(Pretérito Imperfeito do Indicativo)
FUT Future
COND Conditional
INF Infinitive
PPART Past participle
GER Gerund (Gerúndio)
NEG Negation
lit. Literally (used in glosses and translations)
CHAPTER 1

INTRODUCTION

The study of adverbs\(^1\) has proven to be challenging for linguistic theories and only recently has begun to receive more systematic attention (cf. Alexiadou 2002, Ernst 2002). The difficulties range from the definition of the categorial status of adverbs\(^2\) to the specific analysis of the behavior of particular classes.

One of the reasons for the puzzling nature of adverbs is that they raise important questions about the syntax-semantics interface. The flexibility of most adverbs with respect to position makes it hard to correlate their semantic properties with their syntactic distribution, and to decide in particular cases whether homonymy is called upon. Moreover, there is a longstanding debate as to whether there is a universal hierarchy of syntactic positions for adverbs that determines their semantic type (Cinque 1999), or if instead it is the adverb’s selection of a certain type of semantic argument that regulates its distribution with respect to certain clausal projections (Ernst 2002).

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\(^1\) A note on the terminology used throughout the dissertation: following Ernst (2002:7), I will use the term *adjunct* in the sense of a phrase which is not selected by a predicate (i.e., a non-argument), *adverbial* in the sense of an adjunct which takes as its argument a proposition, a fact, an event or a time interval, and *adverb* as an adverbial that belongs to the syntactic category Adv.

\(^2\) For a thorough discussion of criteria, see Ramat and Ricca (1994) and Alexiadou (2002).
For semantic theories, a proper characterization of adverbs’ function as *modifiers* is also unclear. What exactly do they modify, given that the relation between linear order and scope is often not straightforward? Moreover, adverbs frequently interact with other aspects of the meaning of a sentence, like focus-presupposition structure, which makes it harder to tease apart the specific contribution of the adverb from other semantic and pragmatic properties of the sentence.

However, these challenges also render the study of adverbs appealing, in particular as we broaden the empirical coverage and look at less-studied classes. This dissertation focuses on a small set of adverbs which meet this description, adverbs like English *almost* and *barely*, the class I will call “approximative adverbs” (following Horn 2002a). I will concern myself mostly with the set of adverbs that instantiates this class in European Portuguese (EP), although I will refer to data from other languages, in particular from English, as relevant to the discussion.

Several reasons underlie the theoretical interest of approximative adverbs. In the literature, the meaning of approximative adverbs as exemplified in (1) and (2) for English *almost* and *barely* has been accounted for as contributing a conjunction of two propositions that instantiate the PROXIMAL component and the POLAR component of the adverbs (following Sevi 1998 and Horn 2002a). I will refer to this account as the “Conjunctive Analysis” (Ducrot 1972, Sevi 1998, Hitzeman 1992, Rapp and Von Stechow 1999, Horn 2002a, Schwenter 2002a).

---

3 Although this terminology is not used in all the approaches mentioned, and is specifically proposed by Horn (2002a), I will adopt it throughout, given that the other proposals listed make parallel claims.
There seems to be a difference between the two components given in (1’) and (2’).
Intuitively, the point of uttering (1) and (2) is to say something about the closeness to a
certain state of affairs being the case (here, winning the election or not), not about saying that
Gore didn’t win and that Bush won, respectively. In the following, I will refer to this problem
as the asymmetry of the meaning components of approximative adverbs (Horn 2002a).

The meaning of *almost* and *barely*, fleshed out in (1’) and (2’), is puzzling, as the
contribution of an approximative adverb is the conjunction of two propositions of opposite
polarity (e.g. *close to p* and *not p* in the case of *almost*). From the perspective of semantics
and pragmatics, the interpretation of approximative adverbs is challenging; if we assume that
the meaning of a sentence containing an approximative adverb should be analyzed as
involving multiple implications, we are left with the question of the relationship between
them. This question further divides into the need to account for the status of the different
implications and the roles they play in interpretation. Assuming that the implications
contributed by a sentence containing an approximative adverb correspond to different types
of meanings, how can we characterize these types? As we will see, they do not conform to
the standard tests of presupposition and entailment in a straightforward way.

An even more puzzling question pertains to the polar component of approximative
adverbs. In (3), one of the implications of the sentence containing *hardly*, an adverb that
shows broad semantic overlap with barely, is not that John is tall (i.e., the polar component of barely according to (2’)); rather, B’s answer in (3) means that John is not tall. The negative interpretation of hardly seems to be more conventionalized than that of barely (Amaral and Schwenter 2005, 2007):

(3) A: Is John tall?
   B: Hardly, he’s very short.

From the perspective of the study of meaning, these data are problematic, since the contribution of the same lexical item to the meaning of a sentence may yield either a positive or a negative interpretation (i.e., either p or ~p). In this dissertation, I will refer to the interpretation of examples like (3) as the “inverted readings” of approximative adverbs (following Schwenter 2002a).

Another question raised by the meaning of approximative adverbs pertains to the notion of “closeness” which is used to gloss the proximal component. What type of closeness do approximative adverbs denote? Note that the proximal component, as defined in (1’) and (2’), unlike the polar component, actually conflates both a “closeness” relation and a polar notion (either p or ~p). This aspect has not been discussed in the literature, but it proves crucial. Whereas barely has been analyzed as contributing a negative meaning, and hence as an “approximate negator” (Huddleston and Pullum 2002), it is not the case that almost contributes a positive meaning in the same way (as might be suggested by the paraphrase in (1’)). This suggests the need to “unpack” the definition of the proximal component.

Intuitively, approximative adverbs seem to encode a perspective on the expression that they modify by making reference to an ordering (a scale), hereby constraining the felicity of possible continuations. This raises the questions of how to model the perspective
introduced by approximative adverbs and what type of modification they convey. I will argue that the meaning of both adverbs involves an implicit comparison on a scalar dimension; the standard of comparison in each case imposes a particular perspective contributed by the adverb. I will argue that this perspective pertains to a linguistic construal of a situation and that it cannot be entirely captured in truth-conditional terms. Ultimately, these questions pertain to the relation between propositional content and truth conditions, an issue which hinges crucially on the conception of meaning and the boundaries between semantics and pragmatics. Explaining the relation between the two implications contributed by approximative adverbs, as well as the way in which the perspective they introduce is encoded, will be at the core of this dissertation. The analysis that will be proposed involves a particular perspective on the distinction between semantics and pragmatics, which I will present in the next section.

1.1 The semantics/pragmatics distinction

In the current work, I assume a distinction between semantics and pragmatics that follows the Neo-Gricean tradition (Levinson 1983, 1995, Horn 1984, 1989) but develops it as required by the issues raised by the analysis of approximative adverbs.

In the Neo-Gricean tradition, I assume that the domain of semantics pertains to the conventional, invariable meaning of a word or a sentence, which can be calculated in a compositional manner. Pragmatics, on the other hand, is concerned with utterance meaning and the relation between conventional meaning and context. Since Grice’s (1975) groundbreaking work, this relation is viewed as involving principles of rational behavior and
conventions of use that can be fleshed out in a systematic way, allowing for a view of utterance meaning as a function of the combinatorics of conventional meaning and pragmatic rules.

Whereas this divide on the composite nature of linguistic meaning will be followed in this dissertation to a great extent, the analysis of the meaning of approximative adverbs shows that the boundaries between the two domains can hardly be so neatly established. In fact, I will argue that the specification of the conventional meaning of approximative adverbs (i.e., their very semantic contribution) requires the determination of a scale and a standard value on that scale which are contextually retrieved. In other words, the values of the semantic parameters of the meaning of approximative adverbs are contextually determined. Thus, the conventional meaning of the adverb necessarily makes reference to contextual information. Crucially, the two domains are intricately related: although the scalar dimension along which the comparison is established is contextually determined, the structural properties of the scale are part of the semantic restrictions imposed by the conventional meaning of approximative adverbs.

The current analysis views the meaning of approximative adverbs as parallel to the meaning of gradable adjectives. In the latter case, the scalar dimension along which the comparison introduced by the meaning of the adjective is established is given by the semantics of the adjective, and the standard of comparison is contextually provided by means of a comparison class (Klein 1980, Kennedy 1999). In the case of approximative adverbs, both the scalar dimension and the standard value of comparison may be provided either by the lexical semantics of the modified expression or by contextual information.
The present work can be situated at the interface between lexical semantics and pragmatics. One of the goals of this dissertation is to show that the connection between the semantics of approximative adverbs and contextual information is encoded in their lexical meaning as a class. I will be concerned with the types of implications contributed by approximative adverbs that arise in a systematic way in frequent contexts of use, as a consequence of the realm of meaning that approximative adverbs are associated with, and with the relation between these different types of implications.

Approximative adverbs display a wide range of interpretations, since the notion of “closeness” associated with their meaning is highly underspecified. To give just a few examples, in (1), the meaning of almost pertains to the possibility of a certain state of affairs being the case, in (3) the meaning of hardly seems to be equivalent to not, whereas in (4) the meaning of barely can roughly be paraphrased by just and in (5) it can be paraphrased by rarely:

(4) John barely arrived.

(5) Poor guy, barely played a game, and when they did put him in, it was only for the last 30 secs of the 4th quarter… I think he played in a total of 4 games, 4 mins grand total… He wasted more time lacing up his sneakers.


The specification of the meaning of approximative adverbs crucially interacts with the meaning of the expression that they modify and also with contextual information. However, this does not mean that the determination of the meaning of approximative adverbs is random or totally unconstrained (as has been suggested for almost, see Tenny 2000); on the contrary, beneath this broad variability there are systematic restrictions both on the elements that may be modified and on the possible interpretations obtained.
For this reason, the classification of approximative adverbs is complex in that it requires the consideration of several criteria. As will be shown in chapter 2, approximative adverbs share properties of several classes of adverbs (adverbs of degree, negative adverbs, aspectual adverbs, speech-act adverbs), pointing to the need for a cross-categorial classification. This is the approach that will be pursued in this dissertation.

In the remainder of this chapter, I will present in more detail the Conjunctive Analysis and discuss the different proposals in the literature pertaining to the theoretical status of the meaning components of approximative adverbs. I will argue that the Conjunctive Analysis is not entirely adequate to account for the semantic-pragmatic properties of approximative adverbs that have been observed cross-linguistically and that it makes the wrong predictions with respect to some of their interpretations. The Conjunctive Analysis is too coarse-grained to capture the semantic co-occurrence restrictions of the set of approximative adverbs in EP and the semantic distinctions that are encoded by this class of adverbs in EP. Ultimately, I will argue that these distinctions shed light on the notion of “closeness” identified by the Conjunctive Analysis and that they provide some insight into the nature of this class cross-linguistically.

1.2 The Conjunctive Analysis

In this section, I present some of the shortcomings of the Conjunctive Analysis and the desiderata for an account of the semantic-pragmatic properties of approximative adverbs. Although the approach exemplified in (1’) and (2’) for almost and barely correctly captures the implications intuitively associated with the meaning of these adverbs, it has a number of shortcomings. Under the Conjunctive Analysis given in (1’) and (2’), the two
implications that correspond to the meaning components of approximative adverbs are given
the same status, i.e., both are asserted propositions. However, the identification of the two
components has made apparent their asymmetric character (Ducrot 1972, Sevi 1998, Horn
2002, Schwenter 2002). Treating both implications as assertions is hard to reconcile with the
intuition that e.g. the contribution of almost to a sentence is about closeness to the situation
denoted by the modified expression, not about its falsity.

This asymmetry raises the question of the nature and theoretical status of each of the
components; should the polar component be considered an assertion or rather a
presupposition, an implicature, or an entailment?

A problem that follows from the treatment of the meaning components of
approximative adverbs proposed by the Conjunctive Analysis pertains to the licensing of
negative polarity items (NPIs). As shown by (6) and (7), NPIs are licensed in the scope of
barely, which is analyzed above as having a positive polar component, but not in the scope of
almost, which has a negative polar component (cf. Horn 2002a):

(6) *She almost {slept a wink/touched a drop/spoke to anyone}
(7) She barely {slept a wink/touched a drop/spoke to anyone}

These examples suggest that the “negative” element associated with the meaning of
barely is not adequately captured by the split in the propositional components proposed by
the analysis above. This issue relates to the theoretical status of the polar component and its
relation with the proximal component, since in (6) and (7), the polarity of the latter seems to
be the relevant one.
A central problem raised by the Conjunctive Analysis pertains to the definition of the proximal component of approximative adverbs. The notion of “closeness” which is used in the paraphrase given in (1’) and (2’) has been addressed following two main approaches. The first consists of a model-theoretic intensional approach which relies on a relation of similarity between possible worlds (Sadock 1981, Rapp and Von Stechow 1999) or between indices of evaluation (Sevi 1998, Horn 2002a). Under this kind of approach, “closeness” is modeled as a relation between possible worlds, time intervals, or indices of evaluation.

The second approach assumes that almost and barely are scalar operators in that they crucially interact with ordered sets and their structural properties (see Hitzeman 1992, Rotstein and Winter 2004, Penka 2005, Winter 2006 for almost and Aranovich 1995 for Spanish casi; Ducrot 1972, Ducrot 1983 for presque ‘almost’ and à peine ‘barely’). Under the scalar approach, “closeness” is defined in terms of the distance between degrees on a scale.

However, on both accounts the notion of “closeness” is treated as a pre-theoretical notion. Neither type of account makes explicit the way in which this intuitive notion underlies the proximal component and is at the core of the contribution that approximative adverbs make to the sentence in which they occur.

This problem can be made apparent by looking at Rapp and Von Stechow’s (1999) definition of the “core meaning” of German fast ‘almost’, given in (8):

(8)  “fast is of type <s, <<s, t>, t>>. Let w be any world:
    F (fast)(w)(p) = 1 iff (a) and (b) hold.
    a. There is a world w’ which is almost not different from w and p(w’) = 1.
    b. p(w) = 0.” (Rapp and von Stechow 1999:159).

4 There are significant differences in the specific approaches and in the frameworks adopted, but for the purpose of this dissertation the relevant common element is the scalar perspective that they share.
Conjunct (a) in this definition follows Sadock’s (1981) account of the meaning of *almost*, in that it relies on the notion of similarity between worlds. The proximal component remains undefined in Rapp and Von Stechow’s analysis, since the definition includes the notion to be defined and therefore is circular. However, a proper understanding of this notion is crucial inasmuch as the proximal component provides the asserted content of approximative adverbs, as will be shown below.

The analysis provided in (1’) and (2’) leads to a view of *almost* and *barely* as “mirror-images”, as argued by Sevi (1998) and Horn (2002a). Such a characterization presents the meaning of these adverbs as interdefinable (*almost not=barely*), as in (9), from Horn (2002a):

(9) If Bush barely won, he almost didn’t.

Such an analysis predicts that the internal negation of *almost* is equivalent to *barely*. However, the following examples show that this prediction is not borne out:

(10) #Bush barely won, but he got more votes in Ohio than he expected.

(11) Bush almost didn’t win, but he got more votes in Ohio than he expected.

The continuation expressed in the conjunct prefaced by *but* is felicitous only if it denies an expectation arising from the first conjunct. The difference in acceptability between (10) and (11) shows that the contribution of *barely* and *almost not* is not equivalent in the creation of this expectation. In this dissertation, I argue that the expectation created relates to the comparison conveyed by these adverbs; whereas both *barely* and *almost* (and their corresponding words in EP) involve an implicit comparison, the standard of comparison is different in each case, hence the difference in acceptability of examples like (10) and (11). In
other words, one of the problems of the Conjunctive Analysis, made apparent by (10) and (11), is the fact that the definition of the proximal component is not sufficiently detailed.

Treating these adverbs as “mirror-images” raises the question of whether there is evidence to the effect that they should be treated as belonging to the same semantic class. In most languages the words that correspond to the pair *almost/barely* are diachronically unrelated; should we indeed analyze them as conveying the same semantic notion, but coming from opposite perspectives? What type of “approximation” do they convey and what criteria can we use to identify it?

A related question arises with respect to other words that are in paradigmatic opposition to *almost* and *barely* in certain contexts (e.g. *approximately*, *sort of*) – do they express the same semantic notion? The claim to be defended in this work is that there is a set of properties that allows us to identify *almost* and *barely* as approximative adverbs, and also to explain why in certain contexts they constitute paradigmatic alternatives to adverbs from other semantic classes. An argument for the insufficiency of the description provided by the Conjunctive Analysis exemplified in (1’) and (2’) above comes from the fact that it also seems to be an adequate description for the meaning of other adverbials, like *approximately*, as in (12) and (12’):

(12) John is approximately 10 years old.

(12’) John’s age is close to 10 & John is not (exactly) 10.

The two conjuncts given in (12’) that gloss the meaning of *approximately* can be seen as the two implications that correspond to the proximal and the polar components, respectively. Should we treat *approximately* as an approximative adverb? There is an important difference
between the meaning of approximative adverbs and words like *approximately* (as argued in more detail in chapters 2 and 5). Under normal circumstances, (12) can be uttered both if John is a bit older and a bit younger than ten, whereas in an out-of-the-blue context (13) means that John is slightly *under* the age of 10, hence the infelicity of (14) against (15):

(13) John is almost 10 years old.
(14) #John is almost 10 years old; to be accurate, he is 10 years and ten days old.
(15) John is approximately 10 years old; to be accurate, he is 10 years and ten days old.

A relevant distinction between *almost* and *approximately* can be drawn by looking at (16) and (17):

(16) John is almost 10 years old, and he’s really excited about it.
(17) #John is approximately 10 years old, and he’s really excited about it.

In (16), the first conjunct provides a propositional antecedent to the pronoun *it*. Although this antecedent is underspecified, possible resolutions of the anaphoric expression are “He’s really excited about *his upcoming birthday*” or “He’s really excited about *the idea of turning ten*”, while these interpretations are not available in (17).

Again, whereas *approximately* and *almost* seem synonymous in the examples above (if we do not consider the anaphoric reference in the possible continuations), *approximately* is infelicitous in (18), when uttered out-of-the-blue:

(18) #John approximately fell.

The Conjunctive Analysis cannot predict this difference in felicity between *almost* and *approximately*, since the formulation of the proximal component does not specify any
requirements as to the (semantic or syntactic) restrictions on the expressions that *almost* may modify.

A broader theoretical question is raised by the Conjunctive Analysis. In (1’) and (2’) nothing is said about the relation between the two propositional components contributed by approximative adverbs. The identification of these implications raises the question of whether it is coincidental that the two propositions happen to be conveyed by this class of adverbs. In chapter 3, I report experimental work that was conducted to test the asymmetry of the meaning components of approximative adverbs. It is shown that subjects identify each of the meaning components according to the task they are presented with. When asked to provide felicity judgments about the coherence of pairs of sentences in which the first sentence contains an approximative adverb, subjects clearly favor the proximal component. However, when asked explicitly about the truth conditions of the sentence in the actual world, subjects respond in accordance with the polar component. Hence, the identification of the implications associated with the meaning of approximative adverbs seems to be highly dependent upon the nature of the tasks presented to native speakers. These data are relevant to understanding the contribution of each component to context update and the relation between the two meaning components.

This question is also pertinent for diachronic considerations and for language acquisition; there is evidence that the two components do not play the same role in semantic change (cf. Schwenter 2002a, Pons Bordería and Schwenter 2005, Amaral 2006a). Furthermore, the polar component seems to be acquired later than the proximal component, as shown by the research on acquisition reported in chapter 3 (Champaud and Bassano 1987 for French *presque* and *à peine*, Boucheix and Dhont 1992 for French *Presque*, ‘almost’).
In this section, I have outlined the contribution of the Conjunctive Analysis to the study of approximative adverbs. This type of account has correctly identified the two meaning components of this class of adverbs, as glossed by the implications given in (1’) and (2’). However, I have shown that a number of problems remain, in particular pertaining to the definition of the nature of the proximal component and the asymmetry between the two components. Both synchronic and diachronic data show that treating the two propositional components as conjoined assertions is too coarse an analysis since it cannot capture the complexity of the behavior displayed by approximative adverbs. In the next section, I present a number of tests that can be used as evidence for the asymmetry of the two components and may provide clues as to the identification of their theoretical status.

1.2.1 The asymmetric status of the meaning components

Several tests provide evidence for the asymmetry of the meaning components of approximative adverbs. As pointed out in Schwenter (2002a), the meaning of yes/no questions, as in (19) below, shows that the proposition questioned is the proximal component, as made apparent by the continuation of B’s answer in (19 a’):

(19) a) A: Did John almost miss the train?  
    B: Yes. (=He got close to missing the train & he didn’t miss the train) 
   a’) B: Yes, he did almost miss the train; he caught it just in the nick of time.

In (19b), B’s response negates the proximal component, but not the polar component, since it is generally not interpreted as entailing that John missed the train. This would be
predicted as a result of double negation, i.e., \(\neg(\neg{\text{miss\_the\_train\ (j)})}, \) which does not correspond to native speakers’ intuitions about the meaning of the sentence:

(19) b) A: Did John almost miss the train?  
     B: No. (=He didn’t come close to missing the train; \(\neq\) he missed the train)

Therefore, the bare yes/no answer “can only be interpreted as affirming or denying the proximal, not the polar component (…)” (Schwenter 2002a:164). Again, this is apparent in the felicitous continuation of B’s response:

(19) b’) B: No, he didn’t. In fact, he was there a full ten minutes before it left.

Crucially, descriptive negation does not affect the polar component. In order to negate the implication of A’s question that John did not miss the train, a reply as in (b’’) would be required:

(19) b’’) B: No, he didn’t ALMOST miss the train. He DID miss it. He showed up after it had already pulled away from the platform.

B’s answer in (b’’) has a clear flavor of metalinguistic negation (the use of capitals in the example signals prosodic prominence). These data show that it is only possible to respond to or negate the proximal component of approximative adverbs, suggesting that this component is the main contribution of these adverbs to the conversational record.

Another example that supports the asymmetric view of the two components is given in (20) (from Ziegeler 2000, Horn 2002a):

(20) I almost cancelled because \{I was ill/#I would have felt too guilty\}.
In (20), the proposition “I did not cancel” (i.e., the polar component under the Conjunctive Analysis) cannot support the causal link expressed in the subordinate clause. Hence, the causal clause elaborates on the proximal component of the approximative adverb, not on the polar component.

As noted by Nouwen (2006), the evaluative adverbs in (21) and (21’) express an evaluation of the proximal, not of the polar component:

(21) Fortunately, Peter can barely read (so he couldn’t fully understand the insults addressed to him in the letter).

(21’) Unfortunately, Peter can barely read (so he should practice more).

In both examples, what is evaluated as fortunate or unfortunate is the fact that Peter’s reading skills are unsatisfactory (i.e., close to Peter cannot read), not the fact that he can read, despite the positive polar component of the adverb.

Moreover, it has been pointed out that in sentences with NPI let alone licensed by barely, the second conjunct of the sentence is interpreted as a negative proposition, which is consistent with the assumption that the proximal component of barely is more prominent than the polar component (Fillmore et al 1988:518):

(22) He barely reached DENVER let alone CHICAGO.

In other words, the meaning of (22), which presupposes traveling from west to east, is correctly paraphrased by (24), not by (23):

(23) He barely reached Denver; a fortiori he barely reached Chicago.

(24) He barely reached Denver; a fortiori he did NOT reach Chicago.
The different status of the meaning components is also made apparent by the fact that the polar component can be explicitly asserted in a clause conjoined to a sentence containing an approximative adverb, provided the sentence is prefaced by *but*, as in (25) and (27), whereas the explicit assertion of the proximal component always yields an infelicitous utterance, as in (26) and (28):

(25) Danny is almost bald, *and* but he is not bald yet.

(26) *Danny is almost bald, *and* but he is close (to being bald).

(27) John barely reached Denver, *and* but he did it.

(28) *John barely reached Denver, *and* but he came close to not reaching it.

Further evidence for the asymmetry of the two components in the interpretation of approximative adverbs also comes from other sources. Data from acquisition studies suggest that in terms of ontogeny, the proximal component of *almost* seems to be acquired earlier (cf. Boucheix and Dhont 1992). Experiments on the interpretation of *almost* by children show that before 7 years old, children assign to a sentence containing *almost* an interpretation that corresponds to a value either slightly under or slightly above the value denoted by the expression which is modified by the adverb, a result which clearly differs from the one obtained with adults and which becomes weaker between the ages of 7 and 10. Adults and older children only allow for values which are slightly under the value denoted by the expression modified by *almost*. This suggests that while the polar component seems to be present only at a later age, the proximal component plays a role earlier on in the way children interpret sentences containing the adverb *almost*. 
In the next section, I provide some background on previous approaches to the theoretical status of the polar component of approximative adverbs.

1.2.2 The Polar Component

In the literature on approximative adverbs, there has been a long debate with respect to the status of the polar component. Three main views can be identified.

On the first view, the polar component is part of the conventional meaning of the adverb, and is therefore an entailment. This is the view adopted in Hitzeman (1992), as well as in Rapp & Von Stechow’s definition of almost presented in (8) (in conjunct (b)). This is also the view argued for by Horn (2002a), although he considers that this component is not part of the asserted content of the adverb. According to Horn, the polar component is “entailed but assertorically inert”:

Semantically entailed material that is outside the scope of the asserted, and hence potentially controversial, aspect of utterance meaning counts as ASSERTORICALLY INERT and hence as effectively transparent to NPI-licensing and related diagnostics of scalar orientation. (Horn 2002a:62)

Under this view, the difference between the two components is pragmatic in nature and pertains to the role that different types of linguistic meaning play in the course of context update. A relevant question at this point is what it means for an entailment to be “assertorically inert” and in particular how can this notion be distinguished from other types of linguistic content that is not asserted. This is a theoretical question which pertains to the status of different “kinds” of meanings. Although this issue is not entirely solved by Horn’s proposal, his contribution is important in the problem of the asymmetry of the two
components is framed in terms of what is the asserted content. Crucially, Horn assumes that the polar component is added to the Common Ground (and hence, is new information), albeit in a different manner from the proximal component. The approach to the status of the polar component that is proposed in this dissertation elaborates on Horn’s account.

A second view, put forward by Anscombe and Ducrot (1983), is that the polar component of almost and barely should be considered a presupposition. This account runs into problems because sentences containing approximative adverbs fail to pass the standard “family of sentences” tests for presupposition (Kadmon 2001; for a more thorough set of tests for presupposition and different types of non-asserted meanings, see Roberts, forthcoming). For example, both in the interrogative sentence (29) and in the sentence with negation (a hole to presupposition), in (30), the intuitions are not clear as to whether the sentences presuppose that Danny is not bald:

(29) Is Danny almost bald?
(30) It is not the case that Danny is almost bald.

The third position is adopted by Sadock (1981), Atlas (1984), and Ziegeler (2000), who argue that the polar component is calculated on the basis of the conventional meaning of the word and general principles of cooperative conversation, and thus arises as a conversational implicature.

The latter view faces a major problem, namely the fact that the purported status of conversational implicature is hard to reconcile with the resistance to explicit cancellation exhibited by the polar component (cf. Hitzeman 1992, Horn 2002a). This view is unable to
account for the fact that (31) is contradictory, a result predicted if the polar component is considered an entailment:

(31) *Mary is almost a corporal and she’s a corporal.

Sadock points out that the negative implicatum of a sentence containing *almost is harder to cancel than other scalar implicata, e.g. the “not all” implicatum of *some, a fact for which he provides no explanation. However, Atlas provides other examples, which he considers to be non-contradictory (Atlas 1984:352):

(32) Not only did Mart almost swim the English Channel, in fact he did swim it.

One of the arguments supporting the conversational implicature view is the “reinforceability” criterion (Sadock 1978). Conversational implicata may be non-redundantly affirmed, as in (33), which is not the case for entailed and presupposed material, as shown by the impossibility to felicitously add the existential presupposition of the definite description to the sentence in (34):

(33) Some but not all men are bald.

(34) *The king of France is bald and there is a king of France.

Sadock (1981) argues that [α almost ψ’d] is like (33) in that the negative conjunct in (35) can be non-redundantly added:

(35) Gertrude almost but did not quite swim the English channel.
However, Horn (1991) shows that entailments and presuppositions can be felicitously affirmed, if there is *rhetorical or argumentative contrast* (Anscombre and Ducrot 1983) between the two conjuncts, as made explicit by the use of *but* in (35). Rhetorical contrast is defined by Horn in the following way:

> An informationally redundant affirmation of Q will be discourse-acceptable if it counts as argumentatively distinct from P in the sense that where P counts as an argument for a conclusion R, Q represents or argues for an opposite conclusion R’. (Horn 1991:326)

So, if semantically entailed material can be felicitously reinforced, these tests cannot serve as a diagnostic for the conversational implicature status of the polar component.

In their discussion of the implications associated with the meaning of French *presque* ‘almost’ and *à peine* ‘barely’, Anscombre and Ducrot argue that these words have opposing scalar orientations, i.e., they belong to opposed argumentative scales. According to Anscombre and Ducrot, two propositions $p_1$ and $p_2$ are placed in the same argumentative scale if there is a third proposition $q$ for which the speaker considers $p_1$ and $p_2$ as arguments. This relation between an argument and a plausible conclusion is not a relation of logical implication, but rather a relation supported by a typical correlation provided by world knowledge.

The scalar orientation of the adverbs is introduced by their asserted content (i.e., not by the polar component, which is the presupposed content, on their account). This can be seen by comparing (36) and (37), from Anscombre and Ducrot (1983):

(36) #Il fait presque nuit, allume seulement tes veilleuses.
    ‘It is almost night, turn only your night lights on.’
(37) #Il fait à peine nuit, allume tes veilleuses.
   ‘It is barely night, turn your night lights on.’

In (36) and (37), the proposition denoted by the first clause is the proffered motive for the directive in the second clause. If we consider the polar implications of the sentences containing approximative adverbs in (36) and (37) according to the Conjunctive Analysis, i.e., that it is not night at speech time and that it is night at speech time, respectively, the continuations provided should be felicitous, since these propositions could be taken as arguments for the conclusions expressed by the second sentences in (36) and (37). However, (36) and (37) are not felicitous utterances.

Anscombe and Ducrot argue that presque has a positive argumentative value, while à peine has a negative argumentative value in that the former licenses continuations compatible with the truth of the modified predicate (in (36), that it is night) and the latter licenses continuations with the falsity of the modified predicate (in (37), that it is not night). The felicity patterns observed in (36) and (37) provide the counterpart, at the discourse level, of the causal connection at the sentence level, noted in (20) above, that also builds on the proximal component of the adverb.

Although Anscombe and Ducrot make important observations about the behavior of sentences containing approximative adverbs with respect to their felicitous continuations, they do not provide any explanation for why this is the case; there is no semantic analysis of the adverbs that would predict such behavior. Moreover, the notion of “positive” and “negative argumentative orientation” is misleading in that it may suggest some intuitive notion of positive or negative evaluation related to a high vs. a low quantity in absolute terms (this is the understanding of Lundquist and Jarvella 1994, Jarvella and Lundquist 1994, in
their experiments). For *almost*, such an approach is inadequate, since the adverb may felicitously modify an expression that denotes either a minimum or a maximum scalar value and hence may yield an interpretation that pertains either to a low or a high quantity (i.e., both *almost nothing* and *almost everything* are perfectly acceptable). Rather, the insight of Anscombe and Ducrot’s work consists of pointing to the scalar semantics of the adverbs and to the way in which it licenses inferences that constrain the range of contexts in which the adverbs may be felicitously used. In this dissertation, I try to capture this insight by specifying the nature of the comparison introduced by the adverbs, the structural properties of the scale involved, and the standard value (or norm) on the scale that the adverb selects for.

What (36) and (37) show is that the proposition identified by the Conjunctive Analysis as the polar component is somehow “backgrounded” (Sevi 1998) or “assertorically inert” (Horn 2002a). This can be seen clearly by comparing the felicitous continuations of a sentence containing (a) an approximative adverb vs. (b) the polar implication of that approximative adverb, as illustrated by the following examples from Spanish *casi* and sentential negation (from Schwenter 2002a:163):5

(38) Vamos a sentarnos (ya), está casi lista la cena.  
‘Let’s sit down (now), dinner’s almost ready.’

(39) #No vamos a sentarnos (todavía), está casi lista la cena.  
‘Let’s not sit down (yet), dinner’s almost ready.’

(40) #Vamos a sentarnos (ya), no está lista la cena.  
‘Let’s sit down (now), dinner’s not ready.’

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5 In (38)-(41), it should be assumed that the meaning of “sit” is contextually specified as “sit at the dining table (in order to eat)”.

24
(41) No vamos a sentarnos (todavía), no está lista la cena.
‘Let’s not sit down (yet), dinner’s not ready.’

Even though the polar component of casi in (38) and (39) can be paraphrased as “Dinner is not ready”, (39) is not a felicitous utterance (cf. (41)).

One of the contributions of the Conjunctive Analysis is that it has identified and teased apart the two implications associated with the meaning of approximative adverbs, hence allowing for the identification of their asymmetric character. This issue will be pursued in this dissertation both in a theoretical and in an experimental perspective. The experiments reported in chapter 3 build on the continuation tests presented in this section; the two experiments conducted were designed to provide psycholinguistic evidence for the asymmetric behavior of the two components and to isolate their role in interpretation.

1.2.2.1 The “inverted readings” of approximative adverbs

In this section, I briefly describe the phenomenon of “inverted readings” of approximative adverbs (Schwenter 2002a, Horn 2002a), and the way in which it has been understood to bear on the problem of the asymmetry of the meaning components of approximative adverbs.

This phenomenon has been attested in different, unrelated languages. As exemplified in (3) with English hardly, in certain contexts the adverb does not display a positive polar component, as glossed in (2’), but rather a negative polar component. In this dissertation, I will refer to the interpretation in which the polar component of an approximative adverb conforms to the description given in (1’) and (2’) as the “canonical interpretation”, and to the
interpretation of the adverb as displaying the opposite polarity as the “inverted interpretation”. According to Horn, in the latter case “the proximal component is retained but the polar component effectively flip-flops depending on the context of utterance and interpretation.” (Horn 2002a:63).

One of the described cases concerns the Mandarin Chinese particle *chā-yīdiār* ‘almost’ (literally ‘miss-a-little’). When this particle has scope over a negated verb phrase, it may have the expected reading ‘barely, almost not’, or the logically unexpected reading ‘almost’ (cf. Li 1976). According to Li, the predicate over which the particle has scope is crucial for the determination of the reading, in that the inverted reading arises when the predicate denotes an event regarded as highly undesirable (according to world knowledge), like “die”, “be drowned”, “bump into a wall”.

Another example is “inverted casi (‘almost’),” an innovative use attested in Valencian Spanish (cf. Schwenter 2002a), exemplified in (42):

(42) “[Context: Speaker is trying to get out of his car, parked on a narrow street, but many cars are passing by and he has to wait. When he is finally able to get out, he says] ¡Casi salgo! (Schwenter 2002a:166)
  almost get-out: PRES:1SG
  ‘I almost did not get out!’

In restricted linguistic contexts (in utterance-initial position and only with verbs in the Present Tense), casi *p* may be uttered even if the context entails the truth of *p*. In (42), the fact that the speaker managed to get out of the car is of course known to him, and the approximative adverb therefore exhibits an “inversion” of its canonical polarity. Moreover,

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6 For inverted readings of Spanish *apenas* ‘barely’, see Albelda (2005).
what the adverb contributes in (42) is that “the event described in p is presented as having been on the verge of non-realization” (Schwenter 2002a:171).

The licensing of this interpretation is restricted to particular contextual conditions. According to Schwenter, “‘inverted’ casi always expresses contravention of some temporal expectation” (2002a:170): what is common to the licensing contexts of inverted readings of casi is that they entail an expectation pertaining to the temporal circumstances of a certain event, which is contravened by the facts in the actual world.

Crucially, the interpretation of the approximative adverb in (42) requires shared knowledge between the participants in the conversation both of the temporal circumstances of the actual situation and knowledge of a norm pertaining to the expected correlation between temporal circumstances and a certain state of affairs. In (42), a comparison is established between the actual situation (with respect to the amount of time taken to get out of the car) and a contextually-assumed norm (the amount of time which in average it takes to get out of a car, under normal circumstances).

Previous research on approximative adverbs has pointed to the theoretical relevance of the phenomenon of inverted readings in that it makes apparent the asymmetric role of the two meaning components; the interpretation of (42) retains the proximal component of casi while reversing its polar component (Horn 2002a, Schwenter 2002a). However, as will be shown in chapter 7, such a view is not entirely accurate, as the proximal component is also affected in these interpretations.

7 Crucially, this interpretation could not have been obtained by using Span. apenas ‘barely’; “Apenas salgo” would mean that the speaker has just gotten out of his car.

8 “If the polar component is more peripheral to the force of almost sentences than is the proximal component, it should not be too surprising to find such cases of inversion; what we never find is the reverse, when almost P retains the not P entailment while jettisoning its better (proximal) half.” (Horn 2002a:65)
The main theoretical question that has been associated with inverted readings is why the polar component can be overridden by certain contextual conditions and what these interpretations suggest about its theoretical status. Clearly, there seems to be a tight link between the polar component and what the speaker assumes to be the norm or the expected outcome of a certain situation. This suggests that treating the propositions yielded by the components of approximative adverbs as conjoined assertions may prevent us from an accurate characterization of the semantic value of approximative adverbs, in particular from understanding the relation between the two meaning components.

Moreover, I believe that the phenomenon of inverted readings is crucial for the understanding of the meaning of approximative adverbs in an even more fundamental way. Given that this type of interpretation seems to be highly restricted to contexts involving the comparison of situations in the actual world with general expectations and assumptions about the course of events, these cases provide important insight for the description of the meaning of approximative adverbs, by clarifying the notion of “closeness” and the nature of its contextual dependence. The phenomenon of inverted readings shows that the meaning of approximative adverbs crucially interacts with contextual information, which includes both information about contextual coordinates (like temporal circumstances) and assumptions and expectations about possible courses of events held by the participants in a conversation.

From a theoretical perspective, the interpretation of approximative adverbs raises an important issue; these adverbs display sensitivity to both types of information: (i) information about the contextual coordinates of an utterance and (ii) knowledge and expectations pertaining to situations of use of a certain predicate. This context sensitivity may be reflected in the structure of discourse and the requirements placed on it, as will be shown in chapter 7.
In a way, the phenomenon of inverted readings points to a broader understanding of the notion of “indexicality” (Kaplan 1979, Levinson 1983, Perry 1997), to be extended to include the speaker’s beliefs and assumptions.

1.2.3 The Proximal Component

In this section, I review two main types of approaches to the proximal component found in the literature, which I will call intensional and scalar, following Nouwen (2006). The former is represented by Sadock (1981), Rapp and Von Stechow (1999) and Sevi (1998), and the latter by Hitzeman (1992) and the more recent proposals of Penka (2005) and Nouwen (2006). I will also review García-Medall’s (1993) analysis, since it constitutes an attempt to motivate and describe a semantic class of approximatives for a specific language (Spanish). With the exception of Sevi (1998), these papers focus exclusively on the meaning of almost (or German fast); hence, the analysis will to a great extent be limited to the proximal component of the meaning of this adverb.

1.2.3.1 The intensional approach

Sevi (1998) proposes a unified analysis of almost and barely (and their corresponding words in Hebrew) that aims at capturing the relations between the meaning of the two adverbs. He claims that the semantics of these adverbs is underspecified, which gives rise to the broad range of possible interpretations. This underspecification is resolved through the
choice of a contextually given linearly ordered set, which may be either lexically or contextually determined.

The main idea is that this set pertains to a dimension of the circumstances of evaluation of a sentence, like possible worlds, standards of precision, and time intervals. Sevi defines a three-place relation over indices, namely a relation of minimal closeness to the index of evaluation with respect to the given dimension. The truth conditions of the two adverbs are given in (43):

(43) Let $A$ be a formula, let $I$ be a discrete set, and let $<$ be a three-place relation such that for every $i^* \in I$, $<_{i^*}$ is a strict partial order on $I$ ($i_1 <_{i^*} i_2$ is read as $i_1$ is closer to $i^*$ than $i_2$).

\[
[[\text{almost}A]]^* = 1 \text{ iff } [[A]]^* = 0 \text{ and there is an } i', \text{ s.t. for any } i'', i' <_{i^*} i'', \text{ and } [[A]]^i = 1
\]

\[
[[\text{barely}A]]^* = 1 \text{ iff } [[A]]^* = 1 \text{ and there is an } i', \text{ s.t. for any } i'', i' <_{i^*} i'', \text{ and } [[A]]^i = 0
\]

(Sevi 1998:56, (8))

There are two main implications of these truth conditions. First of all, the adverbs are defined as the inner negation of each other, i.e., almost not is predicted to be equivalent to barely and barely not is predicted to be equivalent to almost. Second, the contribution of each adverb is analyzed in terms of two assertions (a negative and a positive one), hence Sevi’s proposal is an instance of the Conjunctive Analysis. Although Sevi acknowledges that the two propositions are not equally “important” (Sevi 1998:51) in the interpretation of each adverb, he does not specify a way in which this difference should be modeled (i.e., on his account both propositions are asserted).
The interpretation of sentences (44) and (45) is accounted for as involving a comparison between the current standard of precision and another standard of precision, which would yield a different evaluation:

(44) Danny is almost bald.
(45) Danny is barely bald.

According to the truth conditions given above, (44) is true if the sentence obtained by removing the adverb is false relative to the current standard of precision and true relative to a minimally close standard (and the inverse for (45)). On this account, the contribution of almost in this sentence is a relaxation of the standard of precision; the minimally close standard allows in the extension of the predicate “bald” a number of individuals which do not belong in the extension of the predicate under the current standard. In the case of barely, the predication is truthful according to the current standard of precision but it is false under a close, stricter standard of evaluation (i.e., a standard that requires the sentence to be true relative to more standards of precision than the current standard). Hence, barely operates a tightening on the standard of precision.

I believe that this account faces a major problem. If almost simply operates a relaxation of the standard of evaluation, one would expect it to behave just like approximately, not exactly or loosely speaking. The contrast between almost and approximately exemplified in (14) through (17) above shows that this prediction is not borne out with respect to approximately. As for loosely speaking, note that (46) sounds simply like a rectification of the speaker, while (47) is contradictory:

9 A relation of relaxation on the set of precisifications is defined as follows:

“(14) A precisification s_i for a predicate P is more relaxed than a precisification s_j for P iff the extension of P relative to s_j is a proper subset of the extension of P relative to s_i.” (Sevi 1998:39).
Loosely speaking, Danny is bald. But more accurately, he has a reasonable amount of hair.

Danny is almost bald. But more accurately, he has a reasonable amount of hair.

Sevi notes that unlike *loosely speaking*, the contribution of *almost* has a truth-conditional effect, but in fact his account does not handle the two cases differently (since the truth conditions in (43) predict that in a sentence with *almost* the current standard is less strict than the minimally close standard).

Another difference between *almost* and *loosely speaking* which cannot be captured by Sevi’s account pertains to the felicity contrast exemplified in (48) and (49):

Danny is almost bald but he is not bald yet.

#Loosely speaking, Danny is bald but he is not bald yet.

The contribution of *almost* made apparent in (48) is to focus on a transition between two states of opposite polarity (*not bald vs bald*), hence introducing a dynamic perspective. In this respect, the meaning of *almost* relates to the semantics of phasal\(^{10}\) adverbs like *already* and *not yet*, which contribute a perspective on a state by locating it with respect to a change of state (Löbner 1989). This is not the case for *loosely speaking*, and consequently (49) is infelicitous.

Furthermore, Sevi’s proposal cannot account for the fact that the polar component of *almost* cannot be explicitly asserted unless it is presented as going against an expectation, as shown by the fact that (50) is infelicitous:

---

\(^{10}\) I use the term *phasal adverb* in the sense of Löbner (1989) and Van der Auwera (1998) as referring to adverbs like English *already*, German *schon* or *noch nicht*, or Portuguese *ainda* and *já* (also designated as *aspectual adverbs*, cf. Ernst 2002).
(50) #Danny is almost bald and he is not bald yet.

This shows that Sevi’s account does not capture the argumentative orientation (in the sense of Anscombe and Ducrot 1983) of the adverbs.

I believe that the greatest shortcoming of Sevi’s account pertains to the analysis of barely. Consider (51):

(51) Barely ten students attended the semantics seminar. (Sevi’s example (49))

Sevi’s account of (51), given in (52), is counterintuitive in that it fails to capture the notion of insufficiency (i.e., the evaluation as “less than expected” or few in quantity) that is contributed by this adverb. For (53), on the other hand, his account seems appropriate:

(52) “Ten students did attend the seminar, but there is a closest (contextually relevant) number such that that many students did not attend.” (Sevi’s example 49’, p. 69)

(53) Almost ten students attended the semantics seminar.

Sevi acknowledges that barely has an evaluative dimension, differently from almost, but he considers that that is a pragmatic issue not relevant for the analysis. Moreover, he seems to accept an ill-defined “optimistic” (his term) implication of the meaning of almost and a “pessimistic” (his term) implication for barely. Note that if we assign a parallel status to each assertion contributed by almost and barely, the “negative” character of barely is not accounted for, and it is not clear why, for example, the adverb licenses NPIs, as observed above.

Contrary to Sevi, I believe that the notion of insufficiency relative to an expectation or few in quantity is a central issue in the semantics of barely. The Portuguese example in (54) is clearly contradictory:
One of the examples discussed by Sevi is (55), from Sadock (1981:259, footnote 2), which is presented as a potential problem for Sadock’s analysis based on similarity between possible worlds:

(55) 961 is almost a prime number. According to Sevi, the interpretation of (55) is correctly accounted for under his analysis, since one can simply assume that we are relaxing the standard of precision of the (otherwise strict) mathematical definition of a “prime number”. However, note that this relaxation of the standard of precision crucially depends on interpreting (55) as pertaining to the degree to which the number 961 has a certain property (in this case, to what degree it approximates the property of having two dividers). This point will be relevant for the analysis of almost proposed in this dissertation.

Sevi claims that a modal interpretation is obtained in examples like the following:

(56) I almost went to Paris, but my money was stolen.
(57) I barely went to Paris – luckily, there was a big delay in the flight.

According to Sevi, the interpretation of (56) and (57) requires the consideration of realistic alternatives to the world of evaluation. Sentence (56) means that in the actual world, the speaker did not go to Paris, presumably because she had no money since her money was stolen, but going to Paris was a close possibility. According to Sevi, (57) means that the speaker did go to Paris in the world of evaluation, but in an alternative world the speaker did not go to Paris because she did not arrive at the airport on time. The set over which the
adverbs operate is in this case a set of possible worlds $W$, ordered with respect to their relative similarity (à la Lewis) with respect to the world of evaluation. In order to reach the intuitively adequate interpretations of (56) and (57), it is necessary to restrict the set of worlds to a suitable subset of $W$ in which we assume that a contextually given condition, namely the reason that made $\phi$ true or false, does not hold. Thus, this condition functions as the antecedent of a counterfactual conditional (If my money hadn’t been stolen, I would have gone to Paris), which for Sevi is implicit in the interpretation of these adverbs when they are VP modifiers.

There are obvious similarities between the account proposed in this dissertation and Sevi’s. First of all, Sevi’s goal is to inquire into the “kind of adverbs” that almost and barely are. In this dissertation, I also provide a characterization of “approximative adverbs” as a class, and in particular of the notion of closeness that they encode. I also follow Sevi in assuming that the meaning of approximative adverbs is underspecified and that the interpretation of the sentence in which they occur depends on the identification of an ordered set provided either by the lexical semantics of the modified expression or the context in which the adverb occurs. However, I will claim that the semantics of approximative adverbs imposes specific requirements on the structure of the ordered sets that they may combine with, and that these structural features make it possible to account in a more comprehensive way for the semantic-behavior of this class of adverbs. I will argue that there are two main types of scales that play a role in the interpretations of approximative adverbs: property scales and scales that represent the aspectual structure of events.

I believe that Sevi’s intuition that the contribution of almost and barely pertains to the circumstances of evaluation of a certain predicate (i.e., to its truthful application) is
fundamentally correct, and the main thesis of this dissertation builds on a similar proposal for
the semantics of these adverbs. However, I believe that this function is strictly related, in the
case of these adverbs, to an assessment of degree (pertaining to the extent of realization of an
eventuality and intensification in the case of almost, and to insufficiency – an implicit
evaluation of “few” – in the case of barely). A theory of the meaning of approximative
adverbs must comprise the two dimensions. I will argue that my approach accounts for a
broader set of data and sheds light on the relation between the meaning of approximative
adverbs and phasal adverbs, on the one hand, and focus operators, on the other, a topic which
is not mentioned by Sevi, to be developed here in chapters 4-7.

1.2.3.2 The scalar approach

The first account of the meaning of almost that relies upon the notion of an ordered
set of elements (i.e., a scale) is provided by Hitzeman (1992). Besides providing an explicit
definition of the polar component, Hitzeman (1992) has two advantages: it provides one of
the few accounts of almost that aims at capturing the cross-categorial restrictions of the
adverb in a unified manner, and it contrasts the meaning of almost with the meaning of sort
of, proposing an account of how and why the two expressions differ in their selectional
restrictions.

Hitzeman accounts for the meaning of almost as a function which maps one category
on a scale onto another category. A category is modeled as a region (a continuous subset) on
a scale whose members share a set of properties. This is formally summarized in (58), from
Hitzeman (1992: 228, (16)):
Given a statement $S_0$ containing the phrase *almost* $P$ and a scale $Sc$ such that $P$ is semantically interpreted as the category $P''$, and $Sc \supset P''$, the following must be true:

i. There exists a region $R$ in $Sc$ such that $R < P''$, and $\neg \exists x$ : $(x \in Sc \& R < x < P'')$  

ii. $R \supset almost(P'')$ and for $x \in almost(P'')$ and $y \in R$, $\neg \exists y$ : $\forall x$ ($y > x$)  

iii. For all categories $C''$ such that $almost(P'') < C''$, replacing *almost* $P$ in $S_0$ by *not* $C$ will form a new statement $S_1$ such that $S_0$ entails $S_1$.

In prose, given the phrase *almost* $P$ where $P$ denotes the category $P''$, and given a scale $Sc$ such that it properly contains the region that corresponds to $P''$, (i) there is a region $R$ in the scale that immediately precedes the region $P''$, (ii) $R$ properly contains the region *almost* ($P''$) and there is no member of $R$ that succeeds a member of *almost* $P''$ (i.e., *almost* $P''$ is the part of $R$ on the scale that immediately precedes $P''$), and (iii) for any category $C$ preceded by *almost* ($P''$) on the scale, a sentence containing *almost* $P$ entails a sentence containing *not* $C$.

According to Hitzeman, such an analysis is general enough to account both for the cases in which *almost* $P$ denotes closeness to category membership (the “hedge” function that is shared with *sort of*), as in (59), and cases in which *almost* introduces a temporal scale (60), or a certain event structure (61). Given that in (58) $P$ is a particular case of a category preceded by *almost* ($P''$), condition (iii) formalizes the view of the polar component of *almost* as an entailment.

(59) Frankenstein’s monster was almost human.

(60) Marie is almost pregnant.

(61) Mary almost swam two laps.

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11 The examples are from Hitzeman (1992).
In (59), Frankenstein is mapped onto a region on the scale whose members share a set of properties which approximates the set of those properties that are shared by human beings. As for (60), Hitzeman argues that the category-membership reading obtained in (59) is not possible, since it would require a gradable interpretation of the predicate “pregnant”. Therefore, she claims that the category pregnant “calls a temporal scale, giving the interpretation that Marie is about to become pregnant” (Hitzeman 1992:228). In (61), the ambiguous interpretation obtained with the complex telic is explained by placing the almost-region immediately before either the category began-swimming” or the category swam-two-laps”.

Almost may also select for atelic eventualities, by coercing the predicate into an inchoative achievement, as in (62), which is interpreted as meaning “Mary almost began to swim”:

(62) Mary almost swam.

Hitzeman’s account has a number of problems, though. I believe that the major problem is that it is not clear what the regions on a scale correspond to and how they are related. In (58), the scale is presented as a superset of the category denoted by P”, but it is not clear how that superset is to be determined and in what way that determination relates to the meaning of almost. What exactly does a scale represent, i.e., why e.g. in (58) are the categories not-human” and human” mapped onto the same scale? As will be argued in this dissertation, this is an important component of the contribution of almost. It is not clear exactly what a
category is (is it a sub-scale, is it a subset?) and how many “regions” on the scale need to be posited in order to explain the meaning of almost.\textsuperscript{12}

As for (60), its acceptability is questioned by native speakers. This suggests that there are specific restrictions imposed by almost which are not captured by Hitzeman’s account. In particular, the fact that the predicate pregnant may evoke a temporal scale (leading to the state of “becoming pregnant”) shows that the possibility of retrieving a scalar representation may not be a sufficient condition for the acceptability of modification by almost. Rather, the infelicity of (60) stems from the fact that the point at which someone is “about to become pregnant” cannot be determined with certainty. Hence, the scalar account must make reference to particular points on the scale and specify their properties.

A related problem is that Hitzeman does not posit any constraints on the structure of the scales that almost may select for, and hence does not have a principled way to account for the unacceptability of almost with certain expressions. On Hitzeman’s view, almost, unlike the predicate modifier sort of, “requires clear category boundaries in order to map $P''$ onto a new category just before the lower boundary of $P''$ ” (Hitzeman 1992:229). However, as there is no reference to types of scales and to their structural properties, how exactly the “clear category membership” can be determined is left undefined, despite the fact that is crucially intended to account for the acceptability of (63) and (64):

(63) John has almost too many friends.

(64) Almost too few students showed up for us to hold the lecture.

\textsuperscript{12}In particular, it is not clear if region R and almost($P''$) should be distinguished) in (58).
According to Hitzeman, in (63) and (64) “the criteria for category membership are clearer” (1992:231), although no explanation is provided about why this is the case and how the meaning of the vague modifier too contributes to such criteria.

Despite these limitations, Hitzeman’s proposal aims at a cross-categorial analysis of *almost* using a semantics based on scales, and it identifies the uses of *almost* with different syntactic categories (for example, prepositional phrases, which have been less explored in most of the literature on the semantics of *almost*). Moreover, Hitzeman (1992) constitutes the first account that discusses in a systematic manner the difference between *almost* and *sort of*, and hence raises the question of how the contribution of approximative adverbs differs from that of other predicate modifiers that denote differences in degree of category membership. This point will be important for the account proposed here.

The next account to be reviewed focuses precisely on this issue. Although Sadock briefly mentions that the interpretation of *almost* is somewhat related to the meaning of “hedges” (cf. Lakoff 1973), he does not clarify the consequences of this connection. García-Medall (1993), on the other hand, makes explicit reference to hedges in his attempt to characterize approximatives as a “semantic class”.

In his proposal, approximatives constitute a homogeneous group from the perspective of meaning. Within this category, he identifies subclasses (“Defective”, “Excessive” and “Neutral” approximatives), which allow him to account for what I have been calling, in the line of the Conjunctive Analysis, the polar component. On his account, *casi* ‘almost’ and *prácticamente* ‘practically’ are “defective approximatives” in that they indicate “incompleteness in the extension of the constituents they modify” and they always activate an “inference contrary to the modality [which in his text means affirmative/negative polarity]
of the phrase modified”, i.e., they have a negative polar component. On the contrary, *apenas* ‘barely’ is classified as an “excessive approximative” since it preserves the positive entailment (this subclass of approximatives has a positive polar component).

According to García-Medall, what these subclasses have in common is the fact that they are hedges:


To exemplify, while to be “pretty red” is a way of being red, to be “almost red” is NOT a way of being red, but rather to occupy a place on a scale which is defined by its closeness to the place occupied by red. As made clear by the previous paraphrase, this account is similar to the spirit of Hitzeman’s proposal.

The contribution of the approximative is that the denotation of the modified constituent “se conceptúa como una sucesión más que como una clase”¹⁴ (García Medall 1993:167), i.e., it acquires a scalar or dynamic value, as shown in (65), where *casi* has scope over a predicative nominal:

(65)  Es *casi* un hombre.
     ‘He is almost a man.’

---

¹³ “The entities over which they have scope lose their denotative capacity and acquire the denotation which they obtain from the place that is assigned to them in certain scales (in these cases semantic scales, but in other cases pragmatic)” [my translation].

¹⁴ “…is conceptualized as a succession rather than as a class” [my translation].
According to this account, in (65), the predicate “a man” is modified in that the property of being a man is conceived with respect to an ordered set of elements (e.g. toddler, child, boy, etc.), the order corresponding (in this particular case) to a temporal sequence.

The third category identified by García-Medall is the category of “Neutral” approximatives. This category subsumes particles with a proximal meaning component but no polar component, such as como, aproximadamente, unos, más o menos, as in the following examples:

(66) Es como muy infantil.
‘He/she is like very childish.’

(67) El depósito está aproximadamente lleno.
‘The deposit is approximately full’

These approximative particles may modify a certain quantity (“Había cerca de veinte” ‘There were around twenty’), but also a property (as in the examples above), “sin que sea pertinente en absoluto que la cercanía se refiera a algo alcanzado o a algo sobrepasado”\(^\text{15}\) (García Medall 1993:164). The existence of lexical items and phrases with this value, within the broader class of approximative particles, is an important factor to bear in mind in the discussion of the relative status of the proximal and the polar component.

García-Medall’s approach is interesting also from a methodological point of view, since it provides an analysis of the “system” of approximative adverbs in a language (Spanish). This systemic view makes it possible to flesh out contrasts between the meanings of different expressions, and also to identify a “common core” that defines the class, with respect to which the meaning of specific items can be described.

\(^\text{15}\) “…without it being relevant at all that the closeness pertains to something reached or exceeded.” [my translation]
In this section, I have reviewed the main types of accounts of the meaning components of approximative adverbs identified by the Conjunctive Analysis and. I have shown some of the shortcomings of the Conjunctive Analysis. In the next section, I present data from EP that provide further evidence for the insufficiency of this type of approach.

1.3 Shortcomings of the Conjunctive Analysis: evidence from European Portuguese

In the first part of this section, I present the set of adverbs from EP that I will concern myself with in this dissertation and then I summarize the problems that they raise for the approach to approximative adverbs advocated by the Conjunctive Analysis. This set is exemplified in (68) through (71); the items under consideration appear in boldface:

(68) O João quase marcou golo.
    ‘João almost scored a goal.’

(69) O João mal comeu.
    ‘João barely ate.’

(70) O João falhou o golo por pouco.
    ‘João barely (literally, by little) failed to score a goal.’

(71) Por pouco o João não marcou golo.
    ‘João almost (literally, by little not) scored a goal.’

A number of remarks should be made at this point. First, the approximative adverb in (69) should be distinguished from the manner adverb in (72) and from the adverbial subordinator in (73). Only the meaning of the approximative adverb will be analyzed in this dissertation.

(72) O João comeu mal.
    ‘João ate poorly (mal).’
(73) Mal o João chegou a casa, tocou o telefone.
   ‘As soon as (mal) João arrived home, the phone rang.’

There is a number of semantic and syntactic properties that allow us to distinguish the polysemy of *mal*, which will be presented in chapters 6 and 7 (cp. also Lima 1998, Amaral 2006a).

I will assume that there is a unique lexical entry for *por pouco* but I will distinguish the post-verbal use exemplified in (70) from the pre-verbal use in (71). The two uses display differences both with respect to their co-occurrence restrictions and with respect to interpretation, summarized in (74):

(74) Post-verbal use of *por pouco*: (i) may not occur with the *Pretérito Imperfeito do Indicativo*, (ii) may occur with the *Pretérito Perfeito do Indicativo*, either if the VP is under the scope of negation or if a negative proposition is entailed by the sentence (in certain cases, it is implicated in the context). In this use, the meaning of *por pouco* cannot be paraphrased by *quase* (although the utterance licenses an inference that may be paraphrased by *quase*).

Pre-verbal use of *por pouco*: (i) may occur with the *Pretérito Imperfeito do Indicativo*, (ii) may only occur with the *Pretérito Perfeito do Indicativo* if the VP is under the scope of negation. In this use, *por pouco* can be paraphrased by *quase*, provided the polarity of the sentence is changed accordingly (as shown in chapter 4).

Although the difference in interpretation correlates with the position of *por pouco* in the sentence, it is possible to find some examples in which this correlation does not hold, as in (75):

(75) Betinho… ingressou na Acção Popular (AP), uma organização da esquerda católica…
   **Por pouco** escapou da repressão chilena na queda do Governo de Salvador Allende… Betinho refugiou-se na Embaixada do Panamá … voltou do exílio em 1979… (CP Ext 31267)
   ‘Betinho [proper name]…joined the Popular Action (AP), an organization of the left party with a catholic orientation…He barely (*por pouco* ‘lit. by little’) escaped the Chilean repression when the administration of Salvador Allende fell…Betinho received refuge in the Embassy of Panama…he came back from the exile in 1979…’
In (75), although *por pouco* occurs in pre-verbal position, the sentence does not mean that Betinho *almost escaped the Chilean repression* (i.e., that he did NOT escape). On the contrary, the sentence means that he barely managed to escape, i.e., that the conditions for not being caught by the repression were scarce (and hence, one might expect him not to have escaped). The example shows that the two interpretations of *por pouco* are related, given the inference licensed in (75): if he barely escaped the repression, it was almost the case that he was caught by the repression. This relation will be discussed in more detail in chapter 7. I will hypothesize that the two uses of *por pouco* are diachronically related, the post-verbal use being prior to the pre-verbal one. Although such a claim requires a corpus-based historical study, one may hypothesize that the pre-verbal position originally appeared as a focused position for post-verbal *por pouco*.

Besides the adverbials under consideration, there are other means in EP to express the intuitive notion of closeness conveyed by approximative adverbs. Hence, (76) and (77) are roughly equivalent:

(76)  O João *quase* caiu.  
     the João *quase* fall:SPAST:3SG  
     ‘João almost fell.’

(77)  O João ia caindo.  
     The João go:IMPF:3SG fall:GER16  
     ‘João almost fell.’

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16 The periphrasis formed by the verb *ir* ‘to go’ in the *Imperfeito do Indicativo* with the gerund of a telic verb should be distinguished from the periphrasis formed by the verb *ir* ‘to go’ in the *Imperfeito do Indicativo* with the preposition *a* and a verb in infinitival form (which denotes a manner description of an eventuality of going located in the past).
The contribution of the verbal periphrasis in (77) shares with the meaning of (76) the possible analysis in terms of the conjunction of two propositional components; the first conjunct of (78) entails the negative polar component, thus (78) is a contradiction:

(78) #O João ia caindo e caiu.
the João go:IMPF:3SG fall:GER and (he) fall:SPAST:3SG
‘João almost fell and (he) fell.’

For the purposes of this dissertation, the periphrasis exemplified in (78) will not be analyzed.

The interpretation of the set of items from EP presented here provides evidence for the shortcomings of the Conjunctive Analysis. First of all, the Conjunctive Analysis does not provide any means to distinguish the meaning of *quase* ‘almost’ from the meaning of *por pouco* in its pre-verbal use. Whereas both adverbials are acceptable in certain contexts (cf. (79) and (80)), it is possible to identify contexts in which only *quase*, and not *por pouco*, is acceptable.

(79) O João *quase* caiu.
the João almost fall:SPAST:3SG.
‘João almost fell.’

(80) O João *por pouco* não caiu.
the João by little not fall:SPAST:3SG.
‘João almost fell.’

Both (79) and (80) assert that the event of João falling was evaluated as close to happening and imply that he did not fall (along the lines of the conjunction explicitly stated in (1’)). The contrast in acceptability between *por pouco* and *quase* is exemplified in (81) and (82):
If we follow the Conjunctive Analysis of *almost*, the meaning of both adverbials should be captured by the conjunction of the propositions glossed in (1’), and hence the difference in acceptability between *quase* and *por pouco* cannot be predicted. There are two reasons for the infelicity of (82). First, *por pouco* must occur with telic predicates, which is not the case in (82). Second, intuitively *por pouco* conveys an implication to the effect that the predicate over which the adverbial has scope is (emotively) evaluated, which is hard to reconcile with the predicate in (82), at least in an out-of-the-blue context. I will show that the latter aspect of the meaning of *por pouco* relates to its polarity sensitivity, which will be discussed in chapters 4 and 7.

These data show that the Conjunctive Analysis is too coarse-grained in that it does not tease apart the two types of interpretations exemplified by the pairs above. In (79) and (80), the adverbs describe a situation in the actual world by comparing it with a counterfactual situation, whereas in (81) *quase* evaluates the predication of a certain time of the moment of speech. Crucially, the latter type of interpretation cannot be obtained with *por pouco*. Both types of interpretations would be conflated by the Conjunctive Analysis under the description of the proximal component in (1’), i.e., “close to p”.

Moreover, the analysis of the meanings of *quase* and *mal* in terms of the conjunction of the asserted propositions presented in (1’) and (2’) for *almost* and *barely* predicts that *mal* is equivalent to the internal negation of *quase*. However, this prediction is not borne out, as
shown by the different interpretations obtained with *mal* and *quase não* in examples like the following:

(83) As aulas *quase* não começaram.
the classes *quase* not start:SPAST:3PL
‘Classes almost haven’t started.’

(84) As aulas *mal* começaram.
the classes *mal* start:SPAST:3PL
‘Classes have barely started.’

Whereas (83) asserts that at a certain time, prior to speech time, classes were on the verge of not starting, but eventually they did start, (84) asserts that a very small amount of time has elapsed since classes started. Clearly, in these sentences the two adverbs are not interchangeable. The difference in interpretation requires a different semantic account for each adverb, and in particular an account of the way in which the semantics of the two adverbs interact with the aspectual values of the modified predicates. Note that this difference is not language-specific, as shown by the infelicity of the examples with the English adverbs in (10) and (11). This difference in acceptability can also be tested by the co-occurrence with phasal adverbs like *ainda* ‘still’:

(85) As aulas *ainda mal* começaram.
the classes *ainda mal* start:SPAST:3PL

(86) #As aulas *ainda quase* não começaram.
the classes *ainda quase* not start:SPAST:3PL

The phasal adverb *ainda* ‘still’ may felicitously co-occur with *mal* in (85), but not with *quase não* in (86). The relation between the meaning of phasal adverbs and *quase* will be detailed in chapter 4.
Furthermore, there are specific restrictions on the occurrence of these adverbs which cannot be captured just by the Conjunctive Analysis but rather require a more fine-grained analysis. In fact, the Portuguese adverbs mal and por pouco (the latter, both pre- and post-verbally) display polarity sensitivity, as exemplified below:

(87) O João mal conseguiu pagar o empréstimo.  
the João mal manage:SPAST:3SG pay:INF the loan  
‘João barely managed to pay the loan.’

(88) #O João mal não conseguiu pagar o empréstimo.  
the João mal not manage:SPAST:3SG pay:INF the loan

(89) #O João mal falhou o pagamento do empréstimo.  
the João mal fail:SPAST:3SG the payment of:the loan

The adverb mal may not felicitously occur with a predicate which is under the scope of sentential negation, as in (88). This is not a syntactic constraint, but rather a semantic one, as it is also the case that mal may not occur with a predicate that entails the negation of its complement, as in (89), where the verb falhar ‘to fail, to miss’ entails “did not do X”. In both cases, post-verbal por pouco may be used, as shown in (90) and (91). As shown in (92) through (94), quase does not display this type of sensitivity:

(90) O João não conseguiu pagar o empréstimo  
the João not manage:SPAST:3SG pay:INF the loan  
por pouco.  
by little  
‘João barely didn’t manage to pay the loan.’

(91) O João falhou o pagamento do empréstimo  
the João fail:SPAST:3SG the payment of:the loan  
por pouco.  
by little  
‘João barely failed to pay the loan.’
(92) O João quase conseguiu pagar o empréstimo.
the João quase manage:SPAST:3SG pay:INF the loan
‘João almost managed to pay the loan.’

(93) O João quase não conseguiu pagar o empréstimo.
the João quase not manage:SPAST:3SG pay:INF the loan
‘João almost didn’t manage to pay the loan.’

(94) O João quase falhou o pagamento do empréstimo.
the João quase fail:SPAST:3SG the payment of:the loan
‘João almost failed to pay the loan.’

Furthermore, pre-verbal *por pouco* is also sensitive to the polarity of the predicate under its scope, as shown in (95) and (96):⁷

(95) O João por pouco não caiu.
the João by little not fall:SPAST:3SG
‘João almost fell.’

(96) #O João por pouco caiu.
the João by little fall:SPAST:3SG

Finally, the co-occurrence of the Portuguese approximative adverbs with eventualities whose event time is located at a time after speech time is infelicitous, as exemplified in (97a) and (98a) with the Simple Future and in (97b) and (98b) with the periphrasis formed with the Present of *ir* ‘go’ + Infinitive:

(97) (a) Pedro quase perderá o comboio.
(b) Pedro quase vai perder o comboio.
‘Pedro will almost miss the train.’

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⁷ In fact, pre-verbal *por pouco* seems to be sensitive not so much to polarity, but rather to the veridicality of the predicate it modifies; tenses that contribute a non-veridical interpretation, like the *Imperfeito do Indicativo*, may occur under the scope of *por pouco* without negation. This issue will be discussed in chapter 4.

(i) O João por pouco caia.
the João by little fall:IMPF:3SG
‘João almost fell.’
(98)  (a) #O Pedro mal visitará a avó.
     (b) #O Pedro mal vai visitar a avó.
     ‘Pedro will barely visit his grandmother.’

This restriction has not been accounted for (in most cases not even acknowledged) in the literature.

1.4 Desiderata for an analysis of the meaning of approximative adverbs

The examples presented allow us to formulate two desiderata for a semantic-pragmatic account of approximative adverbs. First, to explain why in certain contexts the operators are interdefinable (why does barely seem intuitively equivalent to the internal negation of almost), but not in others. Second, under a more systemic view (aiming at a language-specific description of this class of adverbs), what are the differences between quase and the adverbial por pouco, which is more restricted since it may occur in some contexts where quase is felicitous, but not in all, and also what are the licensing conditions of mal and por pouco. For the purpose of this dissertation, I will be concerned mainly with the relation between these licensing conditions and the defining criteria of the class of approximative adverbs. In other words, the main question to be answered is why these words display this type of sensitivity – not only in the perspective of the semantics of each item, but also in the perspective of these items as a semantic class.

Besides the descriptive purpose of the latter point, there is also a broader theoretical issue that is at stake. There is cross-linguistic evidence attesting the existence of pairs of
expressions like *quase* and *por pouco*, one being less restricted in use, like *quase*. The distribution of these expressions may provide us with important insight into a more detailed account of the nature of “closeness” which is associated with the meaning of these adverbs. In this respect, I will formulate the following hypothesis, which I will label “Hypothesis about the almost-type approximatives”:

(99) “Hypothesis about the almost-type approximatives”
If a language only has one word of the “almost” type, it will correspond to the least restricted word of the pair (like Port. *quase*); if the language has more than one expression, then one of the expressions will be more restricted in use, and will be restricted to telic predicates, as is the case with *por pouco* (against the more neutral character of *quase*).

Of course, the validity of this hypothesis can only be established on the basis of extended cross-linguistic work on the behavior of approximative adverbs.

The observations made above, which point to a scalar analysis of the meaning of approximative adverbs, raise the question of the relation between this class of adverbs and other classes of adverbs whose meaning operates on scales. Such a connection is not made in the literature, and hence the felicity patterns shown by the set of data below have not been observed. To exemplify, the meaning of the participles *encantado* ‘charmed’ and *fascinado* ‘fascinated’ may be ordered along the scale of a property (i.e., as corresponding to different degrees of someone’s attraction with respect to a discovery), as shown by their possible co-occurrence with the scalar adverb *até* ‘even’ in the order displayed in (100). The same ordering that licenses *até* seems relevant for the felicitous modification by *quase*, hence the infelicity of (101):

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18 These have been attested at least for Spanish (Pons Bordería and Schwenter 2005), Russian (Wierzbicka 1986) and Turkish.
(100) Ele ficou encantado com a descoberta, e (até) quase fascinado.
    ‘He was charmed with the discovery, and (even) almost fascinated.’

(101) Ele ficou fascinado com a descoberta, e (até) quase encantado.
    ‘He was fascinated with the discovery, and (even) almost charmed.’

The sensitivity of approximative adverbs to semantic and pragmatic orderings can also be tested by comparing the meaning of *mal* with the meaning of *só* ‘only’ in a context in which the latter receives a scalar interpretation. If the contextually established set of alternatives over which the focus adverb *só* operates is ordered, the exclusive implication of the adverb yields an interpretation in which all values in the set ordered as higher than the focused constituent are excluded. In (102) below, in the context of a bike tour to Portugal, in which the competitors must go through (i) Sagres > Lisbon > Coimbra > Braga, (102) asserts that João did not make it to any of the cities that follow Lisbon in (i), and (103) licenses the same implication.

(102) O João só chegou a Lisboa.
    ‘João only made it to Lisbon.’

(103) O João mal chegou a Lisboa.
    ‘João barely made it to Lisbon.’

However, despite this common scalar implication, there is a difference between the meaning of the two adverbs, as shown by the difference in felicity between (104) and (105). Whereas in (104) the eventuality of reaching Lisbon is asserted without qualification, in (105) the adverb contributes a qualification pertaining to the extent to which the predicate may be applied to the subject with respect to the particular situation being described (presumably, pertaining to the conditions in which João arrived in Lisbon):
One of the desiderata of an account of the semantic-pragmatic properties of approximative adverbs is to be able to predict the difference in felicity judgements made apparent in (100)-(101) and (104)-(105). The felicity patterns displayed by these data cannot be accounted for by the modal accounts (e.g. Sadock 1981, Rapp and von Stechow 1999) or by accounts that rely on the notion of loosening and tightening of standards of precision (e.g. Sevi 1998).

In sum, the main questions I will be addressing are the following:

1. How can we account for the asymmetry of the two meaning components of approximative adverbs and what is the relation between them?
2. Is there evidence against the “mirror-image” account of almost and barely advocated by some of the proponents of the Conjunctive Analysis? How does this evidence relate to the characterization of the meaning of approximative adverbs?
3. What does the behavior of the EP set of approximative adverbs reveal about the intuitive notion of “closeness” contributed by approximative adverbs? How can it contribute to a definition of the semantic-pragmatic class of “approximative adverbs”?

Ultimately, the theoretical goal behind these questions is the identification of a set of properties that define the class of approximative adverbs. Hence, the approach to be pursued in this dissertation is at the same time descriptive and theoretical. It will be argued that the analysis of the meaning distinctions that are encoded in the EP system of approximative adverbs sheds light on the defining features of the class of approximative adverbs and makes
apparent their similarity with other classes of adverbs (e.g. phasal adverbs like *already*, scalar focus adverbs like *only* and *even*, hedges like *approximately*).

### 1.5 Outline of the dissertation

The dissertation is organized as follows. In chapter 2, I present some of the properties displayed by approximative adverbs cross-linguistically and more specifically in EP. This chapter discusses the difficulties raised by their classification within the major classes assumed in taxonomies of adverbs. In chapter 3, I report two experiments that were conducted to test the asymmetric behavior of the meaning components of approximative adverbs and the different roles that these components play in context update.

In chapter 4, I describe the range of interpretations contributed by approximative adverbs by analyzing the meaning of EP *quase* ‘almost’. I show that the possible interpretations described correlate with the scope of the adverb; when the adverb has sentential scope, it receives a modal interpretation, whereas in its use as a focus adverb, it introduces a comparison between properties along a scalar dimension. In chapter 5, I build on this approach to flesh out the comparison introduced by *quase* and how it underlies the asymmetry of its meaning components, and I compare the interpretation of *quase* with the interpretation of the more restricted adverbial *por pouco*. In chapter 6, I exemplify the cross-linguistically attested relation between approximative adverbs and negation by analyzing the meaning of *mal* ‘barely’. In particular, I describe the comparison introduced by this adverb and its scalar properties. In chapter 7, I show that the semantic co-occurrence restrictions of *mal* can be accounted for on the basis of the scalar analysis proposed in chapter 6. I describe
both the co-occurrence restrictions of the adverb with respect to the aspectual class of the predicate and the co-occurrence restrictions that pertain to polarity. Finally, I compare the meaning of *mal* with the meaning of *por pouco* in post-verbal position. Chapter 8 provides concluding remarks and suggestions for further research.
CHAPTER 2

THE NEED FOR A CROSS–CLASSIFICATION OF APPROXIMATIVE ADVERBS

This chapter focuses on the properties of approximative adverbs\(^{19}\) in EP and in other languages and discusses some of the problems relating to their classification (sections 2.1 and 2.2). In section 2.3, I present the desiderata for an approach to the intuitive notion of “closeness” contributed by approximative adverbs which is more fine-grained than that of the Conjunctive Analysis. Section 2.4 provides an overview of the analysis proposed in this dissertation.

2.1 Properties of approximative adverbs in a cross–linguistic perspective

Adverbs like *almost* and *barely* across languages have often been studied separately. Studies on the semantics of *almost* (and the corresponding words in languages like Dutch, German, Russian, Hebrew, Latin, Spanish, French) have focused on the semantic restrictions of this cross-categorial adverb, in particular with respect to the modification of quantificational and verbal expressions. These studies have identified robust regularities

\(^{19}\) Although in English and EP the sets of words under consideration have been classified as adverbs, I do not intend to argue that for all the languages mentioned the words with related meanings belong to this syntactic class. The language-specific details of that classification are beyond the scope of this dissertation. Rather, the focus is on the semantic-pragmatic behavior of these items cross-linguistically to the extent that it is relevant for the characterization of approximatives as a class.

(1)  #Almost some children came to the party.
(2)  #John visited a museum almost sometimes.
(3)  #John almost likes chocolates.
(4)  #John is almost drawing.
(5)  #John is almost nice.

The studies on the co-occurrence restrictions of *almost* with verbal predicates have shown the sensitivity of *almost* to the aspectual characterization of the predicate and the similarity of *almost* to other adverbs that denote the incomplete realization of an event (e.g. “completion adverbs”, cf. Caudal and Nicolas 2005, Piñón 2005).

On the other hand, *barely* and *hardly* have been grouped together with adverbs like *scarceley* and *rarely*. Huddleston and Pullum (2002) include *barely* in the class of “approximate negators”, together with *few* and *little*, and relate their meaning to the semantics of negative adverbs. A source of evidence for the similarity of *barely* with negative adverbials, which is noted by Horn, is the fact that, unlike *almost*, it can be fronted, triggering subject inversion, as in (6); the same holds for *hardly*, as shown in (7), from Horn (2002a:57):
(6) {Barely/**Almost} had we arrived when an unearthly scream rang out.

(7) Hardly ever will you see such a thing.

Klima (1964) analyzes barely and hardly as preverbal negative adverbs which result from the application of the rule of negation incorporation to “incomplete negations”.

Some authors, however, have treated almost and barely as belonging to the same (semantic) class. Quirk et al. (1985:§8.111-114) classify English adverbs like almost, barely, hardly as “intensifiers”, defined as indicating “a point on an abstractly conceived intensity scale” (§8.104), and within this class as “downtoners”, which have “a generally lowering effect on the force of the verb or predication” (§8.111). The latter class is further subdivided; almost belongs to the class of “approximators” (together with nearly, practically, virtually, all but), whereas barely and hardly are classified as “minimizers” (together with little and scarcely).

There is an important difference between these two sub-classes, namely with respect to veridicality: 20 whereas “approximators” are antiveridical, “minimizers” are veridical. Quirk et al. (1985) note that “Approximators differ from most other downtoners in that they imply a denial of the truth value of what is denoted by the verb” (8.112) and hence display a different behavior from other subclasses of downtoners, as exemplified in (8) and (9), from Quirk et al. (1985):

(8) I almost resigned (but in fact I didn’t resign).

(9) *I kind of like him (but in fact I don’t like him).

20 I follow Giannakidou’s definition of veridicality: “(Non)veridicality for propositional operators
   i. A propositional operator F is veridical iff Fp entails p: FP → p; otherwise F is nonveridical.
   ii. A nonveridical operator F is antiveridical iff Fp entails not p: Fp → ¬p.” (Giannakidou 2002:5).
Klein treats *vrijwel* and *nauwelijks*, the Dutch counterparts of *almost* and *hardly*, respectively, as adverbs of degree (“approximative degree”, Klein 1998:67), on a par with “adverbs of absolute degree” like *completely* or *really* (as in *completely exhausted, really nice*). Ernst (2002) includes *almost* and *barely* in the class of “focusing and clausal-degree adverbs” (within the larger class of Functional adverbs that also includes *again* and *only*), mostly on the basis of their relatively free syntactic distribution, and defines the class of clausal-degree adverbs, where *almost* and *barely* are included, as “adverbs that map the event onto a scale of degree” (Ernst 2002:352). Bosque (1980) treats the Spanish adverbs *apenas* ‘barely’ and *casi* ‘almost’ as hedges, in that they modify the predicative relation of a sentence by assigning it a certain degree of fuzziness (Bosque 1980:105). On the other hand, Lakoff, in his seminal paper on hedges, lists *almost*, but not *barely*, as a hedge (Lakoff 1973:472).

These facts suggest that a proper characterization of approximative adverbs is complex and requires a cross-classification. Ramat and Ricca (1998) consider adverbs like German *kaum* ‘barely’ and Spanish *difícilmente* ‘hardly’ as sentence adverbs, but point out that in certain sentences they have event-internal readings. For example, in generic sentences they are quantifiers over events, and hence interact with the aspectual properties of the verb phrase, whereas in other sentences they behave like sentential operators, in particular like epistemic adverbs. In (10), the German adverb *kaum* is in paradigmatic opposition with *selten* ‘rarely’, whereas in (11) the appropriate paraphrase of *kaum* involves a modal adverb expressing a low degree of possibility, examples from Ramat and Ricca (1998:195, 227):

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21 It has been pointed out that Spanish adverb *apenas* ‘barely, hardly’ displays particular aspectual restrictions that are related with its quantificational nature (cf. Sánchez López (1999:2621)). On the aspectual co-occurrence restrictions of *mal*, see chapter 7.
(10) Johann sieht kaum fern.
   ‘Johann rarely watches TV.’

(11) Johann wird kaum schon gegangen sein.
   ‘It is unlikely that Johann has already left.’

The type of interpretation exemplified in (11) is also found with Turkish neredeyse ‘almost’, and is shown in (12). This interpretation pertains to epistemic modality and the adverb behaves as a sentential operator; on the basis of what the speaker knows, the truth of the sentence in the scope of the adverb is assigned a high degree of likelihood:

(12) Neredeyse gelir.
    ‘(He/she/it) is almost here, i.e., should come here any minute (because I know that)’

The different types of meanings of approximative adverbs, as exemplified in (10) through (12), can be easily related to different classes of adverbs (as shown by their paradigmatic alternatives in the different contexts). However, if we try to identify a semantic “class” of approximative adverbs on the basis of common semantic features underlying the range of uses attested, it is not clear which is the right classification for approximative adverbs as such, given the wide range of uses.

As shown by (11), adverbs like kaum ‘barely, hardly’ tend to appear in sentences with non-indicative moods and with modal verbs, which is interpreted by Ramat and Ricca as suggesting that

(…) such adverbs do not really have the force of weakening the speaker’s assertion by themselves: they can only strengthen an already modalized utterance (Ramat and Ricca 1998:195)
There is a set of constructions in several languages whose meaning relates to the meaning of approximative adverbs, although this connection is not often made in the literature. This is the case of Kuteva’s (1998) “ANA (Action narrowly averted) gram”, an instance of which is French construction with the verb *faillir* exemplified in (13):

(13) Il a failli tomber.
    ‘He almost fell.’

Such constructions receive a counterfactual interpretation. Kuteva points out that these constructions are the result of the grammaticalization of lexical meanings originally associated with negatively evaluated notions (like the notion of “failure” in the French case).

Historically, approximative adverbs present similar lexical sources, the most frequent ones being listed below:

(i) expressions denoting scalar values, which may be minimal quantities (e.g. Spanish *por poco* ‘almost, lit. by little’, Catalan *de poc* ‘almost, lit. by little’, Turkish *az daha* ‘almost, lit. little more’, *ucu ucuna* ‘barely, just, lit. by an extremity, by a tip’, German *um Haaresbreite* ‘barely for the breath of a hair’ ‘barely’, *um ein Haar* ‘for one hair’ ‘almost’, Greek *par’oligon* ‘almost’) or high values on a scale (e.g. English *almost*, from “all most”, German *fast* ‘very’);

(ii) expressions denoting difficulty, effort (Latin *aegre* ‘hardly, originally painfully’, French *à peine* ‘barely’, Greek *molis*);

(iii) negatively evaluated notions (Portuguese *mal* ‘poorly’, German *kaum* ‘barely’, originally related to mourning associated with illness, Sanskrit *krcchram* ‘hardly, scarcely’, etymologically related to a verb meaning ‘causing trouble or pain, cause to be in an evil situation’), and

(iv) modal notions (Latin *quasi* ‘as if”).
Moreover, approximative adverbs like Engl. *barely* or German *kaum* often present polysemies involving temporal values, especially temporal closeness, roughly paraphraseable by ‘immediately after, as soon as’.

The broad range of interpretations that approximative adverbs may receive and their affinities with different classes of adverbs, shown in this section, point to the need for a cross-classification of approximative adverbs. In the next section, I discuss some of the possible criteria for situating approximative adverbs within a taxonomy of adverbs.

### 2.2 Situating approximatives in the taxonomy of adverbs

In this section, I discuss the syntactic and semantic properties of approximative adverbs with respect to the major classes generally assumed in a taxonomy of adverbs. As shown in the previous section, in the literature, when they are analyzed as a class, adverbs like *almost* and *barely* are often classified as belonging to the class of adverbs of degree, so I start out by comparing the behavior of the EP adverbs *quase* and *mal* to the properties of degree adverbs.

The main challenge posed by degree adverbs is their syntactic and semantic polymorphism: they may combine with different syntactic categories as long as their semantic restrictions are respected, and they give rise to a wide range of interpretations due to the flexibility of the notion of scale that they may combine with. Their meaning is underspecified since the scale is provided by the denotation of the expression they modify (Doetjes 1997, 2001, Abeillé and Godard 2003).
A good example of this polymorphism is provided by the EP degree adverb *muito* ‘much, very’, which may modify both nominal and verbal expressions, as well as adjectives and other adverbs:

(14) O João bebeu muito chá. ‘João drank much tea.’
(15) O João dança muito. ‘João dances much.’
(16) O João dormiu muito. ‘João slept much.’
(17) O João gosta muito de chocolates. ‘João likes chocolates much.’
(18) O João é muito alto. ‘João is very tall.’
(19) O João come muito depressa. ‘João eats very fast.’

The adverb *muito* may only combine with a noun of type “mass”, as in (14), where the amount of tea that was drunk is mapped onto a quantitative scale. In (15) and (16), the adverb co-occurs with verbal predicates. In (15), it pertains to the frequency of the instances of dancing within a contextually assumed time interval, and in (16) it measures the time interval during which the eventuality of sleeping obtained (durative interpretation). In (17), on the other hand, the adverb provides a degree on a scale which is not quantitative (a scale of appreciation which is introduced by the lexical semantics of the predicate *gostar* ‘to like’). In (18) and (19), the adverb again operates on a scale, and raises the standard of comparison associated with the denotation of the unmodified adjective in (18) and the adverb in (19) (Kennedy and McNally 2005). In sum, the degree quantifier may combine with different
syntactic categories as long as the denotation of the expression it selects for is associated with a scale. The interpretation obtained is a function of the semantics of *muito* and the type of scale introduced by the expression modified by the adverb.

A similar syntactic polymorphism is exemplified by *quase*, which may combine with almost any syntactic category, as will be shown in detail in chapter 4. This is exemplified briefly in (20) – (22):

(20) … *quase* todos os países … (CP Ext 535)  
‘… almost all the countries…’

(21) … *quase* invisível camada de poeira…(CP Ext 400833)  
‘… almost invisible layer of dust…’

(22) … *quase* seguramente… (CP Ext 1255)  
‘…almost surely…’

This set of examples only provides a small sample of the categories that *quase* may combine with: a quantified NP in (20), an adjective phrase (AP) in (21) and another adverb in (22).

Although *mal* is more restricted in terms of syntactic distribution, since it always combines with a verbal predicate, it may yield different interpretations according to the nature of the scale that is introduced by the predicate, as exemplified in (23) – (25):

(23) O João mal dormiu.  
‘João barely slept.’

(24) O Pedro mal tem visitado a avó.  
‘Pedro barely has been visiting his grandmother.’

(25) O Pedro mal consegue andar.  
‘Pedro can barely walk’.
As shown above with respect to *muito*, the adverb selects for a scale which may or may not be quantitative. In (23) and (24), *mal* denotes a vague quantity; in (23), *mal* has a durative reading, since it measures the time interval during which the sleeping eventuality is said to hold, whereas in (24) *mal* denotes a reduced number of instances of visiting the grandmother within an assumed time interval. In (25), on the other hand, the scale selected by *mal* is not quantitative; it is provided by the notion of ability denoted by the modal verb *can*.

With respect to position in the clause, approximative adverbs differ from the patterns displayed by degree adverbs. In EP, degree adverbs generally occur to the right of verbs and to the left of non-verbal categories (like the adjectives in the absolute constructions in (27) and (29)). This is shown for *muito* and the completion adverb (Abeillé et al. 2004, Piñón 2005) *completamente*\(^{22}\) in (26) – (29):

(26) O Paulo (?)*muito\(^{23}\) fala *muito* com o irmão.  
Paulo (much?) *talks* (much) with his brother.

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\(^{22}\) The point of describing the behavior of this adverb is that it belongs to the subclass of degree adverbs called “completion adverbs” (Piñón 2005, Bonami et al. 2004), which like *quase* are anti veridical operators.

\(^{23}\) The sentence containing *muito* in pre-verbal position is not felicitous in an out-of-the-blue context, but is felicitous under certain contextual conditions. It should be pointed out that in EP a number of degree, frequency and aspectual adverbs occurring in pre-verbal position (the (a) examples below) display a semantic-pragmatic behavior which distinguishes them from their post-verbal counterparts (the (b) examples). Particularly striking in this respect is the case of *bem* ‘well’, a “small adverb” like *mal*, and *muito* ‘much’, exemplified in (i) and (ii):

(i)a O João bem fala,  
the João well talk:PRES:3SG  
mas depois não faz o que diz.  
‘It is true that João talks, but in the end he doesn’t do what he says (he would).’

(i)b O João fala bem.  
the João speak:PRES:3SG well  
‘João speaks well.’

(ii)a Muito fez ele para te ajudar!  
Much do: SPAST:3SG he:NOM  
‘He did a lot in order to help you!’ (implicates: more than he should have done)

(ii)b Ele fez *muito* para te ajudar!  
he:NOM do: SPAST:3SG much  
‘He did a lot in order to help you!’ (no implicature)

Although this difference has not been thoroughly investigated, the interpretation of the adverbs in this position seems to involve a presuppositional component.
(27) (Muito) cansado (?muito),…
    (Very)    tired (?very),…

(28) O João (?completamente) encheu(completamente) a panela
    the João (?completely) filled (completely) the pot
    (completamente).
    (completely)

(29) (Completamente) cheia (?completamente), ….
    (Completely) full (?completely)...

The position of *quase* with finite verbs is always preverbal (possibly sentence-initial, with *que*, which is not the case with other degree adverbs); in copula constructions, it always precedes the adjectival or the nominal predicate. *Quase* may only occur post-verbally if it occurs in a separate intonational phrase, as shown in (30) and (31) (see chapter 4).

(30) O João (quase) encheu (?quase) a panela (?quase).
    the João (almost) filled (?almost) the pot (?almost).

(31) A nuvem (#quase) é (quase) azul, (quase).
    the cloud (#almost) is (almost) blue, (almost)

As for *mal*, it may only occur in pre-verbal position (in post-verbal position it always receives a manner interpretation):

(32) O João (mal) comeu (mal).
    the João (barely) ate (poorly)

Another difference is found with compound tenses, like the Pluperfect. Whereas other adverbs of degree may occur in post-verbal position (sometimes also after the auxiliary verb, as in (34)), *quase* and *mal* precede the auxiliary verb:
Approximative adverbs also differ from degree adverbs in that the latter, but not the former, may fall under the scope of VP-negation, as in (37) through (40):

(37) *O João não quase caiu.
João not almost fell

(38) *O João não mal comeu.
João not barely ate

(39) O João não falou muito com o irmão.
‘João didn’t talk much with his brother’

(40) O João não encheu completamente a panela.
‘João didn’t fill the pot completely’

Degree adverbs, but not approximative adverbs, may occur in the focus position of cleft constructions, as in (41) – (44):

(41) *Foi quase que o João caiu.
it:was almost that the João fell
The results of these tests suggest that unlike degree adverbs, approximative adverbs behave like adverbs that have propositional scope. This is confirmed by the entailments of sentences containing degree adverbs, on the one hand, and approximative adverbs, on the other. Degree adverbs behave as VP-internal adverbs (like manner adverbs) in that the proposition expressed by a sentence containing a degree adverb entails the proposition expressed by the sentence without the adverb, as shown in (45)a and (45)b:

(45)  

(45)  

(46)  

24 The “#” intends to signal that the sentence is not ungrammatical, but rather not possible under the interpretation of mal as an approximative adverb. As shown in chapter 6, this sentence is acceptable if mal is a manner adverb.
A VP-internal adverb is a predicate on the verb, and hence it is a veridical operator. On the other hand, a sentence adverb is an operator that takes the whole proposition in its scope and affects the truth conditions of the proposition, hence may or may not be a veridical operator.

In the following, I compare the behavior of approximative adverbs with the behavior of adverbs that have propositional scope. I use a set of syntactic and semantic criteria that have been proposed in the literature (Jackendoff 1972, Bellert 1977, Parsons 1990, Kovacci 1999, Ernst 2002); these tests distinguish adverbs whose contribution is part of the single proposition expressed by the sentence in which they occur from adverbs whose contribution to the meaning of the sentence yields more than one proposition (i.e., adverbs that make a comment on the proposition expressed by the sentence obtained by removing them). The latter class is called “sentential adverbs” (Bellert 1977) or “speech-act adverbs” (Parsons 1990).

Adverbs that have propositional scope are not felicitous in interrogative sentences. The former is true for *mal* but not for *quase*, given the appropriate context, as in (47):

(47) [Context: two friends are commenting on how João is always late. B says that he arrived at the station just one minute before the train was supposed to leave; A says] A: O João quase perdeu o comboio?
‘Did João almost miss the train?’

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25 This idea, originally presented in Bellert (1977), underlies the notion of *multidimensionality* (Potts 2005).

26 This category is subcategorized by Parsons into (i) evaluative (*e.g.* *fortunately*, *happily*), (ii) epistemic modal (*e.g.* *perhaps*, *probably*), (iii) conjunctive (*e.g.* *therefore*, *however*) and (iv) pragmatic (*e.g.* *frankly*, *sincerely*).
In the case of *mal*, these tests clearly distinguish the manner adverb from the approximative adverb (see also chapter 6), as shown by the contrast in acceptability in the pairs of sentences below, where the (a) example includes the approximative adverb and the (b) example includes the manner adverb:

(48)  
a \#O João mal comeu?\(^{27}\)  
‘Did João barely eat?’

\[\\]

\[\\]

(48)  
b O João comeu mal?  
‘Did João eat poorly?’

Adverbs that have propositional scope are not felicitous in sentences that express an order, a doubt or a wish. The infelicity of *quase* and *mal* in sentences that express an order is shown in (49) and (50), but the adverbs may occur in the other types of sentences. For *mal*, the contrast between the approximative adverb and the manner adverb is shown in (50):

(49)  
\#João, quase cai!  
‘João, almost fall!’

(50)  
a \#João, mal come!  
‘João, barely eat!’

\[\\]

\[\\]

(50)  
b João, come mal!\(^{28}\)  
‘João, eat poorly!’

According to Parsons (1990), speech-act adverbs cannot be in the scope of (i) other adverbs, (ii) quantificational NPs, or (iii) negation. Criterion (i) is not met by approximative adverbs, since they may co-occur with other classes of adverbs that take scope over the whole proposition, like the pragmatic and evaluative adverbs in (51) and (52):

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\(^{27}\) I believe that this utterance can only be felicitous as an echo-question, i.e., as a repetition of someone’s previous assertion that João barely ate.

\(^{28}\) Out of the blue, this sentence is not felicitous because of the implausibility of such an order. However, if we imagine a context in which someone who has bad eating habits will be awarded some prize, the sentence can be felicitously uttered, while the corresponding sentence with the approximative adverb is still infelicitous.
In the case of co-occurrence with eva
vilative adverbs, the felicity of the ut
terance depends on whether the evaluation is compatible with the evaluation of the predicate that the proximal component of the approximative contributes in a particular context. Hence, in an out-of-the-blue context, (53) is infelicitous:

(53) #Felizmente, o João mal trabalha.
‘Fortunately, João barely works.’

Approximative adverbs may occur under the scope of a conditional, as in (54) and (55), a test which argues against their propositional scope:

(54) Se o João quase caiu da bicicleta hoje, não vai querer andar outra vez.
‘If João almost fell off the bike today, he won’t feel like riding a bike again.’

(55) Se o João mal comeu hoje, vai ter fome mais tarde.
‘If João barely ate today, he’ll be hungry later on.’

As for criteria (ii) and (iii) proposed by Parsons, approximative adverbs, like the evalua
tive adverb in (56), cannot be in the scope of a quantificational NP, but rather have scope over it, as shown by the interpretations obtained in (57) and (58):

(56) Fortunately, more than five people showed up.

This sentence does not mean: ‘for each of more than five persons, it was fortunate that he/she showed up’ (Parsons (1990:63)). By the same token, (57) cannot mean: ‘for 100 people, it is
almost the case that each of them came to the party’. Rather, (57) means: the number of people who came to the party is almost 100.

(57) Quase 100 pessoas vieram à festa.
    ‘Almost 100 people came to the party.’

The same scope relation is obtained in (58); it does not mean: ‘for 100 people, João barely saw each one of them’.

(58) O João mal viu 100 pessoas.
    ‘João barely saw 100 people.’

Rather, the sentence means: João saw a number of people which is only slightly above 100 (maybe 101?). Under the two interpretations (58) would have different truth conditions: the former is true if for each single person, João barely saw that person (e.g. if he saw that person just for a second), whereas in the latter case what matters is the total number of people that João saw, not the seeing of each person.

In (59), negation does not take scope over the approximative adverb *quase*, and hence the sentence cannot mean ‘It is not the case that João almost ate’:

(59) O João quase não comeu.
    ‘João almost didn’t eat.’

However, unlike speech-act adverbs (excluding evaluative adverbs), which cannot fall under the scope of negation (as in (60)), approximate adverbs can occur under the scope

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29 The test with negation cannot be done with *mal* due to the impossibility of internal negation: the sequence *mal não VP* is not acceptable.

30 More accurately, what this test aims to show is that even if negation takes wide scope, it can never be interpreted as negating the content of the speech-act adverb; it can only negate the content of the proposition.
of negation if the whole proposition is negated, as in (61) and (62). Here, the approximative adverb takes scope over the proposition expressed by the sentence, and the output of modification by the approximative adverb takes scope under negation:

(60) *It is not the case that frankly John is always late.

(61) Não é verdade que o João quase caiu.
‘It is not the case that João almost fell (i.e., it is not the case that it is almost the case that João fell).’

(62) Não é verdade que o João mal comeu.
‘It is not the case that João barely ate.’

In (61) and (62), what is negated is the contribution of the approximative adverb (more precisely, its proximal component), as made apparent by the possible continuations of (63) and (64):

(63) Não é verdade que o João quase caiu, ele só se desequilibrou um bocadinho.
‘It is not the case that João almost fell; in fact, he just lost his balance a little bit.’

(64) Não é verdade que o João mal comeu – pelo contrário, ele comeu muito.
‘It is not the case that João barely ate (quite the opposite, he ate a lot).’

The conclusions of this section are presented in Table 2.1, which summarizes the differences and similarities between approximative adverbs and other classes of adverbs:
Table 2.1: Properties of approximative adverbs within a taxonomy of adverbs
*This term is taken in the sense of Parsons (1990) mentioned in the text, but excluding evaluative adverbs.

In this section, I have presented semantic and syntactic tests showing that approximative adverbs share properties of degree, evaluative and speech-act adverbs, although they do not entirely meet the criteria for any of these classes. The following properties identified in this section will play a major role in the approach adopted in this dissertation: (i) the semantic and syntactic polymorphism that relates to the flexibility of the scales selected by the adverbs, (ii) the evaluative component of their meaning, and (iii) the wide scope displayed by approximative adverbs over other operators.

2.3 An alternative approach to “closeness”

One of the main semantic properties of approximative adverbs, as presented in chapter 1, is the intuitive notion of “closeness” associated with their interpretation (or rather, with the range of interpretations that they allow for). Given the difficulty in defining the notion of *closeness*, the approach adopted here will take the Conjunctive Analysis as a
starting point but will focus on a detailed analysis of the proximal component. In particular, the question of what *closeness* is will be divided into smaller questions:

1) **Closeness to what?**

A sentence containing an approximative adverb describes some state of affairs as being close to some other state of affairs, denoted by the expression modified by the adverb. An analysis of the distribution of approximative adverbs shows that there are semantic restrictions as to the expressions that they may modify.

As shown in section 2.1, there are robust cross-linguistic regularities pertaining to the semantic restrictions of *almost* and its corresponding expressions in other languages. Although this has not often been noted for adverbs like *barely*, there are co-occurrence restrictions imposed by this type of adverb, as exemplified in (65) and (66) for *mal*. Not only is it necessary to identify these co-occurrence restrictions, but in particular to understand what they reveal about the meaning contributed by approximative adverbs.

(65) #O João mal devorou a comida.  
the João barely devour:SPAST:3SG the food

(66) #Naquele país mal falta água.  
in:that country barely lack:PRES:3SG water

The description of the proximal component under the Conjunctive Analysis would not rule out sentences (65) and (66) and sentences (1)-(5) above, as it does not postulate any semantic constraints on the denotation of the expressions modified by *almost* or *barely*. These semantic restrictions show that not any semantic entity may provide the norm selected by approximative adverbs, and hence that the notion of “closeness” contributed by this class involves structural requirements that are not fleshed out by the Conjunctive Analysis.
2) What are the properties of the notion of *closeness* associated with approximative adverbs?

The intuitive notion of “closeness” associated with approximative adverbs displays two properties: vagueness and underspecification. Consider (67) below. As is typically the case with vague predicates, the truth-conditions of a sentence with *quase* vary according to the context of utterance. Imagine a context c₁ in which a clock-maker utters this sentence while he tries to set a clock. Given that his purpose is to have the clock function as accurately as possible, and that the question under discussion in the context is time measurement, the sentence is likely to be truthfully uttered at 9.59.8 but not at 9.55, for example.

(67) São quase 10 horas.
   ‘It’s almost 10 o’clock.’

However, if in a context c₂ (67) is uttered by a student who is running to a class on campus at 9.55, then it can be said to be true, whereas if uttered at 9.45 it would probably be false. In both contexts c₁ and c₂ it is extremely difficult, or even impossible, to determine how to tease apart the borderline cases (for a review of the Sorites Paradox and general issues on vagueness, see Van Deemter 1995, Kennedy forthcoming).

Another property displayed by approximative adverbs is underspecification. A sentence like (68) allows for different, albeit related, interpretations: João works very rarely, the activities he engages in cannot properly be considered “work”, the quality of his work is poor, etc.

(68) O João mal trabalha.
    ‘João barely works.’
The specification of the meaning of approximative adverbs is strongly context-dependent, and it interacts with the semantic properties of the modified expressions, as well as with contextual information. This underspecification must be taken into account and integrated into the semantics of approximative adverbs, i.e., one desideratum of an account of their meaning must make the prediction that the precise nature of the closeness relation is only determined contextually (within the specific restrictions imposed by the scalar semantics of the adverb). Finally, a related question is

3) What is the relation between the meaning of approximative adverbs and imprecision?

Previous accounts of the meaning of approximative adverbs more or less explicitly assume that their denotation makes the modified expression imprecise by operating on the standard of precision which is assumed in the context (Sevi 1998), i.e., by making the modified expression vague. However, this issue is hardly discussed in connection with the notion of closeness. Here, a glimpse at the analysis of other imprecise expressions may be useful, in particular non-logical quantifiers like few or most.

In their experimental study of the properties of these quantifiers, Moxey and Sanford point out that the notion of precision is relative, and note that “…to call something precise is to say that for some purpose, the quantity expression relies on a sufficiently differentiated scale to be maximally useful…” (Moxey and Sanford 1993:14-15).

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31 This point is made by Tenny with respect to the meaning of almost: “On closer examination we can see that almost offers many possible ‘readings’, limited only by the imagination of the speaker. Almost, unlike partly or partway, seems to quantify freely over almost anything, so to speak. This suggests that almost is not scopally ambiguous, but is simply vague” (Tenny 2000:314-5).
Hence, the crucial question is what justifies the choice of a particular expression in a specific context and what aspects of scale structure are encoded in the meaning of approximative adverbs. The intuitive notion of closeness and its relation to imprecision must therefore be refined. In the next section, I give an overview of the proposal made in this dissertation to capture these notions.

2.4 Overview of the analysis

I propose an account of the proximal and the polar components of the meaning of approximative adverbs that differs from the Conjunctive Analysis. On my account, approximative adverbs introduce a comparison between two values on a scale.

The elements of a comparison (following Kennedy 1999) include:

(i) the dimension along which the comparison is established (the scale of a gradable property);
(ii) a standard value;
(iii) a reference value;
(iv) a degree relation between the reference value and the standard value.

To exemplify, in (69), the relevant dimension is height, the reference value on the scale of height is the value on the scale onto which Mary is mapped, the standard value is the value on the scale onto which John is mapped, and the degree relation (denoted by the degree morpheme) is “less than”:

(69) Mary is less tall than John.
I will argue that approximative adverbs introduce a comparison along a scalar dimension which is associated with the meaning of the predicate that they modify. In particular, approximative adverbs denote a function that maps the modified predicate onto a value on the scale to yield the standard of comparison, and that maps the argument of the predicate onto a value on the same scale, yielding the reference value. The degree relation between the reference value and the standard value is a relation of “slightly less than”.

The standard of comparison is selected differently for *quase* and for *mal* and it is contributed by the meaning of the phrase obtained by combining the approximative adverb with a predicate. For *quase*, the standard of comparison is the endpoint value on the relevant scale. The scale may be either lexically or contextually associated with the predicate. For example, for a telic predicate, the property scale corresponds to the degree of change undergone by the participant in the event which is denoted by the internal argument of the verb, e.g. in *write the book*, it corresponds to the entirety of the incremental theme *the book* having being created. For an adjectival predicate like *white*, the predicate is mapped onto the endpoint of a scale of a property which can be glossed as “being light-colored”. For *mal*, the standard value is a value on a scale which is normally or prototypically associated with the denotation of the predicate. For example, in *O João mal comeu* ‘João barely ate’, the adverb quantifies over the implicit argument of the verb (food) and establishes a comparison between the amount of food consumed in the actual situation and some amount which is assumed or expected as normal.

I will argue that approximative adverbs provide a measurement (a degree evaluation) of the predicative relation, i.e., the relation between a predicate and the argument that it is applied to. They evaluate the extent to which the predicate applies to the argument, i.e., the
extent to which the argument (of possibly different semantic types, e.g. an entity, a proposition, etc.) exhibits a certain property. Approximative adverbs provide a way to assess categorization and do so through a highly context-dependent metric; the metric is provided by a scale which is contextually established, and they establish a comparison with a value on that scale which is treated as a norm. Hence, modification by an approximative adverb gives rise to a revised predicative meaning (a new property) and introduces a comparison between properties which differ minimally with respect to a certain scalar dimension, specified according to the relevant context and the current communicative goals of the interlocutors.

A predicate is a linguistic description of an entity, and there are conditions as to when and how a certain description can be adequately applied; these conditions are the entailments of the predicate. Since the conditions on the application of a predicate to an argument are the entailments of the predicate, the contribution of approximative adverbs will affect the truth conditions of the sentence, as correctly argued by the Conjunctive Analysis.

Given two predicates $P_A$ and $P_B$ that denote properties of the same semantic type, $P_A$ being the predicate modified by the approximative adverb and $P_B$ being the output of the modification, the adverb maps $P_A$ onto a value on a scalar property, that value being the standard or norm for the comparison. The scalar property may be lexically or contextually specified in a particular context, and both $P_A$ and $P_B$ are presented as instantiating a degree on that scalar dimension which is relevant in the context of utterance. The value for $P_B$ on the scale is defined with respect to the denotation of $P_A$ by the degree relation; the property denoted by $P_B$ is mapped onto a degree which is less than the degree onto which $P_A$ is mapped.
The evaluation of the applicability of the predicate relates to the syntactic properties that approximative adverbs display; the type of semantic argument that approximative adverbs take determines the kind of syntactic argument that they may take. In chapter 4, I will argue that even in the examples in which *quase* has narrow scope, it has scope over a predicative relation, and hence the adverb cannot be negated unless the whole constituent that expresses the predicative relation is negated. This constituent need not be propositional, but it must express a predicative relation.

In chapters 4 through 7 I show that both *quase* and *mal* may only co-occur with expressions that are used predicatively; this is particularly striking in the case of *quase*, since this semantic restriction underlies the wide range of syntactic categories that the adverb may combine with.

In the case of *quase*, due to the degree relation and to the fact that the standard value is the endpoint value on the scale, the argument of the predicate is described as displaying a high degree of the relevant property. Hence, the application of the predicate to the argument approximates the situation of use of that predicate that best satisfies its conditions of use, i.e., where all its entailments hold (in a way, we are comparing the degree to which a certain predicate would apply to different arguments). In the case of *mal*, since the argument is mapped onto a value on the scale which is less than the value considered normal for a property associated with that predicate, the predicate is evaluated as applying poorly to the argument.

This assessment of degree with respect to a relevant property underlies the type of inferences licensed by approximative adverbs and the asymmetry of the two components (explored in more detail in chapter 3). This connection between intensification and
identification in the meaning of degree words, leading to common polysemies, has been observed by Bolinger. The diachrony of several degree adverbs and degree nouns exemplify a shift from an identification to an intensification function (e.g. the sentence adverb truly); the diachronic shift proposed by Bolinger (1972) shows that there is a linguistically pervasive connection between “identification by some noteworthy characteristic to intensification of that characteristic” (Bolinger 1972:91).

By contributing an evaluation of the applicability of a predicate, approximative adverbs relate to a set of linguistic expressions which have been analyzed as “hedges”, i.e., expressions that qualify “the denotational aptness of certain other word tokens” (Kay 1997a:145), like loosely speaking, kind of, sort of, approximately (cf. Lakoff 1973, Kay 1997a, Kay 1997b). According to Lakoff, hedges are “words whose meaning implicitly involves fuzziness – words whose job is to make things fuzzier or less fuzzy” (Lakoff 1973:471). In this respect, the approach advocated in this dissertation is consistent with Sevi’s view, that approximative adverbs may quantify over standards of precisification (in the sense of Lewis) of a proposition. A similar idea is compatible with Lasersohn’s notion of “pragmatic halo”, according to which certain linguistic expressions encode instructions about the degree of pragmatic slack which is allowed (and adequate) in a particular utterance.

However, I will argue that these approaches do not provide a detailed enough description of the semantic contribution of approximative adverbs. There is a crucial difference between the meaning of approximative adverbs like almost and hedges like sort of which is left unaccounted for in previous approaches. This difference pertains to the scalar

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32 Although only a diachronic study could confirm this claim, I will hypothesize that the meaning of approximative adverbs exemplifies a shift in the opposite direction: from intensification to identification. In fact, this seems to be the case for German fast ‘almost’ (cf. Eckardt, forthcoming).
meaning of approximative adverbs. Compare (70) and (71); sort of cannot felicitously modify the predicate died because its aspectual structure does not display gradability (Hitzeman 1992); died is an achievement predicate and hence is perceived as an instantaneous transition between two states of affairs.

(70) I almost died.
(71) *I sort of died.

On the other hand, (70) is felicitous under two interpretations, which are made apparent by the contexts in (72) and (73):

(72) I felt so bad/embarrassed/shocked that I almost died.
(73) I had an accident and I almost died.

In (72), the predicate died is conceived as corresponding to the maximum value on a scale of a gradable property (e.g. embarrassment, suffering), of which the actual situation being described instantiates a high degree. In (73), died is presented as the likely outcome of a sequence of events involving an accident (according to the speaker’s comparison of possible courses of events).

In both cases, the contribution of almost, but not the contribution of sort of, is to introduce a scale onto which the predicate died is mapped. The specification of the scale depends both on lexical meaning and on world knowledge. Approximative adverbs make the modified predicate gradable inasmuch as this gradability is required by the comparison they introduce. The perspective that characterizes the meaning of approximative adverbs as a class always involves a comparison with a norm that corresponds to a value on a scale.
When I say that approximative adverbs contribute a “perspective”, I do not mean that the contribution of approximative adverbs is necessarily imputable to a particular speaker and to her subjective beliefs or opinions. Rather, the meaning of approximative adverbs crucially relies on the choice of a certain norm with respect to which a situation is described (and in certain cases, this norm may be determined relative to the point of view of the speaker, but needn’t be).

For example, if I say: Mary is less tall than John. This does not mean that I am introducing a subjective viewpoint or a belief that only holds in my belief world. It simply means that in describing Mary’s height, I have chosen to assign it a value which stands in a particular relation to John’s height (taking this to be the “standard value” for the comparison in this utterance). It is exactly the same type of contribution that approximative adverbs make: they describe an entity or a situation by comparing the degree to which that entity or situation has a certain property, when compared to a degree of the same property which is assumed as the norm. Thus, the evaluation contributed by approximative adverbs is relative, in that the description provided is made with respect to a value assumed as the standard of comparison. When we interpret an expression like almost white, we do not know the exact shade of the color of the object, just as in (69), the exact height of Mary is not provided. Arguably, natural languages provide many examples of such a process; the role of the standard value of a comparative statement can be compared to the role of a reference point in the interpretation of indexicals or to the role of reference time in temporal semantics.

This part of the meaning of approximative adverbs is not strictly truth-conditional; rather, it introduces a perspective in the way in which an entity or a situation is described (Löbner 1989): it is a matter of linguistic construal. The choice of perspective does not
necessarily convey something that is imputable to the speaker’s model, but assuming that the speaker is cooperative, ultimately her choice of a linguistic expression should be consistent with her beliefs and communicative goals. To exemplify, assume that I am describing a certain color and I utter either (74) or (75). The difference in meaning between (74) and (75) is a difference in the way the situation is construed: in the second case, I presuppose that there is a scale of darkness of which the predicate “black” constitutes the maximum degree, but truth-conditionally the two sentences are equivalent:

(74) É muito escuro.
    ‘It’s very dark.’

(75) É quase preto.
    ‘It’s almost black.’

The same can be said about (76) and (77):

(76) O João comeu muito pouco.
    ‘João ate very little.’

(77) O João mal comeu.
    ‘João barely ate.’

The sentence in (76) asserts that the amount of food consumed in the eventuality described was very reduced (with respect to a contextually assumed norm), whereas in (77), the applicability of the predicate comeu in a particular situation is evaluated on the basis amount of food considered normal for a prototypical eventuality of eating. In (77), both the specification of the scale and the specification of the standard value of comparison are not directly given by the conventional content of the arguments of the adverbs, but once their values are retrieved, they become part of the understood proposition expressed (which is
definable in truth conditional terms). There may be more than one type of scale retrieved in this interpretation of *mal*, as shown by comparing (78) and (79):

(78) A Ana esteve pouco doente.
    ‘Ana was not very sick’

(79) A Ana mal esteve doente.
    ‘Ana was barely sick’

Whereas (78) can only have one interpretation, namely that Ana was not seriously sick, (79) may have the same interpretation as (78) but may also mean that Ana was sick for a very short period of time. In the former case, the semantics of the adjectival predicate provides a scale of “seriousness” of the disease. In the latter case, the adverb quantifies over the duration of the bounded time interval during which Ana was sick.

In the next sections, I argue that the two meaning components identified by the Conjunctive Analysis (the polar component and the proximal component) should not be identified with the conjoined propositions presented in (1’) and (2’) in chapter 1. In the approach to be defended here, I agree with the Conjunctive Analysis in that I recognize the existence of the two components in the meaning of approximative adverbs. However, I do not agree with the split in the meaning of approximative adverbs performed by the two propositional conjuncts in (1’) and (2’), in particular with respect to the proximal component. I will argue that the first conjunct in (1’) and (2’) (seen as resulting from the proximal component) actually conflates different aspects of the meaning of approximative adverbs: (i) the degree relation between a reference value and a standard value, (ii) the type of standard of comparison, and (iii) the evaluation of the applicability of the predicate.
2.4.1 The polar component

I will argue that the polar component results from the interaction between the type of standard of comparison and the scale introduced by approximative adverbs.

In the case of *quase*, the modified predicate is presented as instantiating the endpoint value on the scale. For both telic verbs and (gradable) absolute predicates the endpoint value is the standard required for the truthful application of the predicate, and since the degree relation is “slightly less than”, in terms of truth conditions, modification by *quase* denotes that the predicate does not hold (i.e., the sentence obtained by removing the adverb is false).

A careful scrutiny of the data shows that precisely because the polar component results from the interaction between the scale and the type of standard of comparison, it cannot be reduced in all cases to the proposition \(\sim p\), as proposed by the Conjunctive Analysis. In other words, the interpretation of a sentence containing *quase* cannot always be given a counterfactual analysis. The examples presented in the literature support the counterfactual analysis, because they either consist of cases in which *quase* has sentential scope or of cases in which *quase* occurs with telic predicates. Because the endpoint on the relevant scale for certain expressions corresponds to a clear-cut criterion for the truthful application of the predicate (like telic verbs and absolute adjectives), the sentence entails that the predicate does not hold. In examples with non-gradable predicates, e.g. *quase internacional* ‘almost international, analyzed in chapter 4, whose lexical meaning does not determine a one-to-one mapping with a degree on a scale, it is not so intuitive that the sentence means ‘not international’. Rather, ‘almost international’ means that ‘the highest degree of property X, as instantiated by the predicate international, does not hold’.
The polar component only corresponds to the negation of the proposition when the modified expression lexically introduces a standard on which the truthful application of the predicate relies. In a sentence containing *quase*, the standard of comparison is negated. If this standard corresponds to the clear-cut criterion for the truthful application of predicate $P_A$, as provided by its lexical entry, then this criterion will be negated, and the sentence entails “it is not the case that $P_A$”. But if the semantics of the modified predicate does not provide such a standard, it is not intuitively correct to say that the proposition is negated: what is negated is the fact that the maximum degree of the property holds (but a high degree of the presupposed property holds).33 Whereas in *Ele quase ganhou* ‘He almost won’, he did not win, and no winning situation is being described, in *É quase branco* ‘It’s almost white’ the entity described has a certain color, namely a high degree of a light color, although it cannot be considered “white”. As will be shown in chapter 3, such an approach is consistent with the results obtained in the experiments reported, pertaining to the identification of the polar component of *almost*.

As for *mal*, again the polar component can be explained by the type of standard of comparison and the scale introduced by the adverb. In the case of *mal* the standard of comparison corresponds to a norm which is prototypically associated with the predicate. Unlike what we said about *quase*, this norm is not a clear-cut standard for the determination of the truth of the predicate; in fact, the whole range of the positive values on the scale may be truthfully associated with the predicate (in the same way that eating very much, eating much, eating little, all instantiate “eating” eventualities).

33 This is confirmed by the diachrony of German *fast* ‘almost’, which derives from a degree adverb meaning ‘very much’. Presumably, the semantic change was triggered in contexts in which the adverb occurred with a predicate that either did not allow for degree modification or contained the negation of a scalar endpoint, e.g. denoted by a NPI (Eckardt, forthcoming).
Under this view, the polar component is an entailment of the comparison established by approximative adverbs. The polar component is only determined, and added to the common ground, once the relevant scale and the standard value of comparison on that scale have been specified (i.e., the determination of the polar component depends on the retrieval of the semantic parameters that make up the proximal component).

2.4.2 The proximal component

In the approach to be developed here, I argue that the notion of “closeness” which is intuitively associated with the meaning of approximative adverbs results from the degree relation, the type of standard of comparison, and the evaluation of the predicative relation. If the argument of the predicate in the situation to be described is mapped onto a high value on the relevant property, the predicative relation is evaluated as highly appropriate. If the argument of the predicate is mapped onto a value of a property which is below the value normally associated with the predicate, the predicative relation is evaluated as applying only to a low degree. In a way, approximative adverbs are evaluative, but they differ from evaluative adverbs (e.g. fortunately, unfortunately) in that they do not contribute an evaluation of a fact, i.e., they do not take a fact as an argument (Bellert 1977, Ernst 2002). Rather, they evaluate the predicative relation with respect to contextually determined parameters – by providing a measure of how appropriate a certain predicate is as a description of its argument in a particular context.

The analysis of the data shows that there are two main types of interpretations that can be obtained with approximative adverbs: if the meaning of the predicate involves a
change of state, the adverb qualifies the conditions for that change of state to happen (namely, the possibility that it happens), whereas if it does not involve a change of state, it operates on the scale of a relevant property. The meaning of *quase* exemplifies both types of interpretations, whereas the meaning of *por pouco* only exemplifies the former and the meaning of *mal* only exemplifies the latter. This relates to the observation that preverbal *por pouco* may only co-occur with telic verbs, the same types of predicates that yield a counterfactual interpretation with *quase*.

In both types of interpretations, the contribution of the approximative adverb involves a comparison between values on a scale. These values may correspond to different stages in a sequence of events, to different degrees of a scalar property, to different propositions which are ordered within a scalar model or which are temporally ordered (as in the inverted readings of *mal* and *casi*, respectively). The reference value is always vague, but it must nevertheless be possible to determine – hence the unacceptability of the phrase "almost pregnant", mentioned in chapter 1.

Hence, not only do approximative adverbs denote an assessment of categorization, like hedges, but by virtue of having propositional scope, they also operate on the possibility of different courses of events. In other words, they provide a measure of comparability for properties of different types (given the polymorphism of approximative adverbs).

### 2.5 Conclusions

In this chapter, I have presented some of the semantic and syntactic properties of approximative adverbs in EP and in other languages. I have argued for the need for a cross-
classification of approximative adverbs, given that the range of interpretations that they display makes approximative adverbs share features of different classes of adverbs. On the basis of the complex behavior of this set of adverbs, as described in the first two sections of the chapter, I argue for a more fine-grained approach to the notion of closeness associated with the meaning of approximative adverbs.
CHAPTER 3

AN EXPERIMENTAL APPROACH TO THE ASYMMETRY OF THE MEANING COMPONENTS OF APPROXIMATIVE ADVERBS

In this chapter, I address the asymmetric status of the meaning components of approximative adverbs through the discussion of two experiments that were designed to test the predictions of the Conjunctive Analysis. The experiments targeted the interpretation of sentences containing the English adverbs *almost* and *barely*. The results of the experiments show that there is psycholinguistic evidence for the asymmetry of the components of approximative adverbs identified by the Conjunctive Analysis, namely for the prominence of the proximal component. Moreover, the experimental data provide some insight into the status of the polar component and provide evidence against a mirror-image analysis of *almost* and *barely*.

The outline of the chapter is as follows. In section 3.1, I review previous experimental work on the semantic and pragmatic properties of approximative adverbs, both from acquisition and processing studies. In section 3.2, I describe the design and methodology of the two experiments conducted. Section 3.3 provides a discussion of the results and section 3.4 offers concluding remarks and suggestions of further work.
3.1 Previous experimental approaches to the semantic-pragmatic properties of approximative adverbs

In this section, I discuss the results of previous psycholinguistic studies that focused on the semantics and pragmatics of approximative adverbs. First I present the experiments on the acquisition of this class of adverbs and then I present the processing studies.

3.1.1 Experiments on the acquisition of approximative adverbs

Champaud & Bassano (1987) report the results of several experiments with children and adult subjects to study the interpretation of French adverbials presque ‘almost’, à peine ‘just, barely’ and à peu près ‘about’.

Two experiments were conducted. In the first experiment, subjects were presented with a set of dolls of distinct colors, each of them having a box of beads in front of her. Subjects were asked to listen to a sentence that described the number of beads contained in a box. In the experimental items, the adverbials occurred as modifiers of numerical expressions, following the template in (1):

\[(1) \quad \text{J’ai presque/à peine/à peu près } n \text{ perles.} \]
\[\quad \text{‘I have almost/hardly/approximately } n \text{ beads.’} \]

The task of the subjects consisted of identifying the doll(s) who could utter that sentence. In the second experiment, subjects were presented with a set of dolls standing on a wall marked with two lines of different colors and different heights. Subjects were told that the dolls were measuring themselves against the lines. The experimental trials consisted of the following sentences:
Again, the subjects’ task was to identify the doll uttering the sentence in (2).

The rationale of the experiments relies upon a theoretical distinction between “informative value” and “argumentative value” (in the sense of Anscombe & Ducrot 1983) of the adverbials. The former corresponds roughly to the proximal component, and the authors’ aim was to determine the range of the area allowed in the denotation of the operator. For example, in the first experiment the goal was to determine the difference between \( n \) and the actual number of beads in the box of the selected doll. As for the “argumentative value”, it is defined as the relation between the meaning of the utterance and a possible conclusion licensed by it, as a consequence of the (scalar) perspective introduced by a particular lexical item.\(^{34}\) To exemplify, in the second experiment, a sentence containing an adverbial that contributes a “positive argumentative value” would license the conclusion that the doll is “tall”, whereas a sentence containing an adverbial with a “negative argumentative value” would license the conclusion that the doll is short.\(^{35}\)

In order to test for the argumentative value, subjects were explicitly asked about the speaker’s intention when uttering the statement, as in (3) for the first experiment and (4) for the second experiment (Champaud & Bassano 1987:613):

\[^{34}\text{“Thus, “Ça coute seulement (or “à peine”) 10 F (This costs 10 F) can only be used for conclusions such as “that’s not expensive” or “that’s cheap” (negative orientation).” (Champaud and Bassano 1987:606-607).}\

\[^{35}\text{According to the authors, the determination of the argumentative orientation crucially relies on the semantic contribution of the adverb: “…the “positive” label [of \textit{presque}] depends neither on the amount of the value \( n \) mentioned in the utterance, nor on the affirmative or the negative form of the conclusion-sentences.” (Champaud and Bassano 1987:607). As shown in chapter 4, this is not entirely correct, as the authors are confusing the perspective introduced by the semantic value of the adverb with the inferences associated with frequent contexts of use of the adverb (which, of course, are in part constrained by its semantic contribution).}\

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(3) Celui qui a dit cette phrase “...”, est-ce qu’il pense qu’il a assez de perles pour faire son objet ou est-ce qu’il pense qu’il n’en a pas assez?
‘When he/she says this sentence “...”, does he/she mean that he/she has enough beads to make his/her object, or not enough beads?’

(4) Est-ce que la personne qui dit ça pense qu’elle est: plutôt assez grande? plutôt pas assez grande? ni l’un, ni l’autre?
‘Does the person uttering this statement mean that he/she is: tall enough? not tall enough? neither one nor the other?’

Following Anscombre and Ducrot’s (1983) analysis of approximative adverbs, the authors predict that \textit{presque} will be assigned a positive argumentative value, \textit{à peine} will be assigned a negative argumentative value, and \textit{à peu près} will not be assigned any argumentative value. Immediately after providing the answers required in the particular tasks, subjects were asked about the “speaker’s uncertainty”, i.e., the knowledge of the supposed speaker when uttering the sentence containing the scalar adverb. The question asked after the bead test is given in (5), from Champaud and Bassano (1987:11):

(5) “The little boy (girl) who said that, does he/she know (exactly know) how many beads there are in his/her box? (did he/she count them?), or doesn’t he/she know (exactly)?”

The results obtained were as follows. As for the informative value, this study reports an interesting finding: young children (6-8 years old) interpreted \textit{presque n} as describing the numeric values that were located both slightly under and above the \textit{n} value but excluding the value itself. This effect was not found in older subjects and it disappears at the age of 8 years old. From the age of 8 onwards, the range of the denotation of \textit{presque n} is restricted to values that are \textit{less than n} (in accordance with the polar component, in the terminology of the Conjunctive Analysis).
As for the argumentative value, only the predictions concerning *à peine* were borne out; both children as early as 6 years old and adults interpreted the sentences with *à peine* as conveying the notion of insufficiency.\[^{36}\] As for *presque*, the results did not support the hypothesis. In what concerns *à peu près* ‘about’, there is an ontogenetic progression; child subjects assign it a negative orientatvion, but this result is not found in adults.

The answers to the question about the speaker’s uncertainty are interesting, in particular those from the adult speakers. Whereas speakers associate *à peu près* with uncertainty (the result is highly significant and the effect increases with age), this is not the case for *à peine* and *presque*. The two adverbs are associated with certainty, and the effect is stronger for *à peine*. This result is compatible with an analysis of approximative adverbs that distinguishes their meaning from the meaning of other hedges on the basis of the particular scalar perspective that they introduce, as argued in this dissertation.

Also relevant for the investigation of the two meaning components of approximative adverbs (specifically for *almost*) is the study reported in Boucheix and Dhont (1992). This paper argues for a developmental evolution in the interpretation of French *presque* ‘almost’, based on studies with children ranging from the ages of four to eleven years old. The study focuses on two aspects of the meaning of *presque*: (i) whether the value assigned to *presque* $X$ was below, above, or equal to the modified expression $X$, and (ii) the (numeric) difference between $x$ and *presque* $X$.

The results of the experiments were the following. Between 4 and 8 years old, children assign to *presque* $X$ values which may be on a proximal area below or above $X$, and

\[^{36}\] The results obtained in similar experiments conducted by the authors with the modifiers *guère plus* ‘hardly more’ and *seulement* ‘only’ are very similar in terms of the percentages of responses assigning the adverbs a negative argumentative orientation (cf. Champaud & Bassano 1987:620, Figure 7).
which may coincide with \( X \) itself. Only in the age range of 8-9 does the area become restricted to either the value of \( X \) or the range of values close to and below, with only 8% of responses above \( X \). The latter type of response disappears completely at the age of 10. These findings are similar to those reported by Champaud & Bassano (1987). Moreover, as for the distance between \( X \) and \( \text{presque} \ X \), until the age of 7 there is a direct correlation between the quantity denoted by \( X \) and the distance between the value of \( X \) and \( \text{presque} \ X \); the greater the quantity, the farther the value of \( X \) is from the value assigned to \( \text{presque} \ X \).

Both studies reported in this section suggest that the proximal component is identified earlier than the polar component, which shows that also in an ontogenetic perspective the proximal component seems to be more prominent than the polar component.\(^{37}\)

### 3.1.2 Experiments on the processing of approximative adverbs

Using as theoretical background Anscombe and Ducrot’s (1983) Theory of Argumentation in Language, Lundquist and Jarvella (1994) and Jarvella and Lundquist (1994) study the inferential patterns triggered by the use of the adverbs that correspond to \textit{almost} and \textit{only} in Danish, Finnish, and French. According to the authors, these adverbs activate scalar inferences which are absent in corresponding “neutral” sentences. The scalar inference is presented as a “topos” concept which establishes a mapping between two scales of different properties, which can be stated in the following manner:

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\(^{37}\) On the account argued for in this dissertation, according to which the polar component is entailed by the main contribution of the adverb (i.e., the proximal component), one may hypothesize that the findings from the acquisition studies show that small children have grasped the content of the proximal component but cannot identify its entailment.
(6) <the more (the less) an object O has the property P, the more (the less) an object O’ will have the property P’> (Jarvella and Lundquist 1994:172)

In (7) and (8) below (from Jarvella and Lundquist 1994), the first sentence provides an argument licensing a certain conclusion, which is expressed by the second sentence. According to the authors, the adverbs contribute a scalar evaluation of the expression they modify and this evaluation underlies the mapping onto a scale of likelihood of winning an election. This is not the case for (9), which is neutral with respect to that scale. This scalar evaluation determines which sentences will be felicitous continuations of the sentences containing the adverbials, i.e., which sentences can be seen as arguments favoring a particular conclusion:

(7) George Brown got almost 5,000 votes. He is likely to win the election.
(8) George Brown got only 5,000 votes. He is likely to lose the election.
(9) George Brown got 5,000 votes. He is likely to win/lose the election.

The relevant topos concept for co-oriented pairs of sentences (as exemplified by (7) and (8)) is <the more votes X gets, the more likely X will win>, and for anti-oriented pairs (involving different competitors) <the less votes X gets, the more likely Y will win> (Jarvella and Lundquist 1994:183).

The papers report the results of experiments conducted with Danish and Finnish speakers, and later replicated with French speakers, with the goals of testing (i) whether

38 One crucial point to the authors’ argument (not stated in the papers) is the absence of contextual information. Crucially, if the context entails the proposition “5,000 is the required amount to win the election in this county”, then the proposition “George Brown got 5,000 votes” is not “neutral” with respect to a potential scale of likelihood of winning that particular election. It should be noted, however, that what the authors mean by “neutral” is not defined in the paper. Looking at the examples provided, it seems that the neutral sentences are those in which no adverb occurs.
speakers activate up- or down-scales when comprehending texts with almost and only, and (ii) whether it is easier to draw a deduction from a sentence with directional congruence with the previous one than from sentences without directional congruence. The latter point pertains to the question of whether there is any processing cost related to the interpretation of scales that do not display the same orientation, unlike the case exemplified in (7) and (8), where a number of votes evaluated as high is mapped onto a high degree of likelihood of winning, and a number of votes evaluated as low is mapped onto a low degree of likelihood of winning.

The experiments included a question-answer task to test text comprehension and a self-paced reading task. The former involved anaphora resolutions. Subjects read a text about two competitors, identified by their names, whose performance was described in a sentence using either almost or only, as in (10), from Jarvella and Lundquist (1994:183-4).

(10) En sténographie anglaise, Sandrine Barra fut capable d’écrire presque/ne put écrire que 65 mots à la minute.
   ‘In English stenography, Sandrine Barra was able to write almost/only 65 words per minute.’

Later in the text, the result of the competition was presented in a sentence with a definite NP, allowing either for a co-referential or for a disjoint interpretation, and subjects were asked about the name of the winner or the name of the loser of the competition.

In the second experiment, subjects read a text about a competition sentence by sentence on a computer screen. Again, the text involved two competitors and the results of the competition were presented at the end of the text. Subjects were presented either with a co-oriented sentence pair (i.e., a pair in which the scalar evaluation of the performance was consistent with the result of the competition) and an anti-oriented sentence pair (in which the
scalar evaluation of the performance and the result were not consistent). After reading the
text, subjects were asked whether X (one of the competitors mentioned) had won the
competition; this response was used as a measure of comprehension of the text.

In the experiment involving anaphora resolution, the results show the activation of a
scale with “upward” orientation for *almost* (i.e., subjects interpreted the *almost* sentences as
suggesting a high likelihood of achieving the goals mentioned in the texts), and the activation
of a scale with “downward” orientation for *only*. In the reading task, the results show a speed
advantage in the reading times of sentences with congruent continuations, whereas response
latencies were slower for incongruent pairs of sentences.

An interesting aspect of these papers is the fact that the inferential patterns licensed
by the adverbs are studied online, thus providing information about the actual process of
sentence comprehension.

It should be noted, however, that the theoretical assumptions underlying the design of
the experiment raise a number of questions. First of all, as will be shown below, the semantic
contribution of the adverbs should be distinguished from the inferences arising in their
frequent contexts of use. Note that out-of the-blue, (11) would be perfectly acceptable:

(11) George Brown got almost 5,000 votes. He is likely to lose the election.

Moreover, the fact that all the texts described competition situations in which a leading
or a non-leading position are under discussion constitutes a strong bias on the possible
results. Crucially, in some of the narrative texts presented to the subjects, the modified
expressions were themselves strongly evaluative and induced (with or without the adverbial)
a scalar judgment with respect to the likelihood of winning or losing the competition:
examples included *presque idéale* ‘almost ideal’, *n’avait qu’une glisse peu rapide* ‘had only a slowish guide’ (Jarvella and Lundquist 1994:179).

Hence, it can be argued that the effects obtained are not necessarily indicative of the values of the adverbs, but rather are a consequence of the meaning of the modified expressions interpreted in the particular contexts that were provided in the narrative texts. In a context entailing that the winner of an election has to obtain 10,000 votes, (12) is not “upward” oriented, and therefore does not license the conclusion that John is likely to win. In other words, the scalar orientation in this case does not depend on the meaning of *almost*, but rather on the “norm” which is assumed (i.e. how much is “enough” in order to win the election).

(12) John got almost 5,000 votes.

This leads to another point, which pertains to the difference between the meaning of *almost* and *only*. If we compare (12) with (13) in the context just mentioned and in a context in which 5,000 is the amount necessary to win, it seems clear that in the latter case (13) is felicitous only if understood ironically:

(13) John got only 5,000 votes.

The crucial point is that *independently of the context*, if *only* modifies a numeric expression, a scalar orientation is induced, namely a low position in the scale. This is not the case for *almost*, though. In the absence of contextual information, the expression modified by *almost* (5,000 votes) will be assumed as the norm that correlates with the winning position. However, if the context provides a specific value, e.g. 10,000 votes, as the criterion to win,
then (12) simply denotes a number of votes which is slightly less than 5,000 and does not license any conclusion about John being the winner (rather, that he didn’t win), showing that the correlation between the two scales that the authors assign to the meaning of *almost* is in fact a defeasible inference.

The contribution of *almost* consists of depicting a range on a scale (in this case, a quantitative scale) by singling out the endpoint value on that scale, which is treated as the standard of comparison. Very often the endpoint value indeed corresponds to a high value, in absolute terms, if the modified expression lexically encodes a scalar endpoint (a context in which *almost* is likely to be relevant), but the denotation of *almost X* needn’t be a high quantity or a high degree *in absolute terms*. In other words, the output of *almost* modification is a high value on a scale *relative to the standard of comparison*, but the determination of this standard is no independent of a particular context. This is important, because as long as a scale can be assumed, either on the basis of lexical, conceptual or contextual knowledge, in principle any expression can be modified by *almost* (and hence treated as an endpoint). In many cases the modified expressions indeed denote endpoint values on a scale on the basis of world knowledge, but this is not necessarily the case. What this suggests is that Lundquist and Jarvella treat *almost* and *only* as scalar operators with the same behavior, but the interpretations obtained may be a consequence of the design of the materials and the particular tasks of the experiment.

The experiments to be reported in this chapter can overcome the limitations pointed out in these processing experiment by restricting the context effect to just the variable under consideration. By providing a single continuation which unambiguously follows from either the truth or the falsity of the predicate under the scope of the approximative adverb, and
which does not depend on other contextual assumptions, it is possible to test the effect of each of the propositional components in the comprehension of sentences with *almost* and *barely*. In this respect, the present study constitutes a relevant contribution to the field in that the experiments address directly the status of the meaning components of these adverbs, both in online and offline tasks.

### 3.2 The experiments

The goal of the two experiments conducted is to investigate whether there is psycholinguistic evidence for the theoretical distinction between the status of the two propositional components identified by the Conjunctive Analysis.

Two experiments were conducted. The first experiment tested the role of each meaning component component with respect to textual coherence. Since asserted information is the speaker’s contribution to context update (i.e., how the sentence affects the conversational record), the coherent continuation is predicted to be the one that builds on the asserted component. The second experiment intended to test the role of each component when the sentence is interpreted in isolation, i.e., when subjects are directly asked about the truth conditions of the sentence. In this case, responses are predicted to be in accordance with entailed content (since the relation of the sentence with the context of utterance is not at issue).

The design of the present study builds on an analogy with research on quantifiers that denote vague quantities like *few* and *most* (Moxey and Sanford 1993, 1998, Paterson et al. 1998), which is reminiscent of some of the issues discussed above. In production and
comprehension tasks, the meaning of quantifiers like *a few* and *few* is differentiated by subjects in terms of the possible continuations that are considered to be felicitous:

(14) A few members of parliament were at the meeting.
(15) Few members of parliament were at the meeting.

While (16) is considered by subjects as a felicitous continuation of (14), (17) is judged less acceptable and is considered a more natural continuation of (15):

(16) They talked about the Education Bill.
(17) They were out with their secretaries instead.

According to Moxey and Sanford (1993), “positive” (*a few, most*) and “negative” (e.g. *few, not many*) quantifiers introduce a “focal bias” with respect to the set of entities which constitutes the antecedent of the anaphoric expression, in this case the pronoun *they*. Positive quantifiers favor reference to the set of which the predicate is true (i.e., the members of parliament who were at the meeting), called the “reference set” or “refset”, as in (16). On the other hand, negative quantifiers favor reference to the set of which the predicate is false (i.e., the members of parliament who were not at the meeting), called the “complement set” or “compset”, as in (17).

In the present study, a similar methodology is used in reading and judgement tasks to test the interpretation of sequences of sentences, the former containing an approximative adverb, the latter containing a connective that retrieves one of the meaning components of the approximative adverb. This contextual manipulation makes it possible to target each of

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39 Examples (14) through (17) are from Moxey and Sanford (1998:734).
the propositions entailed by the sentence that contains an approximative adverb, as exemplified in (18) and (19).

(18) John can almost swim. Therefore he’ll enjoy a day at the pool with his friends./#Therefore he’s afraid of drowning.

(19) John can barely swim. #Therefore he’ll enjoy a day at the pool with his friends./Therefore he’s afraid of drowning.

The hypothesis to be tested is that *almost* behaves like a “positive” quantifier in that it favors continuations coherent with the truth of the predicate over which it has scope (in accordance with the proximal component of the adverb, according to the Conjunctive Analysis), whereas *barely* licenses continuations coherent with the falsity of the predicate (in accordance with the proximal component of the adverb, according to the Conjunctive Analysis), and in this respect displays a behavior similar to that of “negative” quantifiers. Despite the fact that modification with *almost* entails the negation of the predicate, and modification with *barely* entails the truth of the predicate, the felicitous continuation in (20) and (21) is not the sentence that would coherently follow the respective polar component:

(20) John cannot swim. #Therefore he’ll enjoy a day at the pool with his friends./Therefore he’s afraid of drowning.

(21) John can swim. Therefore he’ll enjoy a day at the pool with his friends./#Therefore he’s afraid of drowning.

Such a comparison provides a more rigorous procedure to test the positive and the negative “argumentative orientation” of *almost* and *barely*, respectively, identified by Anscombe and Ducrot (cf. Horn 2002a, Schwenter 2002a).
3.2.1 Design of the experiments

Both experiments were designed as a $2 \times 2$ completely crossed factorial, with 4 lists in each experiment, in order to counterbalance possible confounding factors, e.g. length in words and word frequency. Each list contained 20 critical items (5 per condition), and the same predicates were used in both experiments. In order to allow for a fair comparison, all the critical items included the modal verb *can* and an activity verb. Each list comprised 68 fillers, which included either activity verbs and a manner adverb (e.g. *swims slowly*) or a predicative nominal (e.g. *is an experienced diver*). The order of presentation of filler and critical items was pseudo-randomized. Each subject saw only one list and different subjects were used in the two experiments.

A total of 96 subjects, undergraduate students at the Ohio State University, were run (50 for Experiment 1, 46 for Experiment 2), of which non-native speakers of English were excluded. The total number of subjects whose data were analyzed was 48 for Experiment 1 (12 subjects per list) and 40 for Experiment 2 (10 subjects per list).

3.2.1.1 Experiment 1

This experiment consisted of a rating task. Subjects read pairs of sentences like (22) on the computer screen, pressing “Next” after each sentence:

(22) John can almost swim. Therefore he’s afraid of drowning.

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40 The experiments reported in this chapter were conducted following OSU Research Protocol 2005B0190.
After each pair of sentences, felicity judgements were elicited with the sentence *How reasonable was this sequence?* In order to rate the sequence, subjects were presented a numeric scale, from 1 (“completely unreasonable”) to 5 (“completely reasonable”). The four conditions in the experiment are presented in Table 3.1; each condition corresponds to a type of continuation, targeting either the proximal or the polar component:

<table>
<thead>
<tr>
<th>John can almost swim</th>
<th>Therefore he’ll enjoy a day at the pool with his friends. [Proximal]</th>
<th>Therefore he’s afraid of Drowning. [Polar]</th>
</tr>
</thead>
<tbody>
<tr>
<td>John can barely swim</td>
<td>Therefore he’s afraid of drowning. [Proximal]</td>
<td>Therefore he’ll enjoy a day at the pool with his friends. [Polar]</td>
</tr>
</tbody>
</table>

Table 3.1: Conditions in Experiment 1

In this experiment, the dependent variable was the rating value attributed to each pair of sentences. The independent variables were the adverb in the first sentence of the pair (*almost* or *barely*) and the type of continuation (coherent with the proximal component or coherent with the polar component of the adverb in the first sentence). The second sentence in each pair was introduced by a connective (*therefore, so, consequently, it’s because*); the number of each connective was kept the same across all the lists (22 tokens of each connective per list, same number of tokens of each connective in the critical items). The entire set of critical items and control sentences is provided in the Appendix.

The predictions for this experiment were the following; (i) for both adverbs, continuations coherent with the proximal component (i.e., the asserted content contributed by the adverb) were predicted to obtain higher rating values than continuations coherent with the polar component, and (ii) accordingly, for *almost*, continuations coherent with the truth of the
modified predicate were predicted to be rated higher than continuations coherent with the falsity of the predicate, and the reverse results were predicted for barely.

Both predictions were borne out. The overall ratings by condition graphed in Figure 1 show that one factor clearly has a consistent effect on the results, namely the type of continuation. For both adverbs, subjects provided higher ratings for continuations that were coherent with the proximal component than for continuations coherent with the polar component. Furthermore, there is an interaction between adverb and type of continuation; continuations coherent with the proximal component are rated higher for pairs containing barely than for pairs containing almost, and continuations coherent with the polar component are rated lower for barely than for almost (see also Figures A.1 and A.2 in Appendix A).

![Figure 3.1: Ratings according to type of continuation](image)

The ratings of the judgement task were treated using an analysis of variance. The means of rating values were subjected to a 2 (adverb: almost, barely) × 2 (continuation type:
coherent with polar component or coherent with proximal component) repeated measures ANOVA, once by subjects and once by items. Adverb and continuation type were treated as within-subjects variables, and list (subject analysis) and group (item analysis) were treated as between-subjects variables.

The results demonstrated a significant main effect of the type of continuation (F1[1,44] = 369.850, p < .01, F2[1,16] = 195.532, p < .01) and a significant interaction between adverb and type of continuation (F1[1,44] = 63.367, p < .01, F2[1,16] = 37.223, p < .01). Post-hoc paired-samples t-tests, at a Bonferroni corrected level of p < .008, revealed the nature of the interaction. The ratings of continuations coherent with the proximal component are higher for barely than for almost (t[47] = -3.846, p = .000), and the ratings of continuations coherent with the polar component are lower for barely than for almost (t[47] = 7.855, p = .000). Furthermore, comparing t-values of the paired t-tests, we can see that with the same number of observations for the two adverbs, the difference between the ratings of the two continuations is greater for barely (t[47] = -18.253, p = .000) than for almost (t[47] = -6.692, p = .000). Although both are significant at p < .008, the relative size of the t-values suggests that the effect is greater for barely than for almost.

Other effects included an interaction with list (the adverb × type of continuation interaction differed across lists: F1[3,44] = 5.150, p < .01), and a marginal effect of adverb in the subject analysis (F1[1,44] = 3.087, p = .086) that is not significant in the item analysis. In the item analysis, group has a significant main effect (F2[1,16] = 3.652, p < .05).
I should point out that the reaction time (RT) of the rating task (i.e., the RT of the subjects’ response after the second sentence in each pair) was also intended as a dependent variable in this experiment. The rationale of including this measure was that according to general assumptions in processing studies, the interpretation of an incoherent sequence (i.e., a pair of sentences in which the second sentence was not coherent with the proximal component) presumably might involve a processing cost, and hence provide further evidence for the asymmetry of the meaning components. However, for a reason which has not been determined a big part of the results pertaining to the RT is missing.

However, the tendency that is suggested by the few data is striking. The RTs obtained for pairs of sentences containing barely were more reduced than the RTs for pairs of sentences with almost. This result is unexpected in that reading times for an expression that has a negative meaning are generally higher. My tentative hypothesis about a possible explanation for the tendency found is that the RT data actually correspond to the rating task and not so much to the reading/comprehension task. In fact, subjects knew that they would be asked to provide a rating judgement (and no independent comprehension task was included in the experiment). Once compared with the rating values, since the difference between the ratings coherent with the proximal component and the polar component was greater for barely than for almost (cf. t-test), it is reasonable to hypothesize that the reduced RTs had to with the fact that subjects seem to have more polarized judgements with respect to barely than with respect to almost, and hence were faster in providing a rating for the pairs containing barely than for the pairs containing a sentence with almost. However, this hypothesis can only be tested by replicating the experiment and possibly by using other experimental methodologies. This will be left for future work.
3.2.1.2 Experiment 2

In this experiment, subjects were directly asked about the truth conditions of sentences containing approximative adverbs; they were requested to provide a True/False judgement about a sentence containing either *almost* or *barely*. After reading each sentence on the computer screen, subjects pressed “Next”, according to the sequence exemplified in (23):

(23) John can almost swim. John can swim. T or F?

The four conditions in this experiment are presented in Table 3.2, where “Sentence 2” corresponds to the propositional component which is being inquired about (this factor will be henceforth called “component”). The name of the component for each adverb, following the terminology of the Conjunctive Analysis, is given in the third column. This column groups the conditions for the two adverbs according to the component that was the target of the question. In the fourth column, A stands for *almost* and B stands for *barely*.

<table>
<thead>
<tr>
<th>Sentence 1</th>
<th>Sentence 2</th>
<th>Targeted component</th>
<th>Condition name</th>
</tr>
</thead>
<tbody>
<tr>
<td>John can almost swim.</td>
<td>John can swim.</td>
<td>Proximal</td>
<td>A can</td>
</tr>
<tr>
<td>John can almost swim.</td>
<td>John cannot swim.</td>
<td>Polar</td>
<td>A cannot</td>
</tr>
<tr>
<td>John can barely swim.</td>
<td>John can swim.</td>
<td>Polar</td>
<td>B can</td>
</tr>
<tr>
<td>John can barely swim.</td>
<td>John cannot swim.</td>
<td>Proximal</td>
<td>B cannot</td>
</tr>
</tbody>
</table>

Table 3.2: Conditions in Experiment 2

The dependent variables were the True/False judgements elicited from the subjects and the reaction time (RT) of the judgement decision. The independent variables were the adverb in Sentence 1 (*almost* or *barely*) and the affirmative or negative sentence, containing
can or cannot, presented after the sentence with the approximative adverb. The set of filler items contained the same number of items for each possible response in each condition, i.e., out of the 68 fillers, 17 “True” responses for can, 17 “False” responses for can, 17 “True” responses for cannot, and 17 “False” responses for cannot. (The complete set of critical items and fillers is provided in the Appendix).

The predictions for this experiment were the following. Given that the task of the present experiment directly targeted the truth conditions of sentences containing an approximative adverb, the True/False judgements were predicted to reflect the propositions identified by the Conjunctive Analysis, on the assumption that the polar component is part of the meaning conventionally contributed by the adverbs. Therefore, subjects were expected to respond in accordance with the polar component (which pertains to the truth or falsity of the modified predicate in the world of evaluation).

In order to make the implications of the results clearer, the predictions of two possible hypotheses are fleshed out in the charts below. In table 3, Hypothesis 1 is schematically presented; if subjects respond in accordance with the polar component, the higher percentages of True/False judgements should be distributed according to the following pattern (here, exemplified with the predicate can swim):

<table>
<thead>
<tr>
<th></th>
<th>John can swim.</th>
<th>John cannot swim.</th>
</tr>
</thead>
<tbody>
<tr>
<td>John can almost swim.</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>John can barely swim.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

Table 3.3: Hypothesis 1 (Subjects respond in accordance with the polar component)
On the other hand, if subjects respond in accordance with the proximal component (Hypothesis 2, given in Table 4), the inverse results are expected, i.e., higher percentages of “True” responses would be expected in the cases in which the second sentence corresponds to the respective proximal component of the approximative adverb and higher percentages of “False” responses would be expected when the second sentence corresponds to the polar component:

<table>
<thead>
<tr>
<th></th>
<th>John can swim.</th>
<th>John cannot swim.</th>
</tr>
</thead>
<tbody>
<tr>
<td>John can almost swim.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>John can barely swim.</td>
<td>F</td>
<td>T</td>
</tr>
</tbody>
</table>

Table 3.4: Hypothesis 2 (Subjects respond in accordance with the proximal component)

As for the second dependent variable, it is not possible to predict differences in RTs for true/false responses since the lexical material is not the same in each case. The problems pertaining to the analysis of the results of RTs will be discussed below.

To sum up, in this experiment subjects were specifically asked about the truth conditions of sentences containing AAs, and each condition targeted each of the entailments of the two adverbs.

The results, graphed in Figure 2, make apparent a general pattern; for both adverbs, the majority of the responses are in accordance with the polar component, i.e., in support of Hypothesis 1 (see Table 3). This can clearly be seen by comparing the conditions targeting the polar component in the second and third rows of Table 3.2 and the two columns in the middle of Figure 2, which represent the higher proportions of true responses per subject. The data show that component had a main effect on the results, and, as in Experiment 1, there is a
difference between the two adverbs, which again involves an interaction with component. For *barely*, the proportion of “True” responses was higher than for *almost* both when the target was the polar component and when it was the proximal component.

![Proportion of True responses per subject per condition](image)

**Figure 3.2:** Proportion of True responses per subject per condition (means)

On a closer look, one can see that rigorously only the results obtained for *barely* confirm Hypothesis 1 (0.755 of “true” responses for “John can swim”, 0.305 of “true” responses for “John cannot swim”). In fact, even if the higher proportion of “true” responses pertaining to the sentences with *almost* is for “John cannot swim” (i.e., the polar component), the results show almost a half/half split between “true” and “false” responses for this component (0.555 for “true” and 0.445 for “false”).

The True/False judgments were analyzed in the following way. A 2 (adverb: almost, barely) × 2 (component: polar or positive) repeated-measures ANOVA was run on arcsine-
transformed proportions of “True” responses per subject and per item per condition. Again, adverb and component were treated as within-subjects variables, and list was treated as between-subjects variable. The results demonstrated a significant effect of the interaction adverb × component (F1[1,36] = 36.126, p < .01, F2[1,16] = 171.615, p < .01). The analysis also showed a significant main effect of adverb (F1[1,36] = 45.294, p < .01, F2[1,16] = 53.826, p < .01), and a significant main effect of component (F1[1,36] = 5.041, p < .05 (.031)), qualified by the referred interaction.

As for the reaction time (RT) data, a caveat should be mentioned. Given that the lexical material and the response type (T vs. F) are not the same across the different conditions, the comparisons between the RT reported should be made with caution. For example, one cannot compare a “True” response to an item in the “A can” condition to a “True” response in the “B cannot” condition; besides the different adverb, this would mean comparing a “True” response to a positive sentence and to a negative sentence. However, if we keep the type of sentence constant and vary only the response type, and look at the condition that inquired directly about the polar component of almost, it is interesting to note that this condition presents delayed reaction times: the mean RT for “A cannot” with “True” as response was 1751.73 ms and the mean RT for “A cannot” with “False” as response was 1495.16 ms. The complete results of the RTs obtained are graphed in Figure 3.3 (see also Appendix B, Table B.1).
3.3 Discussion of the results

The results of the two experiments conducted provide robust psycholinguistic evidence for the asymmetry of the meaning components of *almost* and *barely*. The results of the first experiment show that subjects treat as acceptable continuations of a sentence containing an approximative adverb sentences that are coherent with the proximal component of the adverb, and treat as unacceptable the continuations that are coherent with the polar component. These results demonstrate that the two propositional components have a different
bearing on textual coherence. As for the second experiment, it shows that subjects respond according to the polar component when asked to provide a truth-conditional judgement about the meaning of the sentence in isolation.

This evidence is not conclusive as to the status of the polar component, but the data from the second experiment suggest that it should be considered part of the conventional content of the adverb. Hence, combined with other sources of evidence for the behavior displayed by approximative adverbs (among which the tests discussed in chapter 1), the results obtained seem to argue against the conversational implicature approach.

Focusing on the results of each experiment considered separately, the first experiment showed that the difference between the ratings for each component was greater for barely than for almost. This suggests that subjects have more polarized intuitions about the felicity of continuations in the case of barely than in the case of almost. A possible reason for this difference is the fact that barely displays a “negative behavior” (Klein 1998, Horn 2002a), which follows from the type of standard of comparison that it introduces.

As shown in chapter 1, previous studies have not specified with respect to what barely is negative – note that according to the Conjunctive Analysis both almost and barely contribute the conjunction of a positive and a negative proposition. What seems to be crucial, though, is that the “negative” behavior of barely is associated with the proximal component.

Recall that in Champaud and Bassano (1987), contrary to the authors’ predictions, only à peine was assigned a negative orientation. These results support the thesis defended in this dissertation; à peine introduces a comparison between a certain situation and the prototypical norm for the modified predicate, and denotes a “less than” degree relation, hence
contributing a negative evaluation of the predicate. The notion of “sufficiency” (or lack thereof) is relevant only for barely, not for almost.

Interestingly, studies on language acquisition show that the negative orientation of barely is prevalent in judgments of children at least as young as 6 years old (Champaud & Bassano 1987).

As for the second experiment, the results of the True/False judgement task confirmed Hypothesis 1, i.e., when asked about the truth of the sentence containing an approximative adverb in the world of evaluation, subjects responded in accordance to the polar component. However, what is more striking about the data is that when the targeted component was the polar component in sentences containing almost, the percentages obtained were 55.5% True and 44.5% False. This suggests that, contrary to barely, native speakers did not have clear intuitions pertaining to the truth or falsity of the modified predicate in the interpretation of the critical items containing almost. The decision seems to be more closely related with the semantics of the modified predicate in sentences with almost than in sentences with barely, suggesting that separate analyses are required for the two adverbs (which eventually must account for the cases in which the polar component of almost, as predicted by the Conjunctive Analysis, seems intuitively adequate).

Furthermore, these data provide evidence against the analysis of almost and barely as inner negations of each other, as argued for by the proponents of the Conjunctive Analysis. If this were the case, one would predict symmetric results both in the rating and in the True/False judgement tasks. A possible objection to this line of reasoning is that barely contributes a negative implication, and hence is potentially harder to process (cf. Horn 1989),

41 Champaud & Bassano (1987) report similar results for their experiment with presque and à peine.
not allowing for a comparison with the results obtained with the sentences containing almost (Henk Zeevat, p.c.). However, as pointed out above, as long as we assume, with the Conjunctive Analysis, that both adverbs contribute the conjunction of a negative and a positive assertion, this objection does not hold; the crucial point that remains to be asked is in what respect barely is negative and almost is not.

3.4 Conclusions

The two experiments reported in this chapter show that the role of the meaning components in interpretation is closely related to the nature of the tasks that subjects are asked to perform. Whereas the proximal component plays an important role in the felicitous interpretation of sentences in a context, native speakers respond in accordance with the polar component when they are explicitly asked to provide judgements about the truth conditions of sentences with an approximative adverb.

More importantly, the results support the thesis defended in this dissertation with respect to the nature and status of the polar component. In the case of barely, the results support the Conjunctive Analysis, since native speakers responded in accordance with the polar component when explicitly asked about the truth or falsity of the unmodified sentence. In the case of almost, on the other hand, the results that pertain to the identification of the polar component do not support the Conjunctive Analysis. Native speakers did not interpret

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42 A possible follow-up of this study with the purpose of addressing this issue would be a repetition of the two experiments described, this time using almost not and barely. Future work on the negative character of barely could consist of memory experiments using recall tasks (cf. Moxey and Sanford 1993); it would be illuminating to test whether erroneous recalls of sentences containing barely tend to associate with the proximal component, i.e., with the component that contributes a negative implication.
the experimental items containing *almost* as implying either the truth or the falsity of the modified predicate.

I will argue that this is an important result since it directly correlates with the type of predicate that occurred in the experimental items. As predicted by my analysis of the meaning of *almost*, which will be detailed in the next chapter, *almost* \( p \) only entails \( \sim p \) if the semantics of the modified predicate provides a clear-cut standard on the basis of which the truthful application of the predicate is determined. Given that this is not the case for a modal verb like *can*, which simply introduces an ordering along a dimension of ability, the interpretation obtained does not pertain to truth or falsity of the modified predicate. Hence, the results also support the thesis that the polar component follows from the proximal component (i.e., is entailed by the main contribution of the adverb), and in this respect is part of the conventional meaning of approximative adverbs.

When combined with the other sources of evidence presented in this dissertation, the experimental data provide evidence against treating the polar component as a conversational implicature.

Moreover, the results seem to argue against an analysis of *barely* and *almost* as “mirror-images”, since subjects show more polarized judgements with respect to sentences containing *barely* than to sentences containing *almost*. Hence, the experimental data are compatible with an analysis of the contribution of the two adverbs as relying upon different standards of comparison. The data also reinforce the thesis argued for in this dissertation, and supported by the analysis of the data from European Portuguese, according to which *almost* and *barely* should be given a separate analysis, albeit an analysis that ultimately must account for the contexts in which *almost not* and *barely* are intuitively interchangeable.
The theoretical implications of the experimental results reported in this chapter should be regarded as preliminary, to the extent that only a very limited set of data was included in the critical items (involving the same type of predicates in order to allow for a fair comparison). Moreover, the results obtained should be tested against a wider range of experimental methodologies.
CHAPTER 4

THE RANGE OF INTERPRETATIONS OF APPROXIMATIVE ADVERBS:
THE MEANING OF QUASE

In this chapter, I pursue the goal of fleshing out the intuitive notion of “closeness” associated with the proximal component of approximative adverbs. I exemplify the wide range of interpretations that can be contributed by approximative adverbs by analyzing the behavior of the adverb quase ‘almost’. I show that the range of modification by quase comprises a large spectrum, from predicates to speech-acts.

I will argue that the semantic-pragmatic contribution of quase instantiates all the criteria for the definition of the semantic class of approximative adverbs (i.e., evaluation of the applicability of the predicate and scalarity), and that the range of interpretations described correlates with the different scopes that quase can take and the type of semantic entities modified. Modification by quase denotes the evaluation of the applicability of either a description of a situation (wide scope) or a description of an entity (narrow scope). In both cases the evaluation contributed by quase relies upon its scalar semantics.

This chapter is organized as follows. In section 4.1, I describe the cross-categorial nature of quase and its relation to the underspecified notion of “closeness” contributed by the

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43 I discuss the interpretation of quase in both constructed and naturally-occurring examples extracted from a corpus of contemporary written Portuguese, CETEMPúblico 1.7, a corpus of 190 million words (cf. Santos and Rocha 2001). In the corpora examples, but not in the constructed examples, the adverbs appear in boldface.
adverb. In section 4.2, I propose an account of the semantics of *quase*. In section 4.3, I analyze the interpretation of *quase* when the adverb has propositional scope, and I compare the contribution of *quase* with the semantics of phase quantification. In section 4.4, I analyze the interpretation of *quase* as a focus adverb. In section 4.5, I compare the semantic contribution of *quase* and *por pouco* and argue that the more restricted distribution of the latter is crucial to understand and flesh out the contribution of approximative adverbs. Section 4.6 provides concluding remarks.

### 4.1 Types of closeness denoted by *quase*: closeness to what?

*Quase* is a cross-categorial modifier, as shown in the examples below. It may modify nominal expressions (as in (1) through (4)), either quantified, as in (1) and (2), or non-quantified, as the noun phrase in (3) and the N’ in (4), verb phrases, as in (5), adjective phrases, as in (6) and (7), other adverbials, which may belong to the syntactic category of Adverb, as in (8), (9) and (10), or not, as in (11) and (12), prepositional phrases, as in (13) and (14), and a main clause, as in (15), where the adverb may or may not be followed by *que*:

(i) Nominal expressions:

1. …há uma necessidade urgente em **quase** todos os países … (CP Ext 535)\(^{44}\)
   
   ‘…there is an urgent need in almost all the countries …’

2. …dessa pessoa não sabíamos **quase** nada, (CP Ext 71)
   
   ‘…of that person we didn’t know almost anything (lit. almost nothing)’

---

\(^{44}\) The same meaning may be conveyed by the modification of the noun *totalidade* ‘totality’, as in the naturally-occurring example in (i) … a **quase** totalidade do aumento da produtividade. (CP Ext 1219) ‘the almost totality of the increase in productivity’
(3) V.C. -- Mas é quase disco de prata (faltam seis mil, segundo a editora, a BMG)! (CP Ext 62)
‘But it’s almost silver record (they only need 6000, according to the publisher, the BMG)’

(4) … não posso evitar um quase sentimento de revolta, quando comparto... (CP Ext 281)
‘…I cannot hide an almost feeling of revolt, when I compare…’

(ii) Verb phrases:

(5) …divergências…que quase puseram em causa os esforços para um acordo. (CP Ext 462)
‘…arguments …that almost jeopardized the efforts for an agreement.’

(iii) Adjective phrases:

(6) Num espectáculo quase perfeito destoaria, no entanto, o terceiro andamento...(CP Ext 108346)
‘In an almost perfect concert the third movement was disappointing, though…’

(7) Essa fina e quase invisível camada de poeira…(CP Ext 400833)
‘That thin and almost invisible layer of dust…’

(iv) Adverbials:

(8) O texto, que coincide, quase seguramente, com a letra do futuro diploma legal, … (CP Ext 1255)
‘The text, which coincides almost surely with the text of the future legal document’

(9) …o tempo é agora quase só de nervos, ansiedade e expectativa. (CP Ext 1380)
‘…the time is now almost exclusively (lit. almost only) of nerves, anxiety and expectation’

(10) …os dinossauros eram mais próximos dos pássaros – que nascem cegos e indefesos – ou dos répteis, tais o crocodilo, que são autónomos quase logo à saída do ovo? (CP Ext 244324)
‘…were the dinosaurs closer to the birds – that are born blind and unprotected – or to the reptiles, like the crocodile, that are autonomous almost as soon as they get out of the egg? (lit. almost immediately after leaving the egg)’
(11) «Este Governo já está quase há tanto tempo como o anterior para resolver este problema. (CP Ext 1479627)
  ‘This administration has been delaying the solution of this problem almost for so long as (lit. almost for so much time as) the previous one’

(12) …as pessoas compram um carro e só quase quando se preparam para fechar o negócio é que descobrem que há um financiador pelo meio. (CP Ext 689893)
  ‘…people buy a car and only almost when they are about to close the deal do they find out that there is an intermediary…’

(vi) Prepositional phrases:

(13) … um luxo estranho para pessoas quase sem dinheiro. (CP Ext 58)
  ‘…a weird luxury for people who almost don’t have any money (lit. almost without money)’

(14) …Durão Barroso…ficou quase ao lado de Marcelo Rebelo de Sousa (entre eles só estava António Capucho…). (CP Ext 1458808)
  ‘…Durão Barroso [proper name] was almost next to Marcelo R. de S. [proper name] (between them there was only António Capucho [proper name]…)’

(vii) Clauses:

(15) Quase que se tem dado um tratamento formal, simbólico… (CP Ext 1208211)
  ‘A formal, symbolic treatment has almost been given…’

The syntactic polymorphism of quase is a well-known property of degree adverbs (Doetjes 1997, Abeillé et al. 2004). Despite the wide range of syntactic categories that the adverb may modify, the categories must meet specific semantic requirements, i.e., selection is based on the semantic properties of the modified expression.

Intuitively, there is a “common core” to the meaning of quase in these examples:

(i) the notion of a threshold which is not reached (e.g. (3) asserts that the number of copies which are required for a record to be “silver record” has not been reached yet);
(ii) the situation described is evaluated as involving a minimal distance to that threshold.

In the following, I describe the types of “threshold” that are selected by quase and show how they bear on an understanding of the notion of “closeness” contributed by the adverb.

4.1.1 Scalar endpoints

In this section, I show that the threshold which is selected by quase is provided by the structure of a scale, where the threshold constitutes a scalar endpoint. I define scale as a partially ordered set or poset, i.e., a set of elements which is at least partially ordered. A partially ordered set is defined by a relation which is transitive, antisymmetric, and reflexive, commonly notated as “≤” (Hirschberg 1985, Kennedy 1999, Kennedy and McNally 2005, Caudal and Nicolas 2005). The notion of a partially ordered set has proven useful in different domains of semantics and pragmatics, e.g. as a model for abstract representations of measurement in the semantics of gradable predicates and for orderings supporting scalar implicature.

The dimension, along which the comparison denoted by quase is established, as described in chapter 2, is represented as a scale, the endpoint of which provides the standard value of comparison. The reference value stands in a “slightly less than” degree relation to the standard value. In my analysis, I will take into consideration the following scales:

45 The property that distinguishes partial and total orders is connexity: if for every x and y in a set, either x precedes y or y precedes x, then the order is connex. For the interpretation of quase, it is not necessary to stipulate that the orders be total (i.e., it is not required that all elements in the set be mutually comparable). The informal notion of a scalar endpoint corresponds to the technical notion of greatest element in a set (formally defined as: given a partially ordered set \((P, \leq)\), then an element \(x\) of a subset \(S\) of \(P\) is the greatest element of \(S\) if \(\forall y \in S, y \leq x\)).
property scales (which may or may not be associated with the meaning of gradable adjectives) and scales associated with the aspectual structure of eventualities. The structural properties of scales and their relation with the interpretation of *quase* will be analyzed in the next sections.

### 4.1.1.1 The scale structure of gradable adjectives

Starting with examples like (6) and (7) above, here (16) and (17), respectively, we find that the modified adjectival predicate denotes a threshold that can be conceived as a point on a scale. This point may be defined as corresponding to the negation of the antonymous adjective (in this case *imperfeito* ‘imperfect’ and *visível* ‘visible’, respectively). The adjective *perfeito* ‘perfect’ is true when applied to an entity that is entirely free of imperfections, whereas *invisível* ‘invisible’ is true of an entity that may not be seen. The denotations of the adjectives in each pair of antonyms (e.g., *perfeito* and *imperfeito*) are disjoint, as can be seen by their implications: for any entity on the domain that can have the property in question, one of the adjectives must be true of that entity and the other one false (Cruse 1986, Horn 1989, Rotstein and Winter 2004).

(16) Num espectáculo *quase* perfeito destoaria, no entanto, o terceiro andamento...(CP Ext 108346)
‘In an almost perfect concert the third movement was disappointing, though...’

(17) Essa fina e *quase* invisível camada de poeira … (CP Ext 400833)
‘That thin and almost invisible layer of dust...’

Such observations seem to suggest that *quase* can only modify non-gradable adjectives. However, the distinction between gradable/non-gradable adjectives is insufficient to account...
for the distribution of *quase*, as pointed out with respect to the semantic restrictions of *almost* and corresponding words in other languages (cf. Hitzeman 1992, Morzicki 2001, Kennedy and McNally 2005, Rotstein and Winter 2004). This is exemplified in (18) through (22):

(18) O panda está quase extinto.
    ‘The panda is almost extinct.’

(19) #A energia é quase nuclear.
    ‘The energy is almost nuclear.’

(20) #O Paulo é quase alto.
    ‘Paulo is almost tall.’

(21) #O quarto está quase sujo.
    ‘The bedroom is almost dirty.’

(22) O quarto está quase limpo.
    ‘The bedroom is almost clean.’

Both (18) and (19) contain non-gradable adjectives, and yet only the former is felicitous. Furthermore, although *alto* ‘tall’, *sujo* ‘dirty’, and *limpo* ‘clean’ are gradable adjectives, as can be shown by standard distribution tests, (20) and (21) are less acceptable than (22).

Gradable adjectives like *tall* accept *almost* modification “only to the extent that one can conceive of *tall* as a clear-cut, discrete predicate that partitions its domain into the clearly tall and the clearly non-tall.” (Morzycki 2001:308). The standard that allows for this partition may be entailed by the context, as in (23):

(23) [said in a contest of “tallness”, in which the height of one person in the group, e.g. John, is established as the standard for being “tall”]
    A Maria é quase alta.
    ‘Maria is almost tall.’ [with respect to John’s height].
A more fine-grained analysis of the semantics of gradable adjectives is required in order to capture the facts observed with respect to the distribution of *quase*. In the following, I summarize a recent approach to the semantics of gradable predicates and I point out to what extent it is relevant to understand the meaning of *quase*.

Following Kennedy and McNally (2005), the denotation of a gradable adjective can be accounted for as a measure function that maps entities in a domain onto degrees on a scale, where a degree is defined as an abstract representation of measurement and a scale is a set of ordered degrees. Following Kennedy (1999), I will assume that for the denotation of any gradable adjective, the following semantic constituents should be distinguished:

1. a reference value: the degree to which the entity in the domain is \( \phi \) (where \( \phi \) stands for the denotation of the predicate), obtained by applying the predicate to the argument;
2. a standard value: the degree that determines the truthful application of an adjectival predicate. This value is generally established contextually, with respect to a comparison class;
3. a degree relation, asserted to hold between the reference value and the standard value.

The positive form of an adjective denotes the relation \( \geq \) ‘greater than or equal to’ between the degree of the relevant property onto which the entity in the domain is mapped (the reference value) and a standard value on the scale, which is contextually determined. The adjectival predicate truthfully applies to its argument just in case the reference value is equal to or greater than the standard value (Kennedy 1999, Kennedy and McNally 2005).

The adjective determines an ordering on the domain, and there are specific properties of the ordering that allow us to establish a typology of scales. In particular, two aspects seem

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46 For current purposes, I will assume that scales are constituted by degrees, conceived as discrete entities, rather than intervals. The interested reader is referred to Kennedy (1999), where the arguments and advantages of each account are discussed in detail.
of relevance for the distribution of *quase* and *almost* and other degree modifiers: (i) the structure of the scale and (ii) the type of standard of comparison (Kennedy and McNally 1999, 2005). According to the former aspect, a scale may be open, if both extremes of the scale are not contained in the interval (e.g. *interesting, uninteresting*), closed, if both extremes of the scale are contained in the interval (e.g. *full, empty*), or it may be partially closed, if only either the minimum or the maximum degree on the scale is contained in the interval (e.g. *pure, impure*).

With respect to the type of standard, not all gradable adjectives are equally context-dependent. In some cases the standard value on the scale is contextually determined by means of a comparison class,\(^{47}\) i.e., a contextually restricted set of objects that share a relevant property with the entity denoted by the argument of the adjective. In other cases the standard value is lexically encoded; the lexical meaning of the adjective includes an inherent standard. The former type of adjectives is called “relative”, and the latter “absolute”. This does not mean that the interpretation of absolute adjectives is entirely independent of the context of use. However, an adjectival predicate of this type can be said to hold of an argument only if it has either a maximum or a minimum degree of the relevant property (where what constitutes a maximum or a minimum degree may be relativized to a particular context).

The truth conditions of maximum-standard vs minimum-standard adjectives are defined as in (24) and (25), respectively, where \(S_A\) stands for the scale associated with the

\(^{47}\) The exact way in which the standard value is determined through a comparison class, e.g. by determining a mean value of the degrees of the relevant property that hold of the objects in the domain, goes beyond the scope of this dissertation (see Kennedy (1999) for discussion and comparison of different approaches).
adjective and $m_A$ is the measure function introduced by the adjective (cf. Kennedy & McNally 2005:358):

\[(24) \quad [[\text{AP}_{\text{max}}]] = \lambda x. \exists d \ [d = \max(S_A) \land m_A(x) = d]\]

\[(25) \quad [[\text{AP}_{\text{min}}]] = \lambda x. \exists d \ [d > \min(S_A) \land m_A(x) = d]\]

To exemplify, the adjective *limpo* ‘clean’ denotes the absence of dirtiness, whereas *sujo* ‘dirty’ denotes some degree of dirtiness (cf. Cruse 1986, Horn 1989, 2002, Rotstein and Winter 2004).\(^{48}\) Hence, the former is a maximum-standard adjective, the latter a minimum-standard adjective. It has been pointed out that *almost*, similarly to other “endpoint-oriented” modifiers (Paradis 2001, Kennedy and McNally 2005) like *completely*, typically selects for absolute and maximum-standard adjectives, which explains the infelicity of (20) and (21).

This is easily verified by looking at the distribution of *quase* in the Cetempúblico corpus. Out of the 1848 adjectives that co-occur with *quase*, the 15 adjectives that most frequently occur are presented by decreasing order of frequency in Table 4.1:

\(^{48}\) The distinction between maximum-standard and minimum-standard adjectives corresponds to Rotstein and Winter’s distinction between *total* and *partial* adjectives, respectively (Rotstein and Winter 2004).
Table 4.1: Distribution of *quase* with adjectives in the positive form in *Cetempúblico* 1.7. Numbers represent total number of tokens out of a total of 15111 occurrences

All the adjectives are absolute maximum-standard predicates, with the exception of *meio*, *absoluto* and *exclusivo*, which are non-gradable adjectives. This is not coincidental, given the similarity in truth conditions between maximum-standard and non-gradable adjectives (for discussion on whether maximum-standard adjectives are pointal or non-gradable, see Rotstein and Winter 2004, Winter 2006).

When *quase* modifies an absolute adjective like *limpo* ‘clean’, the threshold is the degree which constitutes the standard of comparison relative to which the truth of the predication is determined; this standard of comparison is context-independent since it is part of the lexical entry of the gradable adjective.

The relation between scale structure and the semantic restrictions of *quase* makes it possible to provide a cross-categorial unified account of the meaning of the adverb and to better understand gradability phenomena. There are robust cross-linguistic regularities in the semantic properties displayed by *quase*, *almost*, and its corresponding words in other languages (cf. Defrise 1989, Sevi 1998, Klein 1998, Morzycki 2001, Rotstein and Winter

49 In the examples with *quase*, *meio* always modifies a numeric expression, as in *meio milhão* ‘half a million’.
in particular with respect to their semantic restrictions. These properties can be subsumed under the more general property of sensitivity to scale structure, and in particular sensitivity to a certain type of standard. By virtue of its cross-categorial nature, *quase* can provide some insight into the properties of gradable expressions and the cross-categorial character of the semantic notion of gradability.

The meaning of *quase* introduces a relation between two elements that are ordered (in this case along the scale of a property). The semantic restrictions of *quase* with adjectival predicates suggest that the structure of the ordered set must have specific properties, in particular with respect to its endpoint. The sensitivity of *quase* to the structure of the scale and in particular to the type of standard of comparison, as provided by the denotation of the adjective, shows that the latter element is a crucial component of the meaning of *quase*.

The generalizations about the semantic restrictions of *quase* with adjectival predicates extend in a straightforward way to the domain of prepositions that denote paths, thus confirming sensitivity to scale structure. As pointed out by Winter (2006), the common property of all the scales that accept modification by *almost* is “closure”, i.e., the scale must contain its endpoint. In this respect, the case of prepositional phrases, as pointed out by Zwarts (2005) and Winter (2006), is particularly illuminating:

(26) O João quase correu para o lago.
    ‘João almost ran towards the lake’

(27) O João quase correu até ao lago.
    ‘João almost ran up till the lake’

In both examples, the modified VPs are telic predicates, and yet there is an important difference in the interpretations of (26) and (27). The sentence in (26) can only have one
interpretation, namely, that João almost began running to the lake. However, (27) is ambiguous between the same interpretation as in (26) and an interpretation in which João ran almost until the point of reaching the lake. This is because unlike (26), sentence (27), because of the semantics of the preposition até ‘until’, provides the endpoint of the path and thus a structure that displays closure, as shown in Figure 4.1.

![Figure 4.1: Schematic representation of the path structures defined by para ‘to, towards’ and até ‘until’, following Winter (2006) for the corresponding prepositions in Dutch and Hebrew.](image)

The same ambiguity is found in the interpretation of accomplishments, where the latter type of interpretation can be paraphrased using até ‘until’, as in O Pedro construiu a casa quase até ao fim ‘Pedro built the house almost until the end’ (cf. Naumann 2001). This possibility is investigated in the next section.

4.1.1.2 Aspectual structure and gradability: counterfactual and scalar readings of quase

In this section, I describe the interpretations of quase with verbal predicates. I argue that in these cases the scalar endpoint selected by the adverb is provided by the aspectual
structure of the predicate. The sensitivity of *almost* to the aspectual properties of the predicate has been noted at least since Hitzeman (1992).

Rapp and von Stechow (1999) identify three possible interpretations of German *fast* ‘almost’ (and English *almost*) with verbal predicates like *kill*. These interpretations are accounted for using predicate decomposition (see also McCawley 1971). The sentence in (28) may receive (i) a “counterfactual”, (ii) a “scalar” or (iii) a “resultative” interpretation (following Rapp and von Stechow 1999:161, (19)), according to the position of the operator *almost* with respect to the meaning components of the verb:

(28)   John *almost killed* Harry.

(a)   \(\texttt{almost } (w) (\lambda w \exists e [\text{AGENT}_{ew} (\text{John}) \& \text{BECOME}_{ew} \lambda w \lambda s. \text{DEAD}_{sw}(\text{Harry}))]\)  
[Counterfactual]

(b)   \(\exists e [\text{AGENT}_{ew} (\text{John}) \& \texttt{almost } (w)(\lambda w. \text{BECOME}_{ew} \lambda w \lambda s. \text{DEAD}_{sw}(\text{Harry}))]\)  
[Scalar]

(c)   \(\exists e [\text{AGENT}_{ew} (\text{John}) \& \text{BECOME}_{ew} \lambda w \lambda s. \texttt{almost } (w) (\lambda w. \text{DEAD}_{sw}(\text{Harry}))]\)  
[Resultative]

The interpretation represented in (a), where *almost* has wide scope, is the counterfactual or modal interpretation according to which John intended to kill Harry but for some reason changed his mind. In the interpretation in (b), John did something to Harry that almost caused him to be dead, whereas in (c) John did something that lead to a state of affairs in which Harry was almost dead (as a result of what John did). As pointed out by several authors (Rapp and Von Stechow 1999, Eckardt forthcoming), it is very difficult, if not impossible, to tease apart the interpretations in (b) and (c), given world knowledge. For this reason, only the counterfactual and the scalar interpretations will be considered in this section.
The interpretations in (a) and (b) are distinguished in German by the use of the Konjunktiv II in (a) and the Indicative mood in (b) (Rapp and Von Stechow 1999). In EP, the same distinction between a counterfactual and a scalar interpretation is obtained with the Imperfeito do Indicativo (past tense with an imperfective aspectual value) versus the Pretérito Perfeito Simples (past tense with a perfective aspectual value), as shown in (29) and (30):

(29) O João quase ganhava a corrida.  
The João almost win:IMPF:3SG the race  
‘João almost won the race.’

(30) O João quase ganhou a corrida.  
The João almost win:SPAST:3SG the race  
‘João almost won the race.’

The counterfactual interpretation is obtained in (29); the sentence is true if João had an excellent position in the race but unexpectedly had an accident and fell only a couple of meters before crossing the victory line, whereas (30) is true if João managed to make a very good time, but one which was slightly worse than the time of the winner. The counterfactual interpretation may be obtained in (30), but the scalar interpretation is not obtained in (29).

When quase occurs with accomplishment predicates, the sentence is ambiguous between the scalar and the counterfactual interpretation (cf. Dowty 1979, Winter 2006). The former is exemplified with verbs in the Pretérito Perfeito Simples in (31) and (32):

(31) O João quase terminou a prova.  
The João almost finish:IMPF:3SG the race  
‘João almost won the race.’

(32) O João quase terminou a prova.  
The João almost finish:SPAST:3SG the race  
‘João almost won the race.’
In both sentences, it is asserted that João performed an activity but did not pursue it until reaching its culmination. Assuming an event structure in which the referential properties of the argument of the verb “measure out” the event, i.e., carry over to the properties of the entire predicate (Krifka 1992, Tenny 1994), in (31) the culmination of the eating event would only be reached when the physical extent of the theme of the consumption verb had been consumed in its entirety. The interpretation of quase is sensitive to the homomorphic mapping from the algebraic structure of the incremental theme (“the pie”) to the structure of the event (cf. Dowty 1991, Krifka 1989, 1992).

In (31) and (32), the scalar endpoint required by the semantics of quase is provided by the aspectual structure of the predicate. The meaning of quase crucially interacts with the internal structure of the event denoted by the predicate; in particular, the adverb (or rather, its polar component) contributes the negation of the endpoint or telos inherent to the description of the event. A schematic representation of the nucleus structure of an event, following Moens and Steedman (1988) and Naumann (2001), is provided in Figure 4.2:
To exemplify, in the unmodified predication in (33) with the creation predicate *build the house*, the event of building a house is the closed interval defined by $s$ (the state at which there is no house, and the process of building a house is initiated) and $s'$ (the endstate, at which a change of state has occurred, namely a house has been built). The two points $s$ and $s'$ are contained in the interval:

(33) O João construiu a casa.  
    ‘João built the house.’

Under the interpretation obtained in (31) and (32), the output of modification by *quase* denotes a sub-interval of the interval bounded by the culmination point (CP) of the nucleus structure of the eventuality, the CP not being included in the interval. This sub-interval is therefore always a part of the DP.

Given the homomorphism between the structure of the incremental theme and the structure of the event, under the scalar interpretation, (31) is truth-conditionally equivalent to (34), where *quase* is adjacent to the internal theme of the verb:

(34) O João comeu quase uma tarte inteira.  
    ‘João ate almost a whole pie.’
In (31), the inception point of the event (IP) is entailed by the sentence, as shown by the infelicity of (35):

(35) #O João quase comeu uma tarte,
The João almost eat:SPAST:3SG a pie
mas não comeu nem um bocadinho.
‘João almost ate a pie, but he didn’t eat any single bit of it.’

However, (35) would be felicitous under the counterfactual interpretation, as in (36):

(36) O João quase comia uma tarte,
The João almost eat:IMPF:3SG a pie
mas não comeu nem um bocadinho.
‘João almost ate a pie, but he didn’t eat any single bit of it.’

In (36), what is negated is the inception point (IP) of the event (unlike what happens in (31) and (32)); the sentence means that the beginning of the pie-eating event was imminent but eventually did not take place. In this case, modification by quase negates the occurrence of the event by negating its beginning. This point about the interpretation of almost is overlooked by the notion of “polar component” as proposed in the Conjunctive Analysis. Native speakers’ intuitions pertaining to the negation of the modified predicate as contributed by the polar component of quase are more precise with respect to which part of the eventuality is negated than is stated by the Conjunctive Analysis.

Defrise (1989) classifies the reading obtained in (36) as the “intentional interpretation” of presque ‘almost’, since a number of inferences pertaining to the reasons why the agent did not initiate the event may be drawn: maybe something happened that prevented him from starting, or he changed his mind, and so on. However, the label proposed by Defrise is misleading in that this component of the interpretation does not seem to be part
of the conventional meaning of the adverb; rather, it follows from the fact that the subject is human and hence a volitional agent, whereas the notion of imminence or predicted beginning of the event is contributed by the semantics of quase. This issue will be developed below with respect to the interpretation of quase with achievements.

4.1.2 Beyond lexically provided scales

In the previous sections, I have shown that quase selects for a scalar endpoint and displays sensitivity to the structural properties of scales. These properties are provided by the lexical semantics of the modified expressions. The sensitivity described underlies the co-occurrence restrictions of quase and corresponding words in other languages, with respect to adjectival and verbal predicates.

In this section, I show that quase may co-occur with expressions whose lexical semantics does not provide a scalar endpoint constituting the standard value for the truthful application of the expression. The cases presented in this section are crucial for understanding the contribution of quase. They make apparent the fact that when the denotation of the modified expression does not provide a scale with the structural properties described above, the scalar interpretation is introduced by the adverb.

4.1.2.1 Atelic eventualities

In the literature, it has been argued that atelic eventualities do not accept almost-modification. However, (37) is perfectly acceptable on the interpretation that the process
denoted by the main verb (sleep) is about to start, as made apparent by its paraphrase given in (37’):

(37) O David está quase a dormir.
    the David be[SLP]: PRES:3SG almost at sleep:INF [Progressive Periphrasis]
    ‘David is about to fall asleep.’

(37’) [Father, after bed-time story] O David ainda não está a dormir, mas falta pouco.
    ‘David is not asleep yet, but it won’t take long.’

In (37), the contribution of quase is to assert closeness to the inception point of the eventuality denoted by the predicate. If we assume a scalar analysis of the structure of eventualities, analogous to that of gradable adjectives (Ramchand 1997, Kennedy and Levin 2002, Kennedy and McNally 2005, Hay et al. 1999, Amaral 2006b, Winter 2006, Kearns 2007), we can conceive of telicity as maximal degree of change undergone by the participant(s) in the event, in parallel to the semantics of maximum-standard absolute adjectives presented above. On the other hand, since atelic predicates are considered to hold as soon as they have started, the onset of the state or process is the minimal sub-eventuality that makes the predication true, just like the standard value of a minimum-standard absolute adjective.\(^{51}\) The interpretations of the examples analyzed in this chapter shows that quase is sensitive to the internal structure of events, and that this structure is crucial in fully determining the threshold which is approached.

In (37), by aspectual coercion the atelic eventuality denoted by predicate in the progressive form receives an inchoative interpretation, i.e., an interpretation that pertains to “the coming about of a state” (Smith 1991:195). In this case, a change of state can be inferred

\(^{51}\) There is evidence from other sources that the inception point of a state or an activity is more salient than its endpoint (cf. Condoravdi and Beaver 2003 on before and after).
(from “not being asleep” to “being asleep”). In EP, modification with *quase* is frequently used to introduce an imminent change of state, in particular with the Progressive Periphrasis formed by *estar* + preposition *a* + Infinitive of the main verb, the adverb appearing after the auxiliary verb, as in (38):

(38) O barco, de lado, está quase a virar-se
    The boat by side be[SLP]:PRES:3SG almost at turn:INF:CL
    [Progressive Periphrasis]
    pela força do rio. (CP Ext 320041)
    ‘The boat, on its side, is about to turn due to the force of the river.’

The progressive periphrasis contributes an imperfective viewpoint, as it presents a part of the temporal schema of a situation with no information about its endpoints. The progressive “spans an interval that is internal to the situation” (Smith 1991:73). This type of viewpoint allows for inferences pertaining either to the beginning or the end of the situation (not specified by the aspectual value of the periphrasis), along the general temporal schema given in (39), from Smith (1991:73, (23)), where *I* and *F* stand for the initial and final endpoints of the situation:

(39) General imperfective temporal schema:

    I…/////….F

Crucially, not only does the meaning of *quase* select for I on the schema in (39), but also it introduces a process *leading to* I, i.e., it treats I as the Culmination Point (CP) of an event (cf. Figure 4.2) and presents the described situation as a proper sub-interval of the Development Portion (or “Preparatory Process”, according to Moens and Steedman 1988). The output of modification by *quase* is presented as a final stage on a sequence of events that has been
initiated, i.e., it denotes an ongoing change which is about to reach its predicted outcome. So, in (38), the turning of the boat is described as a gradual event with an endpoint (the state at which the boat has turned). As shown in section 4.1.1.2, the ordering that underlies such an interpretation of *quase* pertains to different degrees of change. In order for (38) to be true at a certain time, the entity denoted by the theme must have undergone at least some change.

The fact that *quase* contributes an imminent change of state can be tested by the fact that (38’) is contradictory:

(38’) #O barco está quase a virar-se pela força do rio, mas falta muito para se virar.
‘The boat is about to turn due to the force of the river, but it will take long for it to turn.’

In (38) and (40), the contribution of the adverb is to present the eventuality as being about to start, the onset of the eventuality being interpreted as an achievement (corresponding to the change of state). The adverb selects for a transition between two states: in (40), the state at which the vehicle is outside the location in question and the state at which the vehicle is inside the location, as made explicit by the continuation provided in (40’):

(40) O “papamóvel” está quase a entrar. (CP Ext 24778)
‘The “popemobile” [vehicle that carries the Pope] is about to come in.’

(40’) O “papamóvel” está quase a entrar, mas ainda não entrou.
‘The “popemobile” is about to come in, but it hasn’t come in yet.’

In this case, a process involving the movement of the vehicle (or at least the increasing degrees of closeness to its destination) must be assumed, as shown by the infelicity of (40’):
A similar interpretation is obtained when *quase* occurs with aspectual verbs that denote the beginning or the end of a state of affairs, in which case the adverb also denotes imminence of a change of state. This is exemplified in (41) and (42):

(41) Quando se pergunta quando é que a espera acaba recebe-se sempre uma palavra simpática:
“*A espera está quase a acabar*”. (CP Ext 1374768)
‘When people ask when will the wait be over, one always gets a nice answer: The wait is about to end.’

(42) E como a cerimónia de boas vindas ao Presidente português está *quase a começar*,
*não tardaremos a perceber do que se fala quando se fala da tradição imperial chinesa e do seu milenar protocolo.* (CP Ext 575249)
‘And since the welcoming ceremony to the Portuguese President is about to begin, it won’t take long before we realize what people mean by the imperial Chinese tradition and their millenarian traditions.’

In examples (37), (38), and (40), the semantics of the expression modified by *quase* does not provide any information about the endpoints of the situation. However, the interpretation obtained with *quase* requires that the inception point of the eventuality be assumed. Since this point is a transition (a change of state), it has no inherent duration. There is something systematic about the interpretation of *quase* in these examples: the change of state is treated as the CP of the nucleus structure of an event, and a DP is assumed, since it provides a dimension along which degrees of change undergone by the participant(s) in the event can be conceived.
Due to the temporal structure of events, the ordering introduced by *quase* is interpreted as involving a temporal ordering, as shown by the infelicity of (38’), and the process is assumed to have a certain duration. However, this is contingent upon world knowledge; in (38), the boat may actually never turn and be for hours in a position with respect to which one could utter (38) felicitously. What is crucial is that the meaning of *quase* provides a construal of a situation which involves an event template (the situation is described with respect to its (expected) outcome), although it is not temporal in itself.

It is important to point out that (37) may receive another interpretation. Imagine that someone utters (37) in the context of a class, in order to describe the behavior of a student who is not paying attention and is not alert. In this context, the continuation in (43) is not felicitous (whereas it would certainly be appropriate under the interpretation given to (37) above):

(43)  

#O David está quase a dormir, mas ainda não está a dormir/ainda está acordado.

‘David is about to fall asleep, but he is not asleep yet/he is still awake.’

In (43), the contribution of *quase* does not pertain to the imminence of a change of state. Rather, in the intended interpretation of (43), modification by *quase* denotes a property of the student, i.e., it is used to describe a certain state that corresponds to a particular degree of alertness of the student, which makes it close to “sleeping”. This type of interpretation will be discussed in more detail below.
4.1.2.2  Achievement predicates

In this section, I argue that achievement predicates, like atelic predicates, provide the crucial cases to understand the contribution of *quase*.

In (44), the counterfactual interpretation of *quase* is exemplified. The sentence asserts that had the circumstances in the actual world been only a little bit different, Pedro would have missed the train:

(44) O Pedro quase perdeu o comboio.
    ‘Pedro almost missed the train.’

Achievement predicates are typically perceived as non-durative (see discussion in Dowty 1979, 1987), and do not display an internal structure. Hence, the predicate in (44), although telic, cannot be analyzed as involving a maximum “degree of change” undergone by the participant in the event; there is no gradual or incremental process associated with the semantics of the predicate that leads to the change of state at which Pedro misses the train (cf. #John halfway missed the train.). However, (44) entails some unspecified process leading to the change of state denoted by the achievement predicate, since (45) is clearly infelicitous:

(45)  #O Pedro quase perdeu o comboio, mas nunca foi para a estação.
    ‘Pedro almost missed the train, but he never went to the station.’

As pointed out by Sevi (1998), in these examples a sentence with *almost* can be converted into a counterfactual conditional sentence whose antecedent can be either contextually retrieved or explicitly provided, as in (46):
(46) Se o irmão não lhe tivesse dado boleia, o Pedro teria perdido o comboio.  
‘If his brother hadn’t given him a ride, Pedro would have missed the train.’

The infelicity of (45) shows that the contribution of *quase* to the meaning of the sentence entails the existence of a process leading to the culmination denoted by the achievement. Since the nature of this process is not determined by the lexical semantics of the verb, it must be contextually retrieved on the basis of world knowledge.

Sadock’s (1981) intensional analysis of *almost* crucially relies on sentences with achievement predicates (e.g. *Sam almost died*), which entails the falsity of the modified predicate. The contribution of *quase* in such sentences exemplifies counterfactual closeness, modelled in terms of similarity between possible worlds.

Achievement predicates do not have any internal structure, and hence their aspectual configuration does not provide a scale. This is a parallel situation to the case of non-gradable adjectives, where the scalar dimension is induced by the meaning of *quase*. In this respect, it is not surprising that the meaning of *quase* with achievements yields the same type of interpretation as the one obtained for atelic predicates, namely the imminence of a change of state.\(^{52}\) The notion of “imminence of a change of state” is intentionally vague in the sense that assessing that a change of state is about to be brought about may depend on many sorts of factors and ultimately depends on an epistemic judgement; on the basis of the available evidence about a situation, one may conceive of it as *normally or possibly leading to a certain change of state*. These examples show that the interpretation of *quase* combines both modal and aspectual factors (the aspectual structure of the eventuality constrains the possible interpretations).

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\(^{52}\) This is compatible with Piñón’s (1997) view of achievements as “boundary happenings”.

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As shown in this section, the interpretations obtained with *quase* differ depending on the threshold which is selected. If the endpoint of the scale introduced by *quase* is the IP of the event, the interpretation obtained with *quase* pertains to possibility of the event taking place. In this case, the interpretation of *quase* involves the consideration of alternative states of affairs to the one in the actual world. If the endpoint of the scale provided by the semantics of the predicate is the CP, the interpretation obtained is different, since there is a homomorphic relation between the event and the structure of the incremental theme of the verb. In such a case, the negative implication of *quase* pertains to the theme not having been affected in its entirety (and hence the event not having been completed). This difference cannot be captured on a modal account to the semantics of *quase* and *almost*, as exemplified by Sadock (1981). Since possible worlds may be similar in many different ways, there is no systematic way to constrain the interpretations obtained by relating them to the aspectual properties of the predicates over which the adverb has scope. On the other hand, these differences are captured by an account that builds on the structural properties of the types of scales selected by *quase*. In the next section, I will discuss another set of examples that support the need for a scalar analysis of the meaning of *quase*.

4.1.2.3 Relative adjectives

So far, we have considered cases in which the threshold selected by the semantics of *quase* is provided by a scalar endpoint which either corresponds to the inherent standard of comparison determined by the lexical semantics of an adjective, or to a transition point on the aspectual structure of an eventuality (its beginning or its endpoint).
However, despite this pattern, *quase* can modify relative adjectives, i.e., adjectives whose standard of comparison is contextually determined, *infantil* ‘childlike’:

(47) Campeã olímpica de ginástica em 1976 e 1980, … Nadia Comaneci vai casar. Tem 33 anos e o seu corpo deixou de ser aquela silhueta *quase* infantil que dava saltos prodigiosos. Está uma mulher, algo pesada, igual a tantas outras romenas do seu país natal (…).CP Ext 399908) ‘Olympic gymnastics champion in 1976 and 1980,…Nadia Comaneci is about to get married. She is 33 and her body isn’t the almost childlike silhouette known for those astonishing jumps anymore. Now she looks like a woman, a somewhat heavy woman, just like so many other Romanian women of her home country…’

In (47), the interpretation obtained with *quase* is very different from the counterfactual interpretation in (44); intuitively, (47) is not about a situation that could have happened but did not happen in the actual world. Rather, the phrase *quase infantil* denotes a property, i.e., a description of the entity denoted by argument of the predicate, the silhouette of the former athlete. This property is compared to the denotation of the predicate *infantil* ‘childlike’, presented as corresponding to the endpoint value on the scale of a dimension (in this case, presumably thinness and lack of feminine features). In other words, *quase* introduces a scale and denotes a comparison between properties that correspond to possible descriptions of the argument of the predicate (the silhouette of the athlete), the modified predicate being treated as denoting a scalar endpoint on the dimension along which the comparison is established.

In the last three sections, I have presented cases in which the denotation of the expression modified by *quase* does not provide an ordering on elements of a set, and such an ordering is coerced by the meaning of the adverb. In the next section, I turn to a use of *quase* in which the ordering introduced by the adverb is not given by the propositional content of the sentence, but rather pertains to the illocutionary force of the utterance.
4.1.3 Speech-act qualification

The use of *quase* presented in this section can be described as a form of “speech-act qualification” (Lakoff 1980, Matsumoto 1985), defined as the use of certain lexical items (e.g. *sort of, like*) to modify the force of a speech-act. This use of *quase* is exemplified in (48):

(48) É olha, *quase* preferring que mudasses de curso. (CP Ext 91475)
    ‘Yes, see, I would almost prefer that you picked another degree program’

In (48), the speaker uses *quase* to hedge her assertion. In this case, the scale which is assumed is a scale of illocutionary force; the scalar endpoint value corresponds to the full illocutionary force of the verb *preferir* ‘to prefer’. In this use, *quase p* does not denote $\neg p$, as shown by the difference in acceptability between (49) and (50):

(49) O Pedro *quase* perdeu o comboio, mas não o perdeu.
    ‘Pedro almost missed the train, but he didn’t miss it.’

(50) #*Quase* preferring que mudasses de curso, mas não preferring.
    ‘I would almost prefer that you picked another BA, but I wouldn’t prefer that.’

In (49), the polar implication of *quase* can be made explicit in the clause introduced by *but*, but this yields an infelicitous utterance in (50). In (48), *quase* is used to mitigate the force of the speech-act expressed by “*Preferia*”. Hence, it is not surprising that in this function *quase* modifies verbs with strong perlocutionary effect, like *bet, dare, dare to say*, etc., as in (51):

(51) **Quase que** me tento a dizer que… (CP Ext 1491982)
    ‘I almost dare to say that…’
The sentence containing *quase* differs from the unqualified (i.e. non-hedged) predication in that the latter is more committal, i.e., stronger in terms of strength of claim made. The contribution of *quase* is to weaken the illocutionary force of the utterance, by excluding the speech act that has stronger consequences for the speaker.

This use of *quase* is not restricted to modification of performative verbs. In (52), the use of *quase* mitigates the force of the order conveyed by the sentence:

(52) [a friend says to another, while handing her the meat, after a meal]
Quase podías meter la carne en el frigorífico.
‘You could almost put this meat in the refrigerator’

Clearly, the intended meaning is not that the hearer *cannot* put the meat in the refrigerator. Similar examples are found in Spanish with the cognate adverb *casi*; consider the following dialogue in a store between customer and clerk, after buying a product (from Schwenter 2002a):

(53) A: ¿Te lo pongo en una bolsa?
B: Pues…casi mejor.
A: ‘Shall I put this in a bag?’
B: ‘Well…almost better.’

In (53), B does not intend to negate the proposition that it is better if the product is put into a bag (one of the two possible answers to A’s question). Rather, the contribution of *casi* is to hedge a plain “yes/no” answer, presumably for politeness reasons. The same holds for (54):

(54) A: El coche se puede arreglar, pero te va a costar bastante dinero. ¿Te lo arreglo?
B: Pues casi que sí, porque no tengo dinero para comprarle otro y necesito el coche.
A: The car can be fixed, but it’s going to cost you a lot of money. Shall I fix it for you?
B: Well, I would almost say so, because I don’t have enough money to buy a new one and I need it.

Similar uses of the adverb *chotto* ‘a little’ are reported for Japanese (Matsumoto 1985). The adverb is used to weaken the force of an order or the obligation under which the addressee would be placed if the speaker used the unqualified form. This is exemplified in (55), from Matsumoto 1985:146):

(55) Sore chotto ikura shita no?
that how much cost NOM
‘How much did it chotto cost?’

In examples (48) – (54), the approximative adverbs do not contribute the negation of the truth of the modified predicate; in fact, the contexts of use make it apparent that the truth of the predicate is intended by the speaker. Rather, both EP *quase* and Spanish *casi* are used to mitigate the illocutionary force conventionally associated with the modified predicate.

4.2 The meaning of *quase*

I have argued that the interpretations obtained with *quase* and achievements, atelic predicates, and relative adjectives provide the crucial cases to understand the semantics of the adverb. Such cases show that *quase* introduces a scale when the lexical semantics of the modified expression does not provide it.

In this section, I develop this account by showing that *quase* introduces a comparison between two values on a scale. The types of scalar endpoints identified in the previous
sections are treated as the standard of comparison (the standard value), the entity or situation in the actual world being mapped onto a value (the reference value) which is slightly less than the standard value. The two terms under comparison are treated as instantiating different values on the same scale. This representation of measurement provides a metric on the applicability of the predicate in question, and its specification depends both on lexical and contextual information. The term that corresponds to the lower degree on the scale (the one onto which the argument of the predicate is mapped) is never made explicit (in fact, it is expressed by the phrase constituted by *quase* and the modified expression). This is crucial inasmuch as the description of the entity denoted by the argument is made only relative to, or in comparison with, the term that *quase* combines with, to which an endpoint value is assigned. This underlies the particular perspective, or “closeness” component, contributed by *quase*.

In the next sections, I correlate the different interpretations obtained with *quase* with different scopes that the adverb may take. In order to flesh out the different interpretations obtained with *quase* when it has scope over the whole sentence and when it has constituent scope, I must draw a distinction between the focus and the scope of an adverb (König 1991).53

Following König (1991:31), and Jacobs (1983), I will assume that *quase* is an operator that combines with a “structured proposition”, i.e., an ordered pair constituted by a predicate and its arguments. The (semantic) scope is the part of the sentence that contributes the structured proposition and the focus is the prosodically and/or syntactically marked

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53 A similar distinction made in the earlier literature, which roughly corresponds to this distinction, is that between *range* and *scope* (see Jackendoff 1972, Defrise 1989). The terms *scope* and *focus* are preferred because they make apparent the relation between the interpretation of *quase* and focus structure.
constituent, contained in the scope, which provides a value for the variable present in the structured proposition. So, (56) is potentially ambiguous because the adverb has scope over the whole VP, and hence the focus may be either the VP or the internal argument of the verb. If the focus is the VP, the sentence may receive either the counterfactual or the scalar interpretation mentioned above. If the focus is the NP *um pássaro*, the sentence asserts that Pedro drew something which can almost be considered a bird. On the other hand, (57) is not ambiguous since scope and focus coincide, and hence the adverb may only modify the NP *um pássaro*, receiving the same interpretation as the one of (56) with focus on the NP:

(56) O Pedro quase desenhou *um pássaro.*
       ‘Pedro almost drew a bird.’

(57) O Pedro desenhou quase *um pássaro*.
       ‘Pedro drew almost a bird.’

In the following, I show that *quase* may be a sentence adverb (i.e., it may have scope over the whole proposition) or a focus adverb (in which case it focuses only on a part of the sentence, namely the focused constituent). When the scope of the adverb is the whole sentence, the sentence is potentially ambiguous, as it may have any constituent (including, of course, the whole sentence) as its focus. When *quase* is a focus adverb, typically it has scope over the constituent immediately adjacent and scope and focus coincide. Any part of the sentence which can be focused may be modified by *quase* provided it specifies a predicative relation and the predicate can be mapped onto a unique value on a retrievable scale.

The wide scope/narrow scope distinction proposed correlates with the two possible interpretations mentioned above for approximative adverbs: evaluation of the possibility for an event to take place (propositional scope) or evaluation of the applicability of a predicate
(scope over the focused constituent). Given that the whole sentence may be focused, the former case is a special case of the latter. When *quase* has scope over the whole proposition, the dimension along which the comparison is established is the notion of possibility, whereas in the case of narrow scope it is provided by the scale of a relevant (lexically or contextually identified) property.

The polar component of *quase* relates to the possible standards of comparison denoted by the expressions modified by *quase*. If the modified expression is a predicate that denotes an event, the sentence containing *quase* entails that the event does not hold in the actual world. In these cases, the interpretation of *quase* has a modal character. If the modified expression is not an event-denoting predicate, the interpretation obtained relies upon the scale of a property and the sentence may or may not entail the truth of the modified predicate.

Both when *quase* has propositional scope and when it has scope over a constituent smaller than the clause, its contribution is to evaluate the predicative relation, by providing a metric for it, and therefore it yields more than one proposition, as correctly argued for by the Conjunctive Analysis. The difference between the two cases is whether the expression over which *quase* has scope denotes a property of possible worlds (i.e., it is a proposition) or a property of an entity (i.e., it is a predicate). In both cases, *quase* always has scope over a predicative relation; the comparison contributed by *quase* pertains to the applicability of a predicate to its argument, given the conditions that hold in the actual world and the conditions assumed or expected by the speaker for the predicate to hold, on the basis of either linguistic or world knowledge.

Under this view, the difference between the two interpretations is whether *quase* contributes a comparison between different states of affairs (alternative ways the world might
be) or between different degrees of a certain property, as instantiated by different predicates. The function of the adverb is essentially the same in both cases, in that it pertains to the applicability of a predicate (of possibly different types) to an argument.

4.3 Quase as a sentence adverb

I will start with examples in which quase has scope over the whole proposition and the predicate is telic, as in (58):

(58) O João quase caiu.
  ‘João almost fell down.’

There are several arguments for treating quase as a sentence adverb in an example like (58). First, when quase has the whole proposition under its scope, it can only occur under the scope of negation if the whole proposition is negated, as exemplified in (59) and (60):

(59) *O João não quase caiu.
  The João not almost fell down

(60) Não é verdade que o João quase caiu.
  ‘It is not the case that João almost fell down’

The scope relations in (60) are as in (60’) (ignoring tense for simplicity reasons), i.e., ‘It is not the case that it is almost the case that João fell’:

(60’) Neg[Quase[Fall (j)]]
Moreover, the meaning of (58) can be paraphrased as in (58’):

(58’) Quase aconteceu o João cair.
   ‘It was almost the case that João fell down.’

_Quase_ may occur in several positions, with the same interpretation; in a finite clause, before the finite verb, as in (58) above, or before the auxiliary verb, as in (61):

(61) O João quase tinha caído.
   ‘João almost had fallen down’

If the subject is expressed, _quase_ may occur in sentence-initial position only if followed by _que_, as exemplified in (62) and (63), the latter being ungrammatical. _Quase que_ may also occur immediately before a finite verb, as in (64):

(62) Quase que o João caiu.
    almost that the João fall:spast:3sg
    ‘João almost fell down.’

(63) *Quase o João caiu.
    almost the João fall:spast:3sg

(64) O João quase que caiu.
    the João almost that fall:spast:3sg
    ‘João almost fell down.’

There is evidence to the effect that _quase que_ ‘almost that’ is lexicalized to some extent and presents a high degree of cohesion.\(^{54}\) This cohesion may be tested by coordinating the clauses headed by _que_ (Kovacci 1999):\(^{55}\)

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\(^{54}\) An alternative analysis would be to assume that the adverb selects a clause introduced by the complementizer _que_. However, given the test presented in the text, I think that the analysis proposed above should be preferred.

\(^{55}\) In fact, the corpus provides a number of examples that confirm this observation:

   Quase que enlouquece e chega ao ponto de isolar…
Although one of the possible criteria for the lexicalization of a phrase is its different interpretation with respect to the interpretation of the single word, in this case there seems to be no difference in meaning between *quase* and *quase que*. However, there are syntactic restrictions as to the position in which the latter may occur. The phrase *quase que* occurs in the same positions mentioned for *quase*, with the exception of the position before a non-finite verb form, as exemplified in (67) and (68) with a passive sentence:

(67) O João *quase foi* atropelado. / The João almost be:SPAST:3SG hit:PPART

O João *quase que foi* atropelado. / The João almost that be:SPAST:3SG hit:PPART

‘João was almost hit by a car.’

(68) O João foi *quase atropelado*. / the João be:SPAST:3SG almost hit:PPART

*O João foi* *quase que* atropelado. / the João be:SPAST:3SG almost that hit:PPART

‘João was almost hit by a car.’

Moreover, *quase que* cannot immediately precede an adjective (cf. (69)), although it can precede other predicative expressions, as in (70):

(CP Ext 1491982)

almost that become-crazy:pres:3sg and get:pres:3sg to:the point…

‘(She) almost gets crazy and reaches the point of being isolated.’
(69) O quarto está quase limpo.
the bedroom be[SLP]:pres:3sg almost clean
*O quarto está quase que limpo.
the bedroom be[SLP]:pres:3sg almost that clean
‘The bedroom is almost clean.’

(70) ...insistimos, quase que à espera de uma qualquer revelação.
insist:PRES:1PL almost that at:the wait of one any revelation
‘…we insist, almost waiting for a revelation of some sort’

As a sentence adverb, *quase* cannot occur in sentence-final position (and the same holds for *quase que*), neither with an integrated prosody, i.e., as part of the prosodic structure of the sentence), 56 as in (71), nor as an incidental, i.e., after a pause and in a separate intonational phrase (here noted graphically by the comma), as in (72):

(71) *O João caiu quase.
the João fall:SPAST:3SG almost/

(72) #O João caiu, quase.
the João fall:SPAST:3SG, almost

When *quase* occurs with incidental prosody it can only have narrow scope; in this use, it cannot denote an imminent change of state. This can be tested by comparing (73) and (74):

(73) O João caiu quase que limpo.
the João fall:SPAST:3SG almost that clean

(74) O João caiu quase que limpo.
the João fall:SPAST:3SG almost that clean

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56 I am adopting the distinction drawn by Bonami et al (2004) between *incidental* and *integrated* uses of adverbs. According to Bonami et al, there is a relevant distinction, although frequently blurred in the literature, between *incidnality*, which is a prosodic property of adverbs and other adjuncts, and *parentheticality*, which is a semantic-pragmatic property. The former refers to the fact that certain phrases constitute autonomous intonational phrases with a melody and an intensity which is different from (and sometimes contrasted to) the prosodic structure of the sentence. The latter pertains to the interpretation of the adverb, namely to those cases in which the semantic contribution of the adverb is not part of the propositional content asserted by the sentence, but rather “a “comment” on that assertion” (Bonami et al 2004:4). The two properties need not coincide, and do not depend on each other.
Whereas (73) is unambiguous and can only be interpreted as meaning that João moved to a place which is very close to Lisbon (i.e., the adverb associates with the focused constituent *para Lisboa*), (74) is ambiguous; it allows for the narrow-scope interpretation obtained in (73) and for the counterfactual interpretation, in which João was on the verge of moving to Lisbon, but never did.

Both (58) and (62) can be paraphrased as in (58’). According to native speakers’ intuitions, (77) is not an adequate paraphrase of (58) and (62):

(77)  #Quase se pode dizer que o João caiu.
     ‘One can almost say that João fell down.’

In (58) and (62), the contribution of *quase* is to describe a situation in the actual world with respect to another one, described by the proposition “Fall (j)”. This description involves the consideration of alternative ways the world might be, and hence has a modal character. The contribution of *quase* in (58) and (62) involves the notion of epistemic possibility in that it pertains to the speaker’s evaluation of a course of events (the actual situation is described as leading to an expected outcome).

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57 For certain native speakers, this sentence invites an inference to the effect that Lisbon is very far away (with respect to the deictic reference point of the speaker). This issue will be discussed in more detail in chapter 5.
We can paraphrase the meaning of a sentence S in which the sentence-adverb occurs as:

(78) Foi quase verdade que S. (It was almost true that S)

Therefore, it is possible to contrastively focus two situations that might have happened:

(79) O que quase aconteceu ao João foi ser atropelado, não foi tropeçar na rua! ‘What almost happened to João was to be hit by a car, not to trip in the street!’

Another piece of evidence for the relation between quase as a sentence adverb and modal operators is its behavior with implicative verbs (Karttunen 1971). One of the features of this class of verbs is the fact that a speaker who utters a sentence containing a modal verb with scope over an implicative verb (as in (80)) commits herself to the truth of the sentence in which the modal verb has scope over the complement of that verb, as in (81), both examples from Karttunen (1971):

(80) John ought to remember to lock his door.
(81) John ought to lock his door.

In other words, implicative verbs “pass their modality on to the complement sentence” (Karttunen 1971:345). The same happens when quase has scope over a sentence containing an implicative verb, as in (82) and (83):

(82) O Pedro quase se lembrava de trancar a porta. ‘Pedro almost remembered to lock his door.’
(83) O Pedro quase trancava a porta. ‘Pedro almost locked his door.’
When *quase* is a sentence adverb, the truth of the unmodified proposition provides the standard of comparison. As seen above, the aspectual characterization of the verbal predicate is crucial in the type of interpretation obtained; since the semantics of complex telic predicates provides an inherent endpoint to the eventuality, the “telos” of the eventuality is interpreted as the endpoint value on the scale. In other words, in this case the aspectual structure provides the template for the scale required by the semantics of *quase*.

In (58) and (62), the situation in the actual world which is described by the sentence is described as typically leading to an event of João-falling. The situation could have been described in many ways: João was walking, João was in the street, etc. However, the state of affairs described is as part of a course of events leading to a certain culmination, namely João’s fall. The state of affairs is presented as a “phase” in Löbner’s terms, i.e., as a section in an ordered sequence of events. In this respect the meaning of *quase* relates to the meaning of “phase quantifiers” like Engl. adverb *already*, whose contribution is to express a very simple topological property, namely the presence or absence of a transition between a positive and a negative section of (a homogenenous class of) temporally ordered sequences. (Löbner 1989:208)

As pointed out by Löbner, phase quantifiers introduce a certain *perspective* on a state of affairs, and hence their meaning cannot be entirely accounted for in terms of truth conditions; rather, the perspective they introduce imposes specific constraints on their truth conditions.

Since the meaning of *quase* as a sentence adverb relates to the semantics of “phase quantification”, in the next section I will compare the interpretation of *quase* with the interpretation of *já* ‘already’ and *ainda não* ‘not yet’, in order to flesh out the similarities in the perspective they contribute.
4.3.1 *Quase* and the semantics of phase quantification

Löbner (1989) considers the basic and simplest use of German adverbs *schon* ‘already’ and *noch nicht* ‘not yet’ to be represented by their occurrences as sentential operators in imperfective sentences (cp. also Lopes 2000, 2003, for EP). Let us start by comparing the interpretation *já* and *ainda não* with *quase* when they occur in a subtype of imperfective sentence, with the progressive periphrasis formed by *estar a + INF*:

(84) O David está quase a dormir.
    ‘David is about to fall asleep.’

(85) O David já está a dormir.
    ‘David is already asleep.’

(86) O David ainda não está a dormir.
    ‘David is not asleep yet.’

Truth conditionally, (84) entails (86); (84) asserts that the person referred to by the proper noun David is *about to* fall asleep or that the state of David being asleep is seen as imminent but does not hold yet at speech time. Note that (84) also entails

(87) O David não está a dormir.
    ‘David is not asleep.’

However, the conditions under which (84) can be said to be true are more restricted than those of (87); we can say that whenever (84) is true, (87) is also true, but the reverse is not the case. Any child that is awake is *not sleeping*, but not *almost sleeping*. In this respect, the meaning of (84) and (86) can be seen as special sub-cases of (87), being true under particular
circumstances that are determined by the perspective imposed by the semantics of the adverbs.

Roughly, (86) is true only if the phase not-p (where p = Sleep (d)) extends until reference time (t_e) and is followed by a phase p, and the two unique phases fall “within an interval which contains at most one change from not-p to p.” (Löbner 1989:174). A schematic representation of the semantics of the dual operators schon ‘already’ and noch nicht ‘not yet’, which can be applied to já and ainda não, respectively, is given in Figure 4.3 (from Löbner 1989:173):

![Diagram of the semantics of schon and noch nicht]

Figure 4.3: Schematic representation of the semantics of schon and noch nicht

This representation makes apparent that the crucial components of the semantics of já ‘already’ and ainda não ‘not yet’ are the contrast established between the negative and the positive phases and the direction of the transition from \( \sim p \) to \( p \). The fact that there is a negative phase before a positive phase is the distinctive presupposition of this pair of dual operators, versus ainda ‘still’ and já não ‘anymore’, where the direction of the transition is the reverse, i.e., there is a positive phase before a negative phase (Löbner 1989).

Here we can identify an important difference with respect to the meaning of quase; rather than positing a contrast between two states, conceived of as different phases of a
sequence, the crucial component in the semantics of *quase* when it has sentential scope is the transition itself, i.e., the change of state. This claim can be tested as follows. Given the semantics proposed for *já* and *ainda não* as involving a succession of a negative and a positive phase, the perspective introduced by the adverbs explains the semantic incompatibilities exemplified in (89):

(88) Já é tarde/ainda não é tarde.
    ‘It’s already late/it’s not late yet.’

(89) #Já é cedo/#ainda não é cedo.
    ‘It’s already early/it’s not early yet.’

The meaning of *já* ‘already’ excludes states which cannot be preceded by the contrary state, and the meaning of *ainda não* ‘not yet’ requires a previous contrary state (Löbner 1989:181). Under normal circumstances, the state of “being early” is not preceded by a state of “being late”. In an out-of-the-blue context none of the adverbs can be modified by *quase*, as shown below:

(90) #É quase tarde.
    ‘It’s almost late.’

(91) #É quase cedo.
    ‘It’s almost early.’

Crucially, the difference is that the phase modifiers *já* and *ainda não* select for states (“phases”) and impose a constraint on the order of their sequence; *quase*, on the other hand, selects for a transition between states, and the lexical semantics of *cedo* ‘early’ or *tarde* ‘late’ in (90) and (91) does not provide such a transition. In an out-of-the-blue context, there is no
clear threshold at which it begins to be late or early (unless the context specifies a function that maps “late” and “early” onto a specific point on a time scale).

Although the semantics of *quase* differs from that of the phase quantifiers in that it selects for a transition and not for a contrasting predication with two ranks (corresponding to two states of affairs), the perspective introduced by *quase* and the phase quantifiers *já* and *ainda não* has an aspect in common. When *quase* is a sentence adverb, the standard of comparison selected by the adverb is the change of state, conceived of as the scalar endpoint on the aspectual structure of the event. Hence, *quase* is “prospectively oriented towards possible change” (Van der Auwera (1998)) like *já* and *ainda não*. Sentences containing *quase* offer a perspective of the transition with a certain direction: “Specific for the particle *schon* is the perspective “first not P, then P” ” (Löbner 1989:188).58

The relation between *quase* and phase quantification thus becomes clear: in the case of phase quantifiers, which select for atelic eventualities, the transition exists because two phases exist (since there are two unique phases in the time interval, a negative and a positive one, there has to be a transition between them). In the case of *quase*, the two phases exist because the adverb selects for a transition between two states of opposite polarity. This transition provides the cut-off point for the truthful application of the predicate that denotes the *p* phase (cf. Figure 4.3).

In this section, I have described the meaning of *quase* as a sentence adverb. In the next section, I describe its meaning as a focus adverb. The common core of the sentential and the focus-adverb uses of *quase* is the comparison established between two values on a scale,

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58 This explains the striking difference in numbers in terms of co-occurrence of *quase* with the phase quantifiers *já* ‘already’ and *ainda* ‘still’: there were 71 occurrences of *ainda quase* and 759 occurrences of *já quase* in the Cetempúblico corpus.
the standard of comparison being provided by the value onto which the modified expression is mapped. This comparison explains the semantic restrictions of *quase*: the two elements can be compared because they are ordered along a dimension (hence, it must be possible to identify a scale) and the denotation of the modified expression has to be mapped onto a unique value on a scale, in order to provide a standard of comparison. In the realm of events, a change of state provides a salient boundary, and thus can function as a standard value. The reference value corresponds to the evaluation of the situation in the actual world, as assessed by the speaker. This explains the unacceptability of *quase* with the Future tense, pointed out in chapter 1. Given the intrinsic non-determinacy of the Future, it is not possible to identify the reference value of the comparison, as this would require an epistemic state of certainty of the speaker.

The relation between the meaning of *quase* and an expected course of events is not found in non-sentential uses of the adverb (e.g. with the adjective *infantil* in (47)). The analysis of examples in which *quase* is a sentential operator has provided the basis for the possible world analysis of *almost* (Sadock 1981, Rapp and von Stechow 1999), but seems inadequate for other examples (cf. the discussion of some of these examples in Sevi 1998, e.g. “3,333 is almost 4”). As noted by Atlas (1984), the possible world analysis treats *almost* exclusively as a sentence adverb and disregards other uses.

### 4.4 *Quase* as a focus adverb

In this section, I analyze the interpretation of *quase* when it has scope over a constituent smaller than the clause; *quase* may modify directly different types of constituents,
a property typical of “focusing” adverbs like only and even (Cinque 1999). There are a number of tests that allow us to distinguish the two different uses of quase. As a focus adverb, quase occurs immediately adjacent to the modified constituent, either before it, as in (92), or after it, in a separate intonational phrase and deaccented, as in (93):

(92) O papel do desertor tem sido completamente esquecido, quase apagado. (CP Ext 22968) ‘The role of the deserter has been completely forgotten, almost wiped out’

(93) O papel do desertor tem sido completamente esquecido, apagado quase. ‘The role of the deserter has been completely forgotten, wiped out almost’

When quase is a focus adverb, it may only be negated through metalinguistic negation. This is the case even if negation has scope over the whole proposition, as in (95):

(94) O papel do desertor não tem sido QUASE apagado; tem sido COMPLETAMENTE apagado! ‘The role of the deserter has not been ALMOST wiped out, it has been COMPLETELY wiped out!’

(95) Não é verdade que o papel do desertor tem sido QUASE apagado; ele tem sido COMPLETAMENTE apagado! ‘It is not the case that the role of the deserter has been ALMOST wiped out; it has been COMPLETELY wiped out!’

The above mentioned restriction on the co-occurrence of quase with the Future tense is valid only for the cases where quase has sentential scope. Therefore, quase is not felicitous in (96) and (98), but it may felicitously occur in (97) and (99), where it modifies the constituent which is immediately adjacent: the quantified NP in (97) and the PP in (99), respectively:

(96) #(Quase que) o João (#quase) será atropelado. (almost that) the João (almost) be:FUT:3SG hit:PPART
The same contrast holds for the co-occurrence restrictions of quase with quantificational determiners. As a sentence adverb, quase takes the whole proposition as its argument, and hence may felicitously co-occur with cada ‘each’, but it cannot directly modify the quantified phrase headed by cada, as in (100):

(100) *Quase cada criança recebeu um presente.
     almost each child receive:SPAST:3SG a present

(101) Quase que cada região tem o seu santo preferido...(CP Ext 1331603)
     almost that each region have:PRES:3SG the his saint favorite
     ‘It’s almost the case that each region [of the country] has its favorite saint…’

The difference between the wide scope and the narrow scope interpretation of quase can be shown by the contrast between the readings obtained with the Imperfeito do Indicativo and with the Pretérito Perfeito Simples in (102) and (103). In the former case, the adverb has scope over the whole proposition (meaning “It is almost the case that p”), yielding the counterfactual interpretation (and in this case quase may be followed by que). The narrow scope interpretation exemplified in (103) is not about a situation that could have happened but rather about describing the set of children of which the predicate came to the party is true. This set is described with respect to the case in which the set of children in the domain is a subset of the set of people who came to the party:
(102) Quase (que) todas as crianças vinham à festa
almost that all the children come: IMPF:3PL to:the party
(mas acabaram por não vir).
‘It was almost the case that all children came to the party (but eventually they didn’t come).’

(103) Quase todas as crianças vieram à festa
almost all the children come: SPAST:3PL to:the party
(mas faltou uma ou duas).
‘Almost all the children came to the party (but one or two didn’t come).’

The truth conditions of (102) and (103) are different. So, if the relevant set of children in the domain is constituted by four children, (102) is true if the four children were getting ready to come to the party but at the last minute their mother had a problem with the car and they had to stay home, whereas (103) is false in the same context. Only when *quase* has narrow scope may it occur with incidental prosody, as shown by the contrast in acceptability between (102’) and (104)-(105), and may be replaced by adverbs like *praticamente* or *aproximadamente*, as in (106) vs (107’):

(102’) *Todas as crianças vinham à festa, quase.
all the children come:IMP:3PL to:the party, almost

(104) Todas as crianças vieram à festa, quase.
‘All the children came to the party, almost.’

(105) Todas as crianças, quase, vieram à festa.
‘All the children, almost, came to the party.’

(106) Praticamente/aproximadamente todas as crianças vieram à festa.
‘Practically/approximately all the children came to the party.’

(107’) *Praticamente todas as crianças vinham à festa.
practically all the children come: IMP:3PL to:the party
The same interpretation as in (104) – (106) is obtained in (108), where *quase* occurs within an NP (which is not possible for English *almost*):

(108) A quase totalidade das crianças veio à festa.
the almost totality of the children come:SPAST:3SG to:the party
‘Almost all the children came to the party.’

As pointed out above, when *quase* occurs in pre-verbal position, it is potentially ambiguous between the sentence adverb interpretation and the focus adverb interpretation, given that the scope of the adverb may or may not coincide with the focus (i.e., the focus may be the whole proposition or a smaller constituent). This ambiguity is shown in (109) – (112), where the possible continuations make apparent both the counterfactual and the scalar readings obtained with accomplishment predicates ((110) and (111), respectively), and the interpretation obtained when the focus of *quase* is the NP *um pássaro* (in (112)):

(109) O João quase desenhou um pássaro.
the João almost draw:SPAST:3SG a bird
‘João almost drew a bird.’

(110) O João quase desenhou um pássaro, mas mudou de ideias e decidiu desenhar um dinossauro.
‘João almost drew a bird, but he changed his mind and decided to draw a dinosaur.’

(111) O João quase desenhou um pássaro, mas não acabou.
‘João almost drew a bird, but he didn’t finish it.’

(112) O João quase desenhou um pássaro, mas faltava-lhe o bico.
‘João almost drew a bird, but it lacked the beak.’
On the other hand, in (113) – (115) only the focus interpretation is possible:

(113) O João desenhou quase um pássaro,  
the João draw:SPAST:3SG almost a bird  
mas faltava-lhe o bico.  
‘João drew almost a bird, but it lacked the beak.’

(114) #O João desenhou quase um pássaro, mas mudou de ideias e decidiu desenhar um dinossauro.  
‘João drew almost a bird, but he changed his mind and he decided to draw a dinosaur.’

(115) #O João desenhou quase um pássaro, mas não acabou.  
‘João drew almost a bird, but he didn’t finish it.’

In (112), the continuation provided forces the interpretation under which the focus of *quase* is the NP *um pássaro*. Under this reading, both (112) and (113) mean that João drew something, and this drawing is described by comparing it with the predicate “a bird”. The phrase *quase um pássaro* denotes a property, namely a property which resembles the property denoted by “a bird” but differs with respect to some categorial feature of that denotation and hence can be ordered with respect to it. *Quase* may occur with any property-denoting expression. In (13) above, repeated here as (116), the phrase *quase sem dinheiro* denotes the property of having a very reduced amount of money:

(116) … um luxo estranho para pessoas quase sem dinheiro. (CP Ext 58)  
‘a weird luxury for people who almost don’t have any money (lit. almost without money)’

On a scale of the property of having a reduced amount of money, the property of having no money represents the endpoint; the standard value of comparison in this case is provided by the lexical semantics of the preposition *sem* ‘without’, which negates the denotation of its complement.
The contribution of *quase* in (113) and (116) is to provide a metric for the applicability of a predicate, the focus of the adverb. The meaning of the phrase constituted by *quase* and the modified expression is a property which is compared to the denotation of the focus of the adverb, i.e., the entailments that allow for its truthful application. A scalar evaluation underlies this comparison; in (113) the degree to which the drawing instantiates “what one expects a bird to be”, where the scale pertains to an ordering of the sub-entailments of the predicate (the properties that are criterial for category membership). On this view, the semantic restrictions observed above can be explained; the lexical semantics of the predicates that *quase* may modify must provide clear criteria for their truthful application, as is the case with absolute adjectives and with universally quantified expressions, or else the context must entail a clearly defined standard that allows for a one-to-one mapping to the scale required by the semantics of *quase*.

4.4.1 The predicative restriction

In this section, I argue that the semantic requirement imposed by *quase* on the modified expression is that it be used predicatively. In other terms, *quase* may only be felicitously used if the expression it modifies either is a predicate or is interpreted as a predicate, i.e., as a description of some argument.

Cross-linguistically, this account also explains the restrictions found with the words that correspond to *quase*: note that English *almost* can only occur with an NP if it is a predicative nominal; (117) is fine but (118) and (119) are ungrammatical:
(117) He is almost a man.

(118) *Almost a man entered the room.

(119) *She kissed almost a man.

A similar approach is advocated in Moreno Cabrera’s (1984) analysis of the syntactic properties of Spanish *casi. According to this author, the distribution of *casi can be accounted for in the following way: *casi may occur both before an NP and within the NP (i.e., between determiner and noun) as long as the modified expression denotes a property, not an entity.

All nominal expressions that have a referential function, like proper nouns and definite descriptions, are excluded from modification with *casi: *casi Juan ‘almost Juan’, *casi la casa amarilla ‘almost the yellow house’, *casi ella ‘almost she’, etc. Crucially, note that a personal pronoun may co-occur with *quase if used predicatively, as in (120):

(120) Sou *quase eu. [Imagine someone looking at a good sketch of one’s face]

‘It’s almost me’

Further evidence for the predicative restriction of *quase comes from the fact that it may not modify relational adjectives, i.e., those adjectives that establish a connection between the modified noun and an entity or a domain which is external to it, the semantic relation between both being unspecified (Bosque 1993, Demonte 1999:§3.3). In general, relational adjectives may not be used predicatively (but see Demonte 1999: §3.3.1.3). This fact explains the unacceptability of *quase nuclear ‘almost nuclear’ in (19) and the (b) examples in (121) and (122):
(121) a) um dicionário médico
   ‘a medical dictionary’

   b) *um dicionário quase médico
      a dictionary almost medical

   c) *Este dicionário é médico.
      This dictionary is medical

(122) a) política cultural
   ‘cultural policy’

   b) *política quase cultural
      policy almost cultural

   c) *A política é cultural.
      The policy is cultural

As shown by the unacceptability of the (c) examples, these adjectives may not be used predicatively.

Under this approach, any expression may be felicitously modified by *quase as long as it may be used predicatively, as shown with the variants of (4) above in (123) through (126) and the corresponding predicative statements with the copula verb *ser in (123’) through (126’):

(123) quase um sentimento de revolta
     almost a feeling of revolt

(123’) Este sentimento é um sentimento de revolta.
     ‘This feeling is a feeling of revolt.’

(124) um quase sentimento de revolta
     an almost feeling of revolt

(124’) Este sentimento é sentimento de revolta.
     ‘This feeling is feeling of revolt.’

(125) um sentimento quase de revolta
     a feeling almost of revolt

(125’) O meu sentimento é de revolta.
     ‘My feeling is of revolt.’
(126) um sentimento de quase revolta
     a feeling of almost revolt

(126’) Aquilo que eu sinto é revolta.
‘What I feel is revolt.’

Moreno Cabrera concludes that casi is sensitive not to the syntactic category of the word but rather to its function (it always modifies predicates). For this reason, Moreno Cabrera calls it “ADFunció predicativa” (Moreno Cabrera 1984:245).59 This view is compatible with the approach adopted here, according to which quase contributes an evaluation of the applicability of the predicate to its argument. Despite the categorial diversity, what the modified expressions have in common is the fact that they are used predicatively; they may denote properties of entities, properties of sets, or properties of possible worlds (i.e., propositions).

4.5 Comparison between quase and por pouco

In the previous sections, I have argued that quase may be either a sentence adverb or a focus adverb. When quase is a sentence adverb, it has scope over the whole proposition, and the adverb introduces a perspective according to which the situation in the actual world is described as providing the conditions that would lead to a certain change of state. This interpretation relates to epistemic modality since such a description yields an evaluation, typically made by the speaker, of the possibility that the state of affairs expressed by the

59 According to Moreno Cabrera, casi should not be considered an adverb due to its syntact and semantic behavior. However, his argumentation is not convincing; the tests provided by Moreno Cabrera simply show that casi is not a manner adverb (or rather, a VP-internal adverb) (cf. pp. 242-243), and hence his conclusion is not correct.
modified proposition holds in the actual world (Nuyts 2006). In this case, the transition to a change of state constitutes the endpoint value on the scale introduced by the adverb. The premises provided by the circumstances that obtain in the actual world can be seen as providing the “modal base” (Kratzer 1977, 1981, Kaufmann et al. 2006) for the operator.

When the adverbial *por pouco* is used pre-verbally, it is frequently paraphrased by *quase*, but it differs from the latter in that it can only occur as a sentence adverbial, not as a focus adverbial, as shown by the contrast in grammaticality between (129) and (130). Its use as a sentence adverbial is confirmed by the possibility of the co-occurrence with the complementizer *que*, as in (128):

(127) O João quase foi atropelado.  
the João almost be: SPAST:3SG hit  
‘João was almost hit by a car’

(128) Por pouco (que) o João não foi atropelado.  
by little (that) the João not be: SPAST:3SG hit  
‘João was almost hit by a car’

(129) O Pedro tem o cabelo quase loiro.  
the Pedro have: PRES:3SG the hair almost blond  
‘Pedro is almost blond’

(130) *O Pedro (não) tem o cabelo por pouco loiro.  
the Pedro (not) have: PRES:3SG the hair by little blond

Accordingly, *por pouco* always contributes a counterfactual interpretation, as described for the sentential uses of *quase*, and it may not be used as a focus adverb. Therefore, the ambiguity of (131), the Portuguese translation of an example from Sevi (1998:8), disappears with *por pouco*, in (134). Example (131) is ambiguous between a counterfactual interpretation (the reading biased by the continuation in (132)) and an interpretation in which “to know” is treated as corresponding to a degree on a scale of acquaintance, as in (133):
Quase conheci Johnny Marr. ‘I almost knew/met Johnny Marr.’

Quase conheci Johnny Marr: ele mudou-se para um apartamento ao lado do meu antigo um dia depois de eu sair de lá. ‘I almost met Johnny Marr; he moved next to my old apartment a day after I left.’

Eu costumava falar com Johnny Marr sobre a vida e a carreira dele: depois de viver 3 anos perto dele, tive a sensação de que quase o conheci. ‘I used to talk to Johnny about his life and his career; after living 3 years next door to him, I got the feeling that I almost knew him’.

Por pouco não conheci Johnny Marr. ‘I almost met Johnny Marr’

In fact, (134) can only have the interpretation made apparent by the continuation in (132); the sentence cannot have the interpretation that the speaker had a high degree of acquaintance that was close to the degree denoted by the predicate “to know somebody”. The contribution of por pouco exemplified in (134) involves the comparison between alternative ways the world might have been, p and ~p, represented by the branching structure in Figure 4.4 (where the arrow on the horizontal line represents the direction of time). The adverbial introduces a comparison between both propositions along a scale of possibility.

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60 The paraphrases and contexts are from Sevi (1998); the second example was altered because I do not think that the original (10b in Sevi) was felicitous with almost.
In accordance with the scalar lexical meaning of the adverbial, *por pouco* always asserts counterfactual closeness; had the circumstances in the actual world been just a little bit different, the proposition over which the adverbial has scope would not have been true in the actual world. The closeness between the factual and the counterfactual situations pertains to an epistemic judgement: the circumstances that hold in the actual world provide evidence that leads to an expectation about a certain course of events (the outcome that under the premises is seen as most likely to follow). This is exemplified by the naturally-occurring (135):

(135) "Jaime P… morreu, ontem, quando o seu carro foi atingido por uma árvore de grande porte que tombou em consequência do mau tempo…O tronco destruiu o carro e *por pouco* não atingiu também dois agentes da GNR que, na ocasião, se abrigavam da chuva precisamente debaixo da mesma árvore." (CP Ext 161820)
Jaime P [proper name]…died, yesterday, when his car was hit by a big tree that fell as a consequence of the bad weather conditions…The trunk destroyed the car and almost hit (lit. by little not) also two agents of the Police who, on that occasion, were covering themselves from the rain precisely under the same tree.’

In (135), the context entails the premises that underlie the modal evaluation: the agents were “precisely under the same tree”.

As shown for the counterfactual interpretation of quase, it is possible to paraphrase a sentence introduced by por pouco with a counterfactual conditional, the apodosis being provided by contextual information:

(136) Se eu tivesse mudado de casa um dia mais tarde, teria conhecido Johnny Marr.
    ‘If I had moved out of my apartment just one day later, I would have met Johnny Marr.’

Similarly to quase, the counterfactual meaning of pre-verbal por pouco can be tested by the fact that (137) is contradictory, unless interpreted as referring to a sequence of two eventualities:

(137) #Por pouco não conheci Johnny Marr,
    by little not know:SPAST:1SG Johnny Marr,
    e conheci Johnny Marr.
    ‘I almost met Johnny Marr, and I met Johnny Marr.

The fact that por pouco always yields a counterfactual interpretation relates to the fact that it only selects for telic predicates. When it occurs with atelic predicates, as in (138), it is only acceptable under a coerced interpretation. Hence, in (139) the denotation of the predicate is interpreted as the resultant state of an event:

(138) #Por pouco o Pedro não é português.
    by little the Pedro not be[ILP]:PRES:3SG Portuguese
Por pouco o Pedro não é português: no dia antes de ele nascer, a mãe dele foi para Espanha.

‘Pedro is almost Portuguese: the day before he was born, his mother went to Spain.’

This aspectual restriction shows that the licensing conditions of *por pouco* are more restricted than those of *quase*. A preliminary summary of the differences between the two adverbials is provided in Tables 4.2 and 4.3:

<table>
<thead>
<tr>
<th></th>
<th>Sentence adverbial</th>
<th>Focus adverbial</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>quase</em></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><em>por pouco</em></td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

Table 4.2: Classification of *quase* and *por pouco* with respect to type of adverb

<table>
<thead>
<tr>
<th></th>
<th>Clause-initial</th>
<th>Clause-final</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>quase</em></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td><em>por pouco</em></td>
<td>yes</td>
<td>yes (see chapter 7)</td>
</tr>
</tbody>
</table>

Table 4.3: Distribution of *quase* and *por pouco* with respect to position in the clause

Furthermore, *por pouco* is a polarity sensitive item since it always selects for a negative proposition. These co-occurrence restrictions interact with the tense of the clause under the scope of the adverbial, as summarized in Table 4.4:

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61 By “clause-final” I mean a VP-modifier that occurs in clause-final position, and in an integrated occurrence. Of course, as a focus adverb *quase* may occur in post-verbal position, but only with an incidental prosody.

62 This is an important difference between the EP adverbial *por pouco* and Spanish adverbial *por poco*. Hence, the following sentences in (i) and (iii) are not acceptable in EP. In these sentences, *por poco* reverses the polarity of the proposition over which it takes scope (Pons Bodería and Schwenter 2005), like *almost*:

(i) Por poco sale.
    ‘She almost left.’

(ii) *Por pouco sai. [EP]
    by little leave:PRES:3SG

(iii) Por poco llegó Juan.
    ‘Juan almost arrived.’

(iv) *Por pouco chegou o João. [EP]
    by little arrive:SPAST:3SG the João

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<table>
<thead>
<tr>
<th></th>
<th>Pretérito Perfeito Simples</th>
<th>Imperfeito*(a)</th>
<th>Future (simple or periphrastic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>quase</td>
<td>yes</td>
<td>yes</td>
<td>yes (as a focus adverb only)</td>
</tr>
<tr>
<td>por pouco</td>
<td>only with neg.</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

Table 4.4: Distribution of *quase* and *por pouco* with respect to tense

Given that with the *Imperfeito do Indicativo* a counterfactual interpretation is obtained, as shown for *quase*, it is not surprising that *por pouco* may occur with this tense, whereas it may only occur with the *Pretérito Perfeito Simples* if the verb is under the scope of negation. A puzzle for a compositional analysis of the semantics of *por pouco* is that a clause in which *por pouco* occurs with a negated verb in the *Imperfeito do Indicativo* may either be interpreted as entailing the truth of the proposition over which the adverbial has scope, or as entailing its falsity, as shown in (140) and (141) and represented in (140’) and (141’), where p stands for the proposition under the scope of the adverbial and under the negative operator. In (140), the context entails that the contestant has departed (in fact, he has won the race), whereas in (141) the context entails that the old man was not hit by the vehicle. This puzzle does not arise when *quase* occurs with the *Imperfeito*.

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63 In the following charts only the behavior of *quase* as a sentence adverb is considered.

64 The complex semantics of the *Imperfeito do Indicativo* in EP is beyond the scope of this dissertation. However, there are several sources of evidence to the effect that it frequently receives a counterfactual interpretation and that it may be treated as a non-veridical operator, in the sense of Giannakidou (2002) (for a thorough analysis, see Matos (1996) and Mateus et al. (2002), and Cipria and Roberts (2000) for Spanish *Imperfecto*). For the current purposes, it is important to note that the interpretation obtained with *por pouco* and this tense is truth-conditionally equivalent to the interpretation obtained with the negation of the verb in the *Pretérito Perfeito Simples*. A sentence containing pre-verbal *por pouco* (without the negative adverb *não*) only entails the negation of the proposition over which the adverbial has scope when the verb is in the *Imperfeito do Indicativo*.

65 In fact, for certain native speakers, in an out-of-the-blue context a sentence in which *por pouco* occurs with a negated verb in the *Imperfeito* is actually ambiguous. This is not the case in the corpora examples, since the context clearly entails either the truth or the falsity of the modified proposition.
De coroa de louros no pescoço, José Santos revelou aos jornalistas que “por pouco não partia,”
pois chegou atrasado”… (CP Ext 556860)
‘With a laurel crown around his neck, José Santos [proper name] disclosed to the journalists that “I almost didn’t depart, since I arrived late”.’

… o condutor disparou furioso contra a avenida principal da cidade. Na primeira esquina, o riquexó por pouco não atropelava um velhote.
O homem nem tempo teve para protestar: logo atrás vinha outro riquexó a toda a velocidade decidido a ultrapassar qualquer obstáculo. Teve de se desviar enquanto nós seguimos em frente… (CP Ext 2949)
‘…the driver shot like crazy towards the main street of the city. In the first corner, the riquexó [name of a vehicle] almost hit an old man. The man didn’t even have the time to protest: right after us there was another riquexó, at full speed, willing to overcome any obstacle. He had to move to the side while we drove forward…’

In (140) the sentence is interpreted as entailing the truth of the modified proposition, whereas in (141) the sentence entails the falsity of the modified proposition. The entailment patterns of quase and por pouco are compared in (142) – (149):

(142) Por pouco não ganhámos. ⇒ Não ganhámos.
‘We almost won’

(143) *Por pouco ganhámos.
‘We won’

(144) Por pouco não ganhávamos. ⇒ Ganhámos/Não ganhámos.
‘We almost didn’t win./We almost won.’ ⇒ We won/We didn’t win.

(145) Por pouco ganhávamos. ⇒ Não ganhámos.
‘We almost won’ ⇒ We didn’t win.
Note that *por pouco* may occur pre-verbally with a verb in the *Pretérito Perfeito Simples* which is not under the scope of negation, as exemplified in (150):

(150) …a polícia israelita encontrou uma carrinha com 600 litros de produtos explosivos e foi *por pouco* que se evitou um grave atentado no centro de Jerusalém. (CP Ext 642723)
‘The Israeli police found a van with 600 liters of explosive material and they barely prevented a big attack from happening in the center of Jerusalem’

In the examples of this type found in the corpus, *por pouco* systematically occurs with implicative verbs (Karttunen 1971), mostly negative implicative verbs like *evitar* ‘avoid’ (whose lexical meaning entails the negation of the complement of the verb), and in cleft constructions. For this reason, I will argue that in these contexts the adverb is preposed due to actors pertaining to information structure, and that its canonical position is post-verbal, where it is a veridical operator (see chapter 7).66

66 The difficulty in determining whether in pre-verbal position *por pouco* is a veridical operator stems from the fact that it always selects for a negative proposition and that in the examples with the *Imperfeito* the sentence in
The pattern of entailments of *por pouco* is summarized in Table 4.5 below, where \( \phi \) stands for the proposition modified by the adverbial, and X stands for “ruled out”:

<table>
<thead>
<tr>
<th>Clause initial</th>
<th>PRET.PERF.SIMPLES</th>
<th>IMPF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive environment</td>
<td>X</td>
<td>( \sqrt{\phi} ) entails ( \neg\phi )</td>
</tr>
<tr>
<td>Negative environment</td>
<td>( \sqrt{\phi} ) entails ( \neg\phi )</td>
<td>( \sqrt{\phi} ) possibly ambiguous ( (\phi \text{ or } \neg\phi) ).</td>
</tr>
</tbody>
</table>

Table 4.5: Pattern of entailments of *por pouco* with respect to tense and polarity

Another important difference between *quase* and pre-verbal *por pouco*, which makes the latter more restricted in terms of contexts in which it may felicitously occur, is that intuitively the contribution of *por pouco* seems to introduce an evaluative component. Hence, (151) is not a felicitous utterance, at least out of the blue, unlike its counterpart with *quase* in (152):

(151) #Por pouco o João não comeu o bolo.
    by little the João not eat:SPAST:3SG the cake

(152) O João quase comeu/comia o bolo.
    the João almost eat:SPAST:3SG/eat:IMPF:3SG the cake
    ‘João almost ate the cake.’

The predicates that may felicitously co-occur with *por pouco*, both in pre-verbal and post-verbal position, are either negatively or positively evaluated (Horn 1989, Klein 1998). This issue will be developed in more detail in chapter 7, where I argue that this evaluative dimension follows both from the asp ectual restrictions introduced by *por pouco* and inferences that arise in frequent contexts of use of the adverbial. Given the counterfactual

which it occurs may or may not entail the truth of the proposition over which it has scope (cf. cases of ambiguity). As is the case for Spanish *por poco*, diachronic factors pertaining to the syntax of negation may play a role in the puzzle found in the synchronic situation (cf. Pons Bordería and Schwenter 2005).
meaning of the adverbial, the relevance of an utterance about an event that was in the verge of taking place depends on the degree to which that event affects the entity that may experience it. In other words, the consequences of the event make it relevant enough to be worth mentioning getting close to it.

4.6 Conclusions

In this chapter, I have fleshed out the types of “closeness” that may be associated with the interpretation of *quase*. I have argued that *quase* instantiates the two identifying criteria of approximative adverbs, namely evaluation of the applicability of the predicate and scalarity. The former criterion yields two types of interpretations, a “dynamic” and a “static” one. As for the “dynamic” type, the adverb has sentential scope and contributes a description of a situation in the actual world by situating it with respect to an expected outcome on a course of events. As for the “static” one, the adverb has narrow scope and its contribution is to provide a description of a property of an entity, by comparing it to the property denoted by the modified expression. In both cases, a comparison between properties is established along a certain dimension, and hence a partial ordering on elements of a set (i.e., a scale) is assumed. The adverbial *por pouco*, whose interpretation in pre-verbal position was described in section 4.5, may only yield the “dynamic” type of interpretation.

There are several advantages in adopting an approach to the semantics of *quase* that relies on the notion of a scale. First, it allows for a unified semantic account which correctly captures the intuitions pertaining to a wide range of interpretations. Second, there is independent evidence for the sensitivity to scale structure of degree modifiers, which is
supported from cross-linguistic data. This sensitivity accounts in an integrated manner for the semantic restrictions of *quase* and its corresponding words with adjectival and verbal predicates. Furthermore, it also provides insight into the parallelism between both domains and the semantics of prepositions. As argued elsewhere (Kennedy and McNally 2005, Amaral 2006b, Winter 2006), this parallelism improves our understanding of gradability phenomena and its manifestations across different categories.

Given the flexibility of the notion of a scale, this account predicts possible ambiguities in the interpretation of *quase* which is a desirable result. If multiple scales are lexically and contextually retrievable (and relevant to the question under discussion), and the structural constraints described are respected, more than one interpretation with *quase* may be obtained.

This account also makes it possible to highlight the similarities and differences between approximative adverbs and related classes of adverbs; in particular, between the semantics of approximative adverbs, phase quantification and scalar focus adverbs (see chapter 5), which to my knowledge has not been explored in previous work.

As for the distinction between the sentential adverb and the focus adverb, it allows us to tease apart the different meanings among the range of possible interpretations obtained while accounting for the syntactic properties of the adverb. Such a distinction has also proven useful in the analysis of other scalar operators, e.g. *schon* and *noch* (cf. Löbner 1989).
CHAPTER 5

PERSPECTIVE AND SCALAR SEMANTICS: THE MEANING OF QUASE

In this chapter, I flesh out the scalar evaluation denoted by *quase* on the applicability of the modified predicate. I account for it for through the elements of the comparison introduced by the adverb, in particular the standard value and the degree relation, in section 5.1. In sections 5.2 and 5.3, I return to the issue of the asymmetry of the meaning components of approximative adverbs. I explain how the polar component of *quase* follows from its proximal component, the latter being responsible for the intuitively perceived directionality introduced by the adverb. In section 5.4, I compare the present account with Lasersohn’s (1999) notion of “slack regulation” and argue for the advantages of my account on the basis of the distinction between the meaning of *quase* and a hedge like *aproximadamente* ‘approximately’. Section 5.5 analyzes the scalar semantics of *quase* through its co-occurrence with the scalar additive adverbs *até* and *mesmo* ‘even’. Section 5.6 provides concluding remarks.

5.1 The comparison introduced by *quase*

In this section, I develop in more detail the claim that the semantic co-occurrence restrictions of *quase* can be accounted for by its sensitivity to scale structure and the
requirement that the denotation of the modified expression provide a uniquely identifiable value on the scale that may constitute the standard of comparison.

According to Zwarts’ (1985) and Klein’s (1998) analysis of the semantic restrictions of the Dutch adverbs that correspond to quase, vrijwel ‘almost’ and bijna ‘nearly’, only intolerant quantifiers accept modification by these adverbs. Following Löbner (1987), a quantifier Q over a predicate X is tolerant if Q(X) and Q(¬X) can be simultaneously true, and intolerant if Q(X) and Q(¬X) cannot be simultaneously true (i.e., yield a contradictory sentence), as exemplified with the contrast between the determiners alguns ‘some’ and todos ‘all’:

1. **Alguns** amigos do Pedro gostam de chocolate e **alguns** amigos do Pedro não gostam de chocolate. [The two conjuncts may be simultaneously true: Tolerant Q] ‘Some of Pedro’s friends like chocolate and some of Pedro’s friends don’t like chocolate.’

2. ?Quase alguns amigos do Pedro gostam de chocolate. ‘Almost some of Pedro’s friends like chocolate.’

3. #**Todos** os amigos do Pedro gostam de chocolate e **todos** os amigos do Pedro não gostam de chocolate. [The two conjuncts may not be simultaneously true: Intolerant Q] ‘All of Pedro’s friends like chocolate and all of Pedro’s friends don’t like chocolate.’

4. Quase todos os amigos do Pedro gostam de chocolate. ‘Almost all of Pedro’s friends like chocolate.’

What this amounts to is that quase may only combine with intolerant quantifiers, i.e., quantifiers that partition the domain of discourse and hence provide a “clear-cut standard”. This restriction seems justified on the account proposed in the previous chapter; since the adverb evaluates the applicability of the predicate, it may only combine with an expression that provides unambivalent conditions for its truthful application.
This restriction on the type of quantifiers that *quase* may combine with can be seen as a particular instance of the sensitivity to scale structure displayed by *quase*. In fact, the semantics of the universal quantifier in (4) can be conceived as an order on the cardinality of the elements of the power set of the set denoted by the restrictor of the quantifier. The greatest element in the order denoted by the universal quantifier provides the exception that is enough to falsify the quantified statement. In other terms, the greatest value is again the standard on which the truth of the statement depends.

On the other hand, the denotation of an existential quantifier does not meet the selectional requirement of *quase*. The denotation of an existential quantifier simply excludes the empty set; to exemplify, the denotation of an NP like *some horses* is the set consisting of all the nonempty sets of horses, as predicted by the truth conditions of the quantifier given in (5). Hence, such truth conditions do not provide a uniquely identifiable standard that may be mapped onto a unique value on a scale.

\[
[[\text{some AB}]] = 1 \text{ iff } A \cap B \neq \emptyset
\]

The same restriction is found with the adverbs in (6) and (7). In (6), the denotation of the modified adverb whose meaning pertains to epistemic possibility can be modelled in terms of universal quantification over possible worlds. A synonymous expression to *seguramente* would be *com toda a certeza* ‘in all certainty’:

(6) \quad O \text{ texto, que coincide, } \textbf{quase} \text{ seguramente,…} \quad (\text{CP Ext 1255})

‘The text, which coincides, almost surely,…’
Adverbs like *talvez* ‘maybe’ or *possivelmente* ‘possibly’, whose meanings can be conceived as existentially quantifying over possible worlds, cannot be modified by *quase*, as shown in (7):

(7) O texto, que coincide, quase #talvez/#possivelmente/de certeza,…
    ‘The text, which coincides, almost maybe/possibly/certainly,…’

The semantics of universal quantification points to the way in which the selectional restrictions of *almost* can be accounted for in a unified manner. Only one exception is required to falsify the universally quantified statements. The same analysis may be given to the semantics of other expressions that allow for modification by *quase* and *almost* (cf. Klein 1998:157), like the adjective *identical* ‘the same in every aspect, no difference exists’:

(8) The pictures were almost identical/*different.

In the examples with quantificational determiners and adverbs of quantification, the semantic restrictions imposed by *quase* are met by the algebraic properties of the lexical semantics of the modified expressions. However, modification by *quase* is not restricted to such cases. Any expression may be modified by *quase* as long as its denotation can be assigned a value yielding a clearly identifiable degree on a scale of a property and hence may provide a standard of comparison.

Recall that *quase* (and its cross-linguistic congeners) is infelicitous in out-of-the-blue contexts with relative adjectives (Kennedy and McNally 2005). In chapter 4, I argued that this is the case because the semantics of this type of adjective does not provide a standard degree which uniquely determines the truthful application of the predicate. However, this restriction only holds for the positive form of the adjective. In fact, *quase* may co-occur with
degree constructions headed by adjectives of this type, as shown by the following naturally occurring example:

(9) … quadros quase tão grandes como a Muralha da China. (CP Ext 9694)
‘paintings almost as big as the Great Wall of China’

In (9), the comparative clause ‘como a Muralha da China’ provides a degree on the property scale associated to the denotation of the adjective – the degree to which the Great Wall of China is big – which serves as the standard value required by the semantics of quase. Similar examples are found in the BNC, as in (10) and (11):

(10) … tiny arthropods, some almost too small to see with the naked eye…
(11) Its tunnels were almost big enough for me to go down…

In (10), the degree to which the arthropods are small is almost the degree of smallness that makes it impossible for a human to see them with the naked eye. The degree construction establishes a relation between a degree on a scale and a state of affairs: the degree is seen as a necessary condition for a state of affairs to be true: If $d_n$ on the scale of size obtains, then the human eye cannot see the object. The degree $d_n$ establishes a partition in the domain (what can be seen vs what cannot be seen), and hence it provides the standard value of comparison. The same can be said of (11): the degree to which the tunnels are big is almost the size that makes it possible for the speaker to fit in. According to Kennedy (1999), measure phrases and degree constructions like the comparative, so…that constructions, etc. all fulfil the same semantic role; they provide a degree function, i.e., a relation between a reference value and the standard value. The standard value is either provided by the measure phrase (e.g. 5 feet in 5 feet tall) or by the comparative clause, as in (9)).
In the next section, I consider cases in which the standard value is either provided by the meaning of the modified expression or by contextual information (or by both). I describe the comparison introduced by *quase* with respect to three elements that every comparison presents (Kennedy 1999): (i) the scale of a property, (ii) the degree relation, and (iii) the comparison class.

5.1.1 The scale of a property

In this section, I provide empirical evidence for the claim that the semantics of *quase* always conveys a comparison between two values on a scale. In example (3) in chapter 4, repeated here as (12), the denotation of the focused constituent can be seen as a function that maps the argument of the predicate onto a value on a quantitative scale, namely the exact number of copies of a record that are required to be sold for it to be considered a “silver record”:

(12) V.C.- Mas é *quase* disco de prata (faltam seis mil, segundo a editora, a BMG)! (CP Ext 62)
    ‘But it’s almost a silver record (only six thousand more are needed, according to the publisher, BMG)!’

In (12), the difference between the number of copies sold up till the time of utterance and the required amount for the designation “silver record” to be applied, namely 6,000, is explicitly asserted in the discourse context.

The infelicity of (13) shows that the contribution of *quase* requires that the entity which is the argument of the predicate reach at least some value on the quantitative scale. This must be entailed by the context, otherwise the sentence is contradictory:
(13) O último disco dos GNR é quase disco de prata, mas ainda não vendeu nenhum exemplar.
‘The last record of the GNR is almost a silver record, but no copy of the record has been sold yet.’

In certain naturally-occurring examples, the scale that underlies the comparison is made apparent by the fact that a predicate corresponding to another value on the scale is explicit given in the context, as in (14):

(14) …os arquitectos conceberam várias colunas de estilo clássico... Serão num tom claro, quase branco… (CP Ext 1331603)
‘…the architects have designed several columns after the classical style…they will have a light color, almost white’

In (14), the properties denoted by the predicates claro and branco are compared along a dimension; these properties correspond to different values on a scale of shades of a light color. The predicate modified by quase is presented as instantiating an endpoint value on the scale of the property “being light-colored”.

In (14) in chapter 4, repeated here as (15), the properties under comparison pertain to two possible locations of the argument: the location where Durão Barroso actually sat down (denoted by the phrase including quase), and the location next to Marcelo Rebelo de Sousa.

(15) … Durão Barroso… ficou quase ao lado de Marcelo Rebelo de Sousa (entre eles só estava António Capucho…). (CP Ext 1458808)
‘…Durão Barroso [proper name] was almost next to Marcelo R. de S. [proper name] (between them there was only António Capucho [proper name]…’

The contribution of quase is to introduce an ordering on these locations: the predicative expressions quase ao lado and ao lado de are related in that they correspond to different degrees on a scale of proximity, the predicate “is next to” instantiating the maximum degree
of proximity (as is made apparent in the context: there was only one person between the two places).  

In example (10) in chapter 4, repeated here as (16), the terms under comparison are temporal adverbials that modify a clause:

\[(16) \quad \ldots \text{os dinossauros eram mais próximos dos pássaros – que nascem cegos e indefesos – ou dos répteis, tais o crocodilo, que são autónomos quase logo à saída do ovo? (CP Ext 244324)} \]

‘\ldots were the dinosaurs closer to the birds – that are born blind and unprotected – or to the reptiles, like the crocodile, that are autonomous almost as soon as they get out of the egg? (lit. almost immediately after leaving the egg)’

The contribution of *quase* in (16) is to introduce a comparison between different temporal moments at which the offspring of an animal is autonomous, as denoted by different temporal adverbials within an ordered set, e.g. \{when the animal is some days old,\ldots, when the animal is born, as soon as the animal leaves the egg\}. In this case, the ordering pertains to *how early on in the animal’s life can it be said to be autonomous*, of which the modified expression *logo à saída do ovo* constitutes the earliest stage.

The existence of a contextually or lexically determined scale is a necessary condition for the felicitous use of *quase*. It must be possible to map the modified expression onto a scalar value. This explains why the existence of a well-defined standard is not a sufficient condition.

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67 In fact, this is confirmed by the interpretation of the whole passage given in (i). The question under discussion in the context is precisely the (unexpected) closeness between the two politicians, D. Barroso and Marcelo R. de Sousa:

\[(i) \quad \ldots \text{e os gestos foram de reconciliação interna. Na mesa de honra Durão Barroso, que no último congresso foi a voz da discórdia com a estratégia do líder [Marcelo R. de Sousa], ficou quase ao lado de Marcelo Rebelo de Sousa (entre eles só estava António Capucho). (CP Ext 1458808)} \]

‘\ldots and their acts were of internal reconciliation. In the table of honor, Durão Barroso [proper name], who in the last convention was the voice of dissent with respect to the strategy of the leader [Marcelo R. de Sousa], was almost next to Marcelo R. de S. [proper name] (between them there was only António Capucho [proper name]…)’
condition for modification with *quase*. In (17), since no scale can be assumed, the utterance is infelicitous. The focused constituent is underlined:

\[(17) \quad \text{[Context: The graduate committee of a university had a meeting to choose the future graduate students of a program. The necessary conditions for admission are the GRE scores and the endorsement of a faculty member to the candidate]} \]

#Quase um professor apoio o candidato.
almost one professor support:SPAST:3SG the candidate
‘Almost one professor supported the candidate.’

In this context, the use of *quase* as a sentence adverb would be felicitous, as it would be possible to conceive of a sequence of events leading to the truth of the proposition modified by *quase*, thus allowing for the counterfactual interpretation obtained in (18):

\[(18) \quad \text{Quase que um professor apoia o candidato (mas mudou de ideias).} \]
almost that a/one professor support:IMPF:3SG the candidate
‘It was almost the case that a professor supported the candidate (but eventually he changed his mind).’

In this section, I have shown that the semantics of *quase* introduces a comparison between two values along a scalar dimension. The scale may be either lexically or contextually provided, and must be retrievable in order for *quase* to be felicitously used.

### 5.1.2 The degree relation

In the comparison introduced by *quase*, the reference value is assigned a high degree of the relevant property (i.e., slightly less than the maximum degree). There are several sources of evidence for this claim, besides the intuitions pertaining to the interpretation of *quase*. First of all, if another predicate of the same argument is made explicit in the context, and hence
two predicative expressions are ordered along the scale of a property in the context, the predicate which is not modified by quase denotes a high degree of a property, as made apparent by degree morphology, e.g. the superlative degree in (19), by the co-occurrence with a degree adverb (completamente ‘completely’) in (20), and by the intensifying construction in (21):

(19) …um país onde o mercado desta arte é reduzidíssimo, senão mesmo quase nulo. (CP Ext 348790)
‘…a country in which the market for such an art is extremely reduced (lit. reduced: superl.), if not plainly almost null.’

(20) O papel do desertor tem sido completamente esquecido, quase apagado. (CP Ext 22968)
‘The role of the deserter has been completely forgotten, almost wiped out’

(21) Jens, o hippie quase branco de loiro… (CP Ext 768502)
‘Jens, the hippie almost white of fairness (lit. almost white of (so) blond).’

In (21), the predicate “white” is presented as corresponding to the endpoint value on a scale of “blondness”, i.e., “almost white by virtue of having such a fair complexion”.

A sentence containing quase is not felicitous if a low degree of the property in question is asserted to obtain, as shown in (22):

(22) #O papel do desertor tem sido um pouco esquecido, quase apagado.
‘The role of the deserter has been a little forgotten, almost wiped out.’

The entailment of a sentence with quase that pertains to the high degree of the property in question cannot be cancelled; its negation yields infelicitous utterances:

(23) #As roupas eram quase pretas mas não eram muito escuras.
‘The clothes were almost black but they weren’t very dark.’
Another source of evidence is provided by the co-occurrence of *quase* with “degree nouns”, i.e., nouns that denote a high degree of a certain property (Bolinger 1972). In (25), the noun *fora-da-lei* ‘outlaw’ is interpreted as corresponding to the endpoint value on a scale of the property of having lack of respect for the conventions of the society. In (26), *ferro-velho* denotes the property of being extremely old and useless:

(25) Um fadista, quando nasce no século XIX é um anarca, *quase* um fora-da-lei. (CP Ext 5396)

‘A fado[name of a traditional Portuguese type of music]-singer, when born in the 19th century, is an anarchist, almost an outlaw.’

(26) …o Eborense cruzou ontem pela primeira vez o Tejo depois de uma cura de rejuvenescimento… após ter passado 50 anos a andar de cá para lá, já *quase* ferro-velho… (CP Ext 8330)

‘…the Eborense [name of a boat] crossed yesterday the Tagus river for the first time after a cure to make it younger…in fact, after having crossed the river back and forth for 50 years, it was almost a wreck (lit. it was already almost a wreck)’

In (26), the denotation of the degree noun overlaps with the outcome of a temporal process; this is linguistically expressed by the co-occurrence of *quase* with *já* ‘already’. Similar examples are found in English, in the BNC, with the predicate *black*. Either the adjective *black* is used as an absolute adjective that denotes the maximum degree of a gradable property, i.e., as the equivalent of “completely dark”, as in (27), or as the resultant state of a darkening process, in (28):

(27) It was so dark a blue as to be *almost* black…

(28) (…) his eyes would darken until they seemed *almost* black with the sheer emanation of his will.
In this section, I have argued that the reference value on the comparison introduced by *quase* always corresponds to a high value on the scale that underlies the comparison. The systematic co-occurrence of *quase* with degree morphemes and “degree nouns” that denote a high degree of a property further supports a scalar account of the semantics of *quase*. An account of the meaning of *almost* that relies on the similarity between possible worlds, since it allows for too much variability on the way in which possible worlds may be similar, cannot account for these observations without an ad-hoc stipulation.

5.1.3 The comparison class

In general, a comparison class is a contextually-determined set of entities in the domain that share the relevant property with the entity denoted by the argument of the gradable predicate (Kennedy 1999).

In the comparison introduced by *quase*, the comparison class is constituted by predicative expressions (which may take different types of arguments, from entities to propositions). Given the semantics of focus, the semantic value of the constituent focused by *quase* is contrasted with a set of contextually determined alternative values. In general, this set is implicit, although the discourse context may explicitly provide a predicate that denotes another value in the set, as shown by the examples in the previous section. The alternative predicates are compared with respect to the degree to which they instantiate a certain property (the dimension along which the comparison introduced by *quase* is established). This is exemplified in (29) with the non-gradable predicate *internacional* ‘international’:
(29) Chamar à Benetton uma firma de confecções seria, no mínimo, redutor ... a Benetton procura ser uma espécie de nação sem fronteiras, uma ideologia quase internacional, um modo de vida transcultural, multiétnico e plurirracial. (CP Ext 388846)
‘Considering Benetton just a clothing company would be an understatement, to say the least...Benetton aims at being a sort of nation without borders, an almost international ideology, a transcultural way of life, which is multi-ethnic and multiracial.’

The use of quase in (29) shows that the notion of imprecision falls short of capturing the meaning of the adverb; quase has a more subtle function. Unlike degree modifiers like muito, demasiado, which would not be acceptable with the adjective in (29), quase may modify non-gradable adjectives. By doing so, quase places the property denoted by the adjective on a contextually-established scale, assigning to it an endpoint value (here, “being relevant or pertaining to all countries”). The output of modification by quase is a scalar interpretation of the modified property. The notion of gradability is not contributed by the adjective, but rather by the adverb itself.

The contribution of quase in (29) is similar to the modification of gradable adjectives analyzed above, in that again the output of modification with quase is not a degree of the property denoted by the adjective (quase cheio ‘almost full’ entails não cheio ‘not full’). The difference with respect to the predicate in (29) is that the lexical semantics of absolute adjectives like cheio provides a scalar value, i.e., the minimum value of the antonymic property; something which is full is empty to the minimum degree (cf. Cruse 1986, Horn 1989, Rotstein and Winter 2004), whereas there is no property scale encoded in the semantics of the adjective internacional.

Crucially, the contribution of quase is to present the different predicative expressions as instantiating different degrees on a scale of the same property, as in (30):
In (30), the use of *quase* can be compared to that of focus operators like Eng. *even* (cf. König 1991:80), in which the particle induces an ordering among possible alternatives in the same set (where the values of the alternatives correspond to different linguistic descriptions of an entity). An appropriate paraphrase of this use would be “os hábitos rotineiros, ou mesmo obsessivos” ‘the routine-like, or even obsessive habits’. The pragmatic scale which is introduced by *quase* can be represented as in (31),

(31)  
<obsessivo, rotineiro >

in which the rightmost term “rotineiro” is presented as a weaker term on the contextually-established scale. Crucially, this is not a semantic scale in the sense of a Horn scale (in which lexical semantics determines the entailment relations between the terms); rather, the scalar relation is created by the semantics of *quase*. Outside of this example, a native speaker does not establish an entailment relation between the two adjectives (unlike what happens, for example, between words like *hot* and *warm*). In (30), the denotations of the adjectives are conceived of as being mapped onto values on a scale of repetitiveness and the stronger term

68 König’s example (from French *voire*): Ce remède est inutile, voire dangereux. ‘This medicine is useless, even dangerous.’ (König 1991:80)

69 Similar examples with *almost* and adjectives taken from corpora of English appear in Bäcklund (1985:79).

70 So, although it is contradictory to utter (i), this is not the case for (ii):

(i)  
#This pot is hot but not warm.

(ii)  
Os hábitos dele são obsessivos mas não rotineiros. ‘His habits are obsessive but not routine-like.’
(obsessive) is presented as entailing the weaker term: it denotes repetitiveness to a higher degree, i.e., as displaying an extremely mechanical or unvaried character (i.e., “obsessive because repetitive to a high degree”). In this respect, the term obsessive is more informative than the term on the right-hand side of the scale. The scalar relation between the two predicates is created by quase. If the operator were absent in (30), as in (30’),

(30’) …os hábitos rotineiros, obsessivos, de um quotidiano …
‘the routine, obsessive habits of an everyday life…’

the scalar link between the adjectives would not be expressed, i.e., (30’) predicates of the habits that they are simultaneously routine and obsessive (but crucially, not obsessive because too repetitive). This explains why (32) is infelicitous, but (32’) would not be:

(32) #...os hábitos obsessivos, quase rotineiros, de um quotidiano …
‘the obsessive, almost routine habits of an everyday life…’

(32’) …os hábitos obsessivos, rotineiros, de um quotidiano …
‘the obsessive, routine habits of an everyday life…’

Interestingly, in many naturally-occurring examples, the use of quase is explicitly justified in the discourse context, as exemplified in (33) and (34):

(33) Uma vez mais o público primou pela ausência nas bancadas do Autódromo do Estoril, tornando quase «secretas» as quatro corridas ontem disputadas. (CP Ext 293)
‘Once again the public stayed away from the Estoril [name of a place] race course, rendering the four races that were held yesterday almost “secret”.’

Using the unqualified predicate secretas ‘secret’ would impose strict truth conditions on the use of the predicate (namely, in this context, that no one attended the car races); however, the
lack of people is described by a comparison with the lowest end on a quantitative scale (i.e., by the predicate that denotes the total absence of people).

The comparison class need not be restricted to adjectival predicates; in (34), the parenthetical reformulation comments on the choice of the locative PP “on land” as a possible description of the location where the ceremony took place. The sub-entailments of the modified predicate *em terra* constitute the standard of comparison:

(34) Em terra, ou *quase*, já que se trata de uma plataforma que entra pelas águas, ensaiava-se a cerimónia protocolar de entrega de medalhas. (CP Ext 1010)

‘On land, or almost, since we’re talking about a platform that advances into the water, the rehearsal of the ceremony for the medal awards was taking place.’

In this section, I have argued that *quase* introduces a comparison between two values on a scale, the comparison class being constituted of alternative predicative expressions that correspond to different values on the same scale.

5.2 The polar component of *quase*

After having argued in chapter 4 for a more fine-grained account of the notion of “closeness” intuitively associated with the meaning of *quase*, the question of the “polar component” of *quase* needs to be considered. The fact that treating the polar component of *quase* as always corresponding to a negative proposition that underlies a counterfactual interpretation, along the lines of the Conjunctive Analysis, is too strong a claim, is shown by examples like (35):
In (35), the contribution of *quase* is clearly not about some situation which might have been true and does not entail a negation of a state of affairs. Rather, the phrase that includes the adverb denotes a property, more specifically a color, which is defined with respect to the color denoted by the predicate “white”. By the same token, it is intuitively inadequate to say that in (30) above the predicate *obsessivos* is negated.

The polar component of *quase* is present in these examples, but it cannot be captured in a satisfactory manner by the Conjunctive Analysis. As shown by (30) and (35), the polar component can only be determined after the scale and the standard value of comparison have been identified. In other words, modification by *quase* in (30) does not pertain to a contrast between two alternatives *p* and ~*p* (in this case, whether the habits are obsessive or not). Rather, it pertains to the exclusion of the highest degree of a certain property, as instantiated by the modified predicate. When *quase* is used as a focus adverb, it is used to make an assertion about the degree of a certain property; it asserts that a high degree of the property holds of the argument of the predicate.

Another way of seeing this distinction is as follows: in both uses, *quase* is a scalar adverb that involves the comparison of different alternatives; as a sentential adverb, only two alternatives (*p* or ~*p*) are possible because a change of state provides a rigid standard of comparison; as a focus adverb, more than two alternatives are possible. As pointed out by Löbner (1989) with respect to the sentential vs focus uses of phasal adverbs like *schon* ‘already’, in the former case the adverb focuses on a predication which together with the contrasting predication yields exhaustive alternatives, whereas in the latter the adverb focuses
on a predication which together with the contrasting predication provides two alternatives on
a scale with more ranks (Löbner 1989: 190).

This difference crucially hinges on the polar component of quase. When quase is used
as a sentence adverb, a sentence of the form quase p entails ~p, but this is not necessarily the
case when quase is used as a focus adverb. If the lexical semantics of the modified predicate
introduces a standard that determines the truthful applicability of the predicate, where the
standard corresponds to a degree that is enough to determine a change of state, as is the case
with an absolute adjective like cheio ‘full’, then the falsity of the predicate is entailed by the
sentence containing quase. However, in examples like (30) or (35) it is intuitively wrong to
assume that the sentence entails the negation of the predicate, because the choice is not
exclusively between two alternatives, e.g. white or not white (the alternatives mentioned
belong to a scale of more elements). Crucially, in contrast to the use of the adverb as a
sentence adverb, there is not a binary opposition between possible states of affairs (i.e. p or
~p, the possible truth values for a proposition). In (30), the meaning of quase negates that the
highest degree on the scale of the property at issue has been reached, but it asserts that a high
degree has been reached.

This difference can be shown by comparing the interpretation of (36) and (37). Only
the semantics of (37) allows for a change of state (from “not green” to “green”), and hence
introduces two alternative predications of which the argument must be either true or false:

(36) O semáforo é quase verde.
   the traffic:light be[ILP]:PRES:3SG almost green.
   ‘The traffic light [=the structure, the traffic light post] is almost green, i.e., its color is
   similar to green’
The denotation of the noun *semáforo* is different in the two sentences, depending on the presence of the individual-level predicate (ILP) *ser*, which denotes a permanent, defining property of the argument, or the stage-level predicate (SLP) *estar*, that denotes a temporary property of the argument. In (36), the noun denotes the light post, and the contribution of *quase* is to compare the color of the light post with the property denoted by the predicate *green* (presumably, with its prototypical representation). In (37), on the other hand, the noun *semáforo* denotes the (color-changing) light; the traffic light is not green *yet*.

This distinction makes it possible to account for the results reported in Ziegeler (2000:1769-70) about native speakers’ judgements pertaining to the contradictory character of sentences in which the polar component of *almost* is negated. Ziegeler interprets the disparate results obtained as indicating that the polar component should be understood as a conversational implicature. However, such an interpretation of the results does not seem correct, as given the same contextual assumptions, the identification of conversational implicatures is normally not prone to such variation. Rather, the disparity in the results relates to the semantic value of the modified expressions; the sentences containing telic predicates and the predicative nominal *a mouse* were rated as contradictory since their entailments provide a clear-cut standard for the determination of the truthful application of

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71 The results reported by Ziegeler should be taken with caution, as the survey presents a number of methodological problems, e.g. the lack of control items. A more significant problem is the use of the expression *in fact*, which allows for an interpretation of the clause it introduces as a corrective move by the speaker, and not necessarily as yielding the cancellation of the conversational implicature, as claimed by Ziegeler. Such an interpretation may be at the origin of the results obtained with respect to the polar component for the sentence containing *almost all* (55%).
the predicate. In contrast, the results obtained for the relative adjective *bald* and the
imperfective predicate *was running*, where the percentage of judgements of contradiction
was only 50% and 60%, respectively, can be explained by the fact that the lexical meaning
does not provide a clear-cut standard for their truthful application. The interpretation of the
experimental items took place in the absence of contextual information; in fact, given the
sensitivity of *almost* to the standard of comparison, one would expect to obtain varying
results with this type of predicates by contextually varying the conditions for their truthful
application.

5.3 The directionality of *quase*

In this section, I focus on the directionality associated with the meaning of *quase*, in
particular as a result of its proximal component.

Starting with the sentential uses of *quase*, I have argued that the adverb describes a
certain situation by comparing it with the predictable culmination of an event (i.e., a change
of state). This culmination identifies a scale of degrees of change leading to the maximum
degree, namely the creation of a new state of affairs. This fact explains the entailments of
*quase* in its sentential uses: *quase p* entails *not p*, since the course of events unfolds in time
and has a unique direction, but this is not the case when *quase* modifies constituents other
than the clause (as correctly argued by Nouwen 2006). In this section, I show that the
direction of the scale selected by *quase* cannot be predicted just by the lexical semantics of
the adverb. Rather, the direction of the scale follows from the sensitivity of the adverb to the
standard of comparison; the ordering underlying the meaning of *quase* is defined with respect
to that standard in a particular context (the contextual specification of this semantic parameter is part of the lexical meaning of *quase*).

With certain scales only one direction is possible, e.g. the scale structure of events or the order of time.\(^{72}\) In other cases, however, contextual information or conventions of use may contribute to provide a certain direction or override the most prototypical one.

Sadock points out that *almost exactly* removes the directionality of *quase*, i.e., while out-of-the-blue, (38) conveys “less than”, (39) does not (Sadock 1981:267, Nouwen 2006:10):

(38) It is now almost 3.00AM.
(39) It is now almost exactly 3.00 AM.

Note, however, that in (39) *almost* is modifying the adverb *exactly*, not the time predication, and thus affects the function of slack regulation of *exactly* (in this case, maximization of precision) (cf. Lasersohn 1999, Nouwen 2006), not the inferences pertaining to the order of time.

The scalar interpretation contributed by *quase*, i.e., the fact that it assigns to the denotation of the modified expression a gradable interpretation, can best be seen by comparing it with the meaning of *aproximadamente* ‘approximately’, as in (40) and (41), assuming an out-of-the-blue interpretation:

\(^{72}\) Gradable adjectives that denote either positive or negative extents (Kennedy 1999) can also bias the directionality contributed by *quase*, as noted by Sadock (1981) and Nouwen (2006): “Certain predicates, like *tall* and *short*, are already directed, so *almost* can only be understood as referring to the directed scale determined by the predicate itself.” (Sadock 1981:260)
Without further information, (40) is interpreted as “less than 10”, whereas (41) is ambiguous between “less than 10” and “more than 10”. The reason is that the contribution of *quase* is to map the modified constituent onto the endpoint of a scale. In other words, the adverb introduces an ordering on states of affairs, here specified as the process of growing. Since people grow up and get older as time goes by, the order will be \{8<9<10\}; there is no growing process in the inverse direction, an order which would be possible for the set of natural numbers (both orders are available for (41)).

The same point is made by Sadock (1981) on the basis of examples (42) through (44), where the same degree of temperature (0º Celsius) is conceived as the endpoint of the scale, but can be described as either a high or a low point depending on whether “there has just been a heat wave or a cold snap” (Sadock 1981:260):

(42) It’s almost freezing.
(43) It’s almost melting.
(44) It’s almost 0º Celsius.

Because two directions for ordering degrees of temperature are possible (and equally plausible in terms of world knowledge), (44) is not committal as to the direction of the scale (there is no bias for the “less than” reading, here the negative range of the scale), as represented in Figure 5.1. On the other hand, the terms *freezing* and *melting* introduce a
standard of comparison to which *almost* is sensitive, hence determining a particular order of the degrees on the scale.

![Diagram of temperature scale with almost melting and almost freezing points marked]

**Figure 5.1:** Schematic representation of the directionality of *almost*

It is possible to refer to a degree of temperature without any scalar information, by providing a precise temperature (say, 1°C Celsius). Crucially, the difference pertains to the information conveyed; the scalar meaning of *almost* introduces a certain degree as a member of an ordered set, and hence introduces a perspective on the situation described.73

What is puzzling about the meaning of *quase* (and *almost*) is that often a phrase constituted by the adverb and the modified expression seems to denote a high value on a scale, in absolute terms, independently of the meaning of the modified expression. Note that the semantics of *quase* allows for the selection of either a minimum or a maximum value in absolute terms (i.e., independently of modification by *quase*): e.g. *almost all* and *almost none* are perfectly acceptable. In (45), the modified expression denotes a measure of time which does not constitute an absolute endpoint on a scale and does not represent (out-of-the-blue) a big amount of time, and yet *quase* contributes harmonically to a context in which that amount

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73 “*Almost* is one such way of indicating that a scalar reading was intended. This is because *almost*’s proximal component presupposes that times, temperatures, heights etc. are not simply names for degrees, but interrelated ordered sets.” (Nouwen 2006:10)
of time is presented as big (see also section 5.4), just like in (46). In (46), the modified expression denotes a maximum (absolute) endpoint on a scale of thinness, by virtue of its lexical meaning (and hence independently of any particular context of use).

(45) E o pior é que a paragem durou uma eternidade, pois só quase meia hora depois regressou à pista, quando apenas sobravam dez minutos de treino. (CP Ext 1155886) ‘And the worst part is that the stop took for ever (lit. lasted an eternity), since it was only almost half an hour later that (he) returned to the race course, when he had only ten minutes left to practice’

(46) … um humilde camponês, cuja mulher e quatro filhos emagreceram tanto que já são só quase pele e osso. (CP Ext 993935) ‘…a humble peasant, whose wife and four children have thinned out so much that they are only almost skin and bone (lit. that (they) already are only almost skin and bone)’

In both cases, the scalar perspective contributed by quase can be shown by the co-occurrence with the scalar adverbs já and só, with degree modification and degree nouns, the underlined expressions in (45) and (46). In the context of (45), one is licensed to draw the inference that for the speaker quase meia hora is evaluated as a long period of time, i.e., the return took place no sooner than half an hour later.

Along the lines of the analysis proposed by Löbner (1989) for German schon ‘already’, one may argue that the perspective inherent in the semantics of quase imposes constraints on the situations in which the adverb can be used and in which its use is more likely to be relevant. Since the standard of comparison is an endpoint on the scale selected by the adverb, and in many contexts the modified expression is an absolute scalar endpoint by virtue of its lexical semantics (see co-occurrence of quase with adjectives, Table 4.1) the inference that the output of quase denotes a high value in absolute terms becomes associated with the use of quase. Only a frequency study could confirm this claim, but it seems a
plausible (exemplar-based) justification for the inference invited by the meaning of *quase*. The prototypical situations of use of *quase* as a modifier of expressions that denote absolute scalar endpoints induce the “rhetorical orientation” (Schwenter 2002a) of the adverb. This is exemplified in the advertising spot in Figure 5.2 from an Italian website for low-cost airlines, with the translation-equivalent word for *quase* in Italian, *quasi*:

![Figure 5.2: Vola quasi gratis’ logo](image)

‘Fly almost gratis. All the low cost flights in one click!’

The name of the website, “Vola quasi gratis”, builds on the fact that the standard of comparison selected by the adverb denotes an absolute endpoint value on a scale (maximally cheap) and builds on the degree relation contributed by the comparison introduced by the adverb (“so cheap, that…”). The advertising effect crucially relies upon the proximal component of the adverb, and not upon the negation of the predicate (“not gratis”).

In the next section, I pursue the analysis of the perspective introduced by *quase*. I compare the account proposed here with the notion of “slack regulation” proposed by Lasersohn (1999) and I provide evidence for the advantages of the present account by comparing the meaning of *quase* with the meaning of the hedge *aproximadamente* ‘approximately’.
5.4 Scalar semantics and slack regulation

I have argued that approximative adverbs as a semantic class contribute an evaluation of the applicability of a predicate to its argument. In this respect, their meaning relates to the meaning of “hedges” (Lakoff 1973, Kay 1997a, 1997b), expressions like sort of, kind of, approximately, which loosen the truth conditions of the expression they combine with and encode the degree of imprecision allowed in a certain context of use.

The current approach also bears significant similarities with Lasersohn’s notion of a “pragmatic halo” and the related function of slack regulation (Lasersohn 1999). In the following, I compare the two approaches and show why the approach put forward in Lasersohn (1999) cannot satisfactorily account for the meaning of approximative adverbs like almost and quase.

Lasersohn points out that people normally allow for a certain degree of looseness or slack in their speech, i.e., they allow for statements that are “close enough” to the truth for practical purposes even if they are not true in the strictest sense. For example, people utter (47) intending a quasi-universally quantified reading:

(47) The townspeople are asleep.

It is possible to utter (47) felicitously even if a couple of townspeople are awake, due to pragmatic slack, i.e., a certain degree of imprecision which is allowed given the pragmatic situation and the purposes of the utterance.

This is modelled by Lasersohn through the notion of “pragmatic halo”, defined as a set of entities that are associated with the denotation of an expression, where each entity in
the set differs from the denotation in some respect that is pragmatically negligible, and are ordered with respect to the strictness of possible contexts. The endpoint of this ordered set is thus the truth-conditional denotation of an expression (seen as the “core denotation”). For example, in (47) the pragmatic halo of the townspeople is constituted by a set of people which is ordered and more or less closely approximates the set of actual townspeople. The halo of complex expressions is then formed in a compositional manner from the halos of the single expressions (and preserving the orderings of the constituent expressions). Importantly, for Lasersohn both individual lexical items and propositions have pragmatic halos (the latter, of course, requiring a compositional procedure that allows for the derivation of the halo of the complex expression from its parts).

Lasersohn points out that the degree of precision of a certain utterance is not only determined by pragmatic factors but may also be linguistically encoded; words like exactly or perfectly impose specific restrictions on the degree of slack which is permitted (hence, Lasersohn calls them “slack regulators”). For example, the contribution of exactly is to tighten the pragmatic halo of the expression it modifies, namely by denoting the identity function; modification by exactly affects the pragmatic halo by eliminating all those elements that are not closest to the core denotation of the expression.

Note that the notion of “pragmatic slack” argued for by Lasersohn should not be confused with truth-conditional vagueness. The former relates to standards of precision according to which “closeness to the truth” of a statement is determined, on the basis of what is appropriate in a context of use. The idea of quantification over contexts with different standards of precision is similar to Sevi’s (1998) proposal for the analysis of almost and
barely which is based on the quantification over “standards of precisification”, reviewed in Chapter 1. Lasersohn also points out that:

Note that quantifying over contexts is not equivalent to modal quantification over possible states of affairs. To evaluate a sentence such as *John is perfectly happy*, for example, we do not imagine whether John would be happy no matter what context we place him in; rather we consider whether John’s actual state would qualify as happiness no matter what context provides our standard of evaluation. (Lasersohn 1999:533, note 11)

The point that Lasersohn is making pertains to the comparison between the interpretation of a phrase like “necessarily happy” with “perfectly happy”; as he points out, in the latter case we are concerned with the possible contexts and standards of evaluation under which the truth of the expression holds.

Lasersohn’s proposal could be extended to account for the meaning of *almost*; one could assume that unlike *exactly*, *almost* affects the halo of an expression by removing its core denotation (i.e. the standard that defines the strictest context) and by imposing a certain constraint on the order, e.g. by excluding the associated set of denotations that is furthest from the core, according to contextually-determined criteria. Such an account would correctly capture, for example, modification by *quase* with quantificational determiners and adverbs of quantification (which would be parallel to Lasersohn’s account of the example with *the townspeople*).

There is some similarity between the notion of “slack regulator” and the notion of “evaluation of the applicability of the predicate” that I propose in this dissertation. The consideration of a “pragmatic halo” also pertains to the conditions for the adequate use of a
linguistic expression (on the basis of the more or less strict standard of precision determined by the circumstances of the utterance).

However, there is an important difference between the two accounts. Lasersohn assumes that slack regulation pertains to “closeness to the truth”; slack regulators convey information about how distant a certain utterance is from the truth-conditional core denotation of an expression. The degree of slack permitted in an utterance relates to what is “close enough not to obscure pragmatically relevant details or distinctions” (Lasersohn 1999:525). In other words, in Lasersohn’s view, imprecision in normal speech is allowed as long as it does not hinder communication, i.e., if the speaker can convey what he wants given the current purposes and the context of utterance. Lasersohn assumes that the truth-conditional core is always present as the maximum degree of precision (the question being how much one is allowed to deviate from it).

By contrast, the account proposed here differs from the notion of slack regulation by claiming that a speaker chooses a word like *quase* because the information conveyed is different. On Lasersohn’s view, saying “almost white” instead of “white” simply amounts to using the predicate “white” in a loose manner, and thus allowing in the denotation of the modified expression some objects that shouldn’t properly be considered white. However, as we have seen in this chapter, there is something systematic in the use of *quase* and *almost* that cannot be fully captured by the notion of “loosening the standard of precision”. The whole point of using *quase* and *almost* is not to be imprecise; *quase* introduces a comparability function between properties on the basis of a contextually-relevant scalar dimension. Modification by *quase* denotes a property of a property; this revised predication provides different information from the unqualified predication, which cannot be captured by
the notion of “pragmatic looseness”. The contextual inferences licensed by the scalar semantics of approximative adverbs explain the constraints that they impose on the discourse context and their systematic co-occurrence with scalar adverbs.

Approximative adverbs have an evaluative component that relates with the semantics of degree adverbs. Degree adverbs typically affect the standard of comparison which is assumed as the norm in a comparison (Klein 1980, Kennedy and McNally 2005). Approximative adverbs introduce a standard of comparison and assess categorization with respect to that standard. Hence, they evaluate the extent to which an argument meets the standard associated with the predicate that they co-occur with. This evaluative component, which follows from the scalar semantics of almost and quase, cannot be captured by Lasersohn’s account. Consider the difference in acceptability between (48) and (49):

(48) John has lost so much hair lately that he is already almost bald.

(49) #John has lost so much hair lately that he is already not exactly bald.

The perspective under which “bald” is presented, i.e., as denoting a resultant state from a process (in this case, a process of losing hair) is not conveyed by not exactly, although the latter can be interpreted as inducing a loosening of the standard of precision for the evaluation of a certain predicate.74 The felicitous co-occurrence of almost with already (vs

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74 In EP, given the semantic difference between ser (ILP) and estar (SLP), (ii) yields an infelicitous utterance (assuming that Danny is not a baby), whereas (i) does not:

(i) O Danny é quase careca, mas não tem perdido cabelo.  
   ‘Danny is[ILP] almost bald, but he hasn’t been losing any hair (lately)’

(ii) #O Danny está quase careca, mas não tem perdido cabelo.  
   ‘Danny is[SLP] almost bald, but he hasn’t been losing any hair (lately)’

I believe that Sevi’s account cannot explain this difference in acceptability, since in the two cases we must assume that the adverb operates on standards of precision. If, on the other hand, we maintain Sevi’s assumption that the adverb operates on a contextually determined scale, but assume that that scale may be either the scale of a certain property or the scalar structure of an event, of which the modified constituent constitutes the endpoint,
still) follows from the fact that almost introduces a scalar representation which involves a transition between two states of affairs, the ordered phases inherent to the semantics of already (cf. chapter 4). Interestingly, corpora examples of almost and quase frequently show the co-occurrence with already and já, as in (48).

Another problem with reducing the meaning of quase or almost to slack regulation comes from the relation with gradability explored in particular in this chapter. Sevi (1998) notes that in an example like (50), despite the fact that run is not a gradable predicate, “we put it together with walk on a velocity scale, hence creating fuzziness in the boundary between them” (p. 58).

(50) I was walking so quickly that I almost ran.

However, Sevi does not mention the fact that on the velocity scale (which is introduced by the semantics of quase), “run” is treated as the term that denotes the highest velocity (comparatively, in this case in relation to “walk”). I believe that this intensifying function (cf. Bolinger 1972) cannot be captured through the notion of slack regulation and is also not captured in Sevi’s (1998) account. The contribution of quase in (50) is to denote a property that corresponds to a high degree on a velocity scale.

By the same token, the slack regulation account does not make it possible to explain the co-occurrence of quase with scalar adverbs like até and mesmo ‘even’ (cf. section 5.7),

we can account for the difference between (i) and (ii). Crucially, Sevi ultimately evokes event structure in some of his examples, so it is not clear that his index coordinates are actually necessary: “…in the case of accomplishment verbs there is always a natural scale: the scale of progress. Relaxing the standards will allow events which did not culminate into the predicate’s extension.” (Sevi 1998:77).

75 When Sevi presents his definition of a relaxation relation between standards of precision (Sevi 1998:39) he notes that a less strict standard allows for the inclusion in the extension of a predicate of entities that would otherwise not be allowed in the extension of the predicate because they “have the property of the predicate to a lesser degree” (Sevi 1998:39).
which require an ordering on elements of a set and are sensitive to different types of scalar endpoints. Assuming that *quase* simply contributes a loosening of the truth conditions of the sentence cannot account for the systematic conditions regulating the co-occurrence of these adverbs, as shown by the felicity contrast between (51) and (52):

(51) Ele ficou encantado, e (até) quase fascinado.
‘He was charmed, and (even) almost fascinated.’

(52) #Ele ficou fascinado, e (até) quase encantado.
‘He was fascinated, and (even) almost charmed.’

Both the denotations of *fascinado* ‘fascinated’ and *encantado* ‘charmed’ could be associated with a pragmatic halo, by loosening the standards of precision of the context, and yet they are not equally acceptable in (51) and (52) due to their different scalar semantics, as shown by the co-occurrence with *até*, which selects for a scalar endpoint.

Note also that Lasersohn would incorrectly predict that (17) above, repeated here as (53),

(53) #Quase um professor apoiou o candidato.
‘Almost one professor supported the candidate.’

would be acceptable, since it is certainly possible to conceive of a pragmatic halo associated with the denotation of the lexical item *professor* (for example, someone who teaches but does not have a degree, or someone who has barely started teaching, etc.), and yet the sentence is not acceptable, since there is more than a loosening of precision involved. Moreover, the scalar account proposed here makes it possible to provide an integrated analysis that accounts for the sensitivity to aspectual properties of the predicates modified by *quase* and for the range of interpretations obtained.
Without mentioning the intensifying function, such an account of *quase* yields no distinction between this adverb and an adverb like *aproximadamente*, which merely loosens the degree of precision of the utterance. In the following, I compare the meaning of *quase* with the meaning of *aproximadamente*.

In (40) and (41) above, in an out-of-the-blue context, the occurrence of any of the adverbs is possible and, roughly, both sentences mean that João’s age differs from 10 years in pragmatically unimportant respects, although their interpretation is not entirely equivalent, as discussed in chapter 1 and repeated in (54) and (55):

(54) O João tem quase 10 anos, e está muito entusiasmado com isso.
    ‘João is almost ten years old, and he is very excited about it.’

(55) #O João tem aproximadamente 10 anos, e está muito entusiasmado com isso.
    ‘João is approximately ten years old, and he is very excited about it.’

In (54), the contribution of *quase* is to introduce an order (in this case, the process of growing up) whose greatest element (in the technical sense of the term) is the transition to the age of ten, the antecedent for the anaphoric pronoun *isso*. On the other hand, the meaning of *aproximadamente* relaxes the standard of precision for the use of the expression “10 years old” but does so without any reference to a change of state (i.e., in a static manner), hence the infelicity of (55).

In the context of (56), on the other hand, only *aproximadamente* may feliciously occur:

(56) ...A partir daqui, anda-se bem. As ruas ... têm corredor «bus», e, mesmo com todos os automóveis parados em filas ou nos sinais vermelhos, o 78 segue, demorando *aproximadamente* dez minutos entre a Galiza e a Praça da Liberdade. (CP Ext 20344)
‘From this point on, one proceeds fast. The streets…have a bus lane, and even if all the cars are in a traffic jam or stopped on the red lights, the [bus] 78 goes on, and it takes approximately ten minutes between Galiza and the Praça da Liberdade [names of squares in Oporto]’

The contribution of *aproximadamente* in (56) is that the amount of time that the bus takes between the two locations is more or less 10 minutes. Crucially, not only may the phrase containing *aproximadamente* denote an amount of time either below or above 10 minutes, but also it induces no evaluation of that amount of time. Hence, the use of *aproximadamente* is felicitous in a context like the one provided in (56), which presents the meaning of *dez minutos* as a reduced quantity of time, but could also be felicitously used in a context in which the modified expression is described as denoting a great quantity. On the other hand, *quase* is not felicitous in the same context, as shown in (57):

(57) #A partir daqui, anda-se bem….o 78 segue, demorando quase dez minutos entre a Galiza e a Praça da Liberdade.

‘From this point on, one proceeds fast…the [bus] 78 goes on, and it takes almost ten minutes between Galiza and the Praça da Liberdade [names of squares in Oporto]’

In (57), the presence of *quase* yields an infelicitous utterance because it invites the inference that the modified expression denotes a long amount of time, which is not compatible with the context, since the question under discussion is precisely the fastness of the bus. The invited inference is a consequence of the scalar semantics of the adverb and its sensitivity to the properties of the standard of comparison. Since modification by *quase* is frequently associated with expressions denoting absolute endpoints on lexically encoded scales, a high value of a property in absolute terms becomes associated with the meaning of the adverb (cf. also Portolés (2004) on Spanish *hasta*).
This invited inference underlies Anscombe and Ducrot’s notion of “positive argumentative orientation” of *presque*, which is adopted in the experimental work on the semantics of *presque* reported in chapter 3. However, this notion is ill-defined in that the definition of “positive” is not provided. Rather, the directionality introduced by *quase* follows from semantic and pragmatic factors, as shown above. The type of standard of comparison assumed by the speaker in a certain context is crucial to the linguistic construal of the situation contributed by *quase*.

The same point can be made with respect to (58) and (59). In this context, the adverb *apenas* ‘only’ contributes a scalar exclusive implication (“no more than 2700”), hence implying an evaluation of 2700 as a reduced quantity when compared with the total number of IPSS:

(58) As IPSS [Instituições Particulares de Solidariedade Social] são mais de 3400, apesar de apenas *aproximadamente* 2700 terem uma actividade permanente. (CP Ext 1127811)

‘The IPSS [Private Charities] are now more than 3400, although only approximately 2700 do have a permanent activity’

In a context in which the number and efficacy of the institutions in question is under discussion, the use of *quase* is not felicitous as a modifier of the expression which is marked as representing the smaller quantity:76

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76 The same contrast in acceptability is found with *só*, in contexts in which a certain quantity is presented as reduced (with respect to another contextually accessible quantity, e.g. when the former is a part of the latter, as in (i) and (ii):

(i) Um dos problemas que mais preocupa as autoridades é a proliferação de escolas de idiomas no país, uma vez que existem actualmente cerca de mil, que regularmente anunciam cursos de inglês para estrangeiros. Destas, *aproximadamente* uma quarta parte é reconhecida pelo “British Council”.

(CP Ext 298992)

‘One of the problems that worries the authorities is the proliferation of language schools in the country, as there are at the moment around one thousand which regularly offer courses of English as a foreign
Although both the phrases including *quase* and *aproximadamente* denote a range of values that exclude the exact quantity denoted by the modified expression (and in this respect both relax the standard of precision), there are important differences between the two adverbs. The contribution of *quase* is to identify a range of values on an order by comparing them *with respect to* a particular element on the order. Not only does the comparison necessarily introduce the ordering, which is absent in the meaning of *aproximadamente*, but it also introduces the expression modified by *quase* as a standard of comparison or a norm. The properties of this standard of comparison, which follow both from the scalar semantics of the adverb and from the prototypical contexts in which its use is relevant, are associated with the meaning of *quase* and constrain in a systematic manner the contexts in which the adverb may felicitously occur.

To sum up, so far I have argued that *quase* displays the two identifying properties of approximative adverbs: it is scalar and it evaluates the applicability of a predicate. These
properties make it possible to differentiate *quase* from other adverbs, as is schematically represented in Table 5.1 below:

<table>
<thead>
<tr>
<th>Adverbs / Properties</th>
<th>Scalar</th>
<th>Evaluation of the applicability of the predicade</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>aproximadamente</em></td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td><em>já</em></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td><em>quase</em></td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

Table 5.1: Properties of *quase* in contrast with *aproximadamente* and *já*

Unlike *aproximadamente*, the semantics of *quase* requires a partial ordering on the elements of a set, onto which the denotation of the modified constituent is mapped. Unlike *já*, *quase* evaluates the applicability of the predicate it occurs with, i.e., it establishes a comparison between alternative predicates that could be used as possible descriptions of a situation.

### 5.5 Quase and the meaning of scalar adverbs *até* and *mesmo*

I have argued that *quase* can be used as a focus adverb that contributes a comparison between a value on an ordered set of alternatives (a scale) and an endpoint value on that set. In this respect, the meaning of *quase* clearly relates to the meanings of the scalar adverbs\(^7\) *até* and *mesmo* (both translation equivalents of English *even*). Although a thorough description of the values of these adverbs is beyond the scope of this dissertation, it is useful to compare their

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\(^7\) In this section, I will classify *até* and *mesmo* as adverbs, following the common terminology in the Portuguese grammatical tradition (cf. Mateus et al 2002), although their counterparts in different languages have been classified as *particles* (cf. König 1991, Schwenter 2002b, among others). The discussion of their classification goes beyond the scope of the comparison intended in this section.
meaning with the meaning of *quase*. In this section, I analyze corpus examples in which the adverbs co-occur in order to tease apart the contribution of each adverb.

For the analysis of *até* and *mesmo*, I assume to a great extent an analysis similar to that proposed by Portolés (2004) and Schwenter (2002b) for the Spanish adverbs *hasta* and *incluso*, respectively.

In EP, the form *até* may correspond either to the lexical item that belongs to the syntactic category of preposition (as in (60)) or to the category of (a focus) adverb (61). The two may co-occur, as in (62). As a preposition, it may denote either a spatial or a temporal path, as well as abstract types of paths.

(60)  O Pedro trabalhou [*até às 6 da tarde*]PP.
   ‘Pedro has worked until 6 p.m.’

(61)  *Até o Pedro*FOCUS trabalhou.
   ‘Even Pedro has worked.’

(62)  *Até o Pedro trabalhou até às seis da tarde.
   ‘Even Pedro worked until 6 p.m.’

In the following, I will only consider examples in which *até* is a focus adverb and has scope over *quase* (i.e. cases in which the linear order of the sequence – *até quase* – reflects the scope relations between the two adverbs). In these examples, *até* is in paradigmatic opposition with the focus adverbs *mesmo* or *só* and could be omitted without loss of grammaticality (although, of course, there would be a difference in interpretation).

In order to understand the contribution of the adverbs *quase* and *até*, a theoretical distinction is required. The use of *quase* in the following examples demonstrates the sensitivity of the adverb to the structure of a pragmatic scale (cf. Fauconnier 1975, Horn 1972, Hirschberg 1985, Kay 1990, Schwenter 1999, Portolés 2004). Following Schwenter
(1999), I will assume a distinction between “semantic scales” and “pragmatic scales”. The former are scales whose ordering is determined by the lexical semantics of the linguistic expressions, exemplified by the Horn scales in (63) and (64). These scales are structured by entailment (i.e., the term on the left unilaterally entails all the terms to its right), and by (scalar) conversational implicature (the use of a term conversationally implicates that any stronger term on the scale, i.e., any term to its left, does not hold). The latter is a generalized conversational implicature induced by the Q-principle (Horn 1985, Levinson 2000).

(63)  <all, most, many, some>

(64)  <boiling, hot, warm, lukewarm>

“Pragmatic scales”, on the other hand, are scales whose ordering is based not upon semantic entailment but rather upon world knowledge, and hence are structured on the basis of defeasible inferences. The ordering of the values on this type of scale is based on conversational implicature or “pragmatic entailment” (Fauconnier 1975). This type of entailment differs from logical entailment in that the notion of truth is relativized to a scalar model (Kay 1990), i.e., an ordered set of propositions which provides a set of background assumptions assumed by the participants in a conversation. An example of a pragmatic scale is given by Fauconnier in his classic paper on the topic:

… suppose it is true that (37) “Alexei can lift weight [X2]”; then in absence of additional information, we assume that if weight [X1] is lighter than [X2], Alexei can also lift [X1]. This is not a logical implication of (37), because it is obviously quite possible that [X1], even though lighter, is harder to lift (e.g. because of its shape, size, etc. . .). That Alexei can lift [X1] will be implicated, rather than implied [=entailed], by (37). (Fauconnier 1975:192)
Hence, sentence (65) is not contradictory, although it may seem striking and unexpected due to our general assumptions about the weight of objects in the world:

(65) Peter can lift the car but not the radio.

I adopt the notion of pragmatic entailment and informativeness as relativized to a scalar model, following Kay (1990). In his analysis of the scalar additive particle even, Kay argues that the particle is sensitive to certain features of the discourse context, in particular to the ordering of a set of propositions assumed to be the shared background assumptions of the participants in a conversation. Hence, in (66), the proposition expressed by the sentence in which even occurs, the “text proposition” or tp, is marked by the particle as more informative than another proposition assumed in the context, the “context proposition” or cp, since it pragmatically entails it in a scalar model:

(66) A: Can John jump six feet?
B: Yes and he can even jump seven feet.

Given our general assumptions about distances and the difficulty of obstacles, the set of propositions schematically represented in Figure 5.3 below (from Schwenter 2002b:120) can be assumed as the scalar model shared by participants A and B. The direction of the arrow in the figure stands for increase in informativeness:

![Figure 5.3: Scalar model for (66)]
In the following, I assume that *até* ‘even’ is (i) a focus adverb, since the constituent it modifies is contrasted to other alternatives on a contextually restricted set, (ii) it is a scalar adverb in that the denotation of the modified constituent is presented as more informative than the alternative value(s), on the basis of an ordering on propositions with respect to unilateral entailment,\(^7^8\) (iii) it is an additive adverb in that at least an alternative of lower informative value on the same ordered set is implied to hold,\(^7^9\) and (iv) differs from other adverbs like *mesmo* (in languages that encode this distinction) in that it is an absolute scalar adverb (Schwenter 2002b), i.e., it selects for an inherent endpoint on a scale and does not require that another value on the scale be contextually accessible. On the other hand, *mesmo* is a relative scalar adverb since it does not select for an inherent endpoint on a scale and it requires that another value on the scale be contextually provided.

*Quase* may co-occur both with *até* and with *mesmo*. This is not surprising, since we have seen that *quase* may modify an expression that can be in a one-to-one mapping to a scale, but which is not necessarily an endpoint value on a scale.\(^8^0\) This is exemplified in (67); the denotation of the constituent *uma hora* is not an endpoint on a scale:

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\(^7^8\) “*Even* requires non-fortuitous entailment in a scalar context from tp to cp, that is, entailment which exploits the scalar property of the model.” (Kay 1990:70-71)

\(^7^9\) I use the term “implied” because the discussion on whether this inference is a presupposition or an entailment of *até* is beyond the scope of this work (for discussion, see König (1991) and Kay (1990) on *even*). A more relevant point for this dissertation is that I am subsuming into the notion of *additive* the notion of “accumulative scale” proposed by Portolés (2004:24 ff.), since I believe that this notion collapses both the cases in which the lower values on the scale are entailed by the stronger term and those cases where the lower values are neither substituted nor entailed by the stronger term.

\(^8^0\) As pointed out by Kay with respect to English *even*, the item focused by the particle does not have to be the most extreme on the relevant scale but “it is (normally) implicated to be the most extreme item of which the asserted predication is true.” (Kay 1990:80, footnote 32) This is also the case for *almost*, since the modified expression is interpreted as the endpoint value on the scale.
Um sofrimento que se pôde ver… na cara dos mais categorizados corredores, mas, sobretudo, naqueles que mais se atrasaram - 16 chegaram mesmo quase uma hora depois… (CP Ext 469680)

‘A suffering that can be seen…right on the face of the best runners, but particularly on those who had a bigger delay – 16 of them arrived even (=mesmo) almost one hour later…’

Following Schwenter’s (2002b) analysis of the particle incluso, I will assume that the use of mesmo is licensed if the cp, i.e., the less informative proposition, is accessible in the context. If this requirement is met, mesmo may occur both with propositions that denote scalar endpoints and with propositions that do not denote endpoints.

In (67), the context proposition (cp) is made available by the relative clause que mais se atrasaram ‘(runners) who had a bigger delay in the race’, underlined in the example. The proposition expressed by the relative clause entails the proposition “Some runners were late”. The relation between the two propositions in the assumed scalar model is schematically represented in Figure 5.4:

| tp: 16 runners were one hour late. |
| cp: Some runners were very late. |
| cp: Some runners were late. |

Figure 5.4: Scalar model for (67)

Since the focused constituent does not denote an endpoint value on a scale, an infelicitous utterance is obtained with até, as shown in (67’):

(67’) # …naqueles que mais se atrasaram-16 chegaram até quase uma hora depois…

‘…those who had a bigger delay – 16 of them arrived even (=até) almost one hour later…’
On the other hand, in (68) and its modified version (68’) both adverbs até and mesmo may felicitously occur since the information structure requirement of mesmo is met (the cp is contextually accessible) and at the same time the constituent that is modified by quase denotes an absolute endpoint on a scale, namely zero (nada ‘nothing’):

(68) Talvez a Esquerda tenha hoje muito pouco, ou mesmo quase nada, de específico em terrenos económicos ou até sociais. (CP Ext 775711)
‘Maybe the Left [party] has nowadays very little, or even (= mesmo) almost nothing, which is specific to it [as a political orientation], in the economic or even in the social realms.’

(68’) Talvez a Esquerda tenha hoje muito pouco, ou até quase nada, de específico em terrenos económicos ou até sociais.
‘Maybe the Left [party] has nowadays very little, or even (= até) almost nothing, which is specific of it [as a political orientation], in the economic or even in the social realms.’

The co-occurrence of quase and mesmo makes apparent the scalar interpretation induced by quase. I have argued that quase introduces a scale, the denotation of the modified expression being mapped onto its endpoint value. However, in many cases there is no explicit mention of the scale in the context. What is interesting about the co-occurrence of mesmo and quase is that the cp requirement of mesmo makes apparent the scale that underlies the comparison introduced by quase. The proposition that has a lower informative value on the scalar model provides evidence for the property scale required by the semantics of quase. This is particularly clear in examples like (69)-(72):

(69) Às vezes temos comportamentos tontos, mesmo muito tontos. (adapted from Portolés 2004:23)
‘Sometimes we have a silly behavior, even (=mesmo) very silly.’

(70) #Às vezes temos comportamentos tontos, mesmo quase muito tontos.
‘Sometimes we have a silly behavior, even (=mesmo) almost very silly.’
Às vezes temos comportamentos tontos, mesmo demasiado tontos. ‘Sometimes we have a silly behavior, even (=mesmo) too silly.’

Às vezes temos comportamentos tontos, mesmo quase demasiado tontos. ‘Sometimes we have a silly behavior, even (=mesmo) almost too silly.’

In (69) and (71), *mesmo* is licensed by the fact that the full clause introduces the cp, which is entailed by the proposition expressed by the elided clause prefaced by *mesmo*. Crucially, the cp introduces the scale of a property of which *quase* denotes a high degree.

The sensitivity of *quase* and of the scalar additive particle *até* to the ordering of propositions on a scalar model can be verified by the fact that they mark the most informative proposition when interpreted against a background of ordered assumptions. In (73), not only the focused constituent, the locative PP *em cima da praia* ‘on the beach’, is conceived as the endpoint value on a set of locations ordered with respect to distance to the shore, but also the proposition expressed by the sentence is the most informative proposition on the scalar model:

Os desportistas desta modalidade [motos aquáticas], na ânsia de mostrarem as suas «habilidades», frequentemente põem em perigo os banhistas. Assim, só podem circular a mais de 300 metros da costa, mas chegam a andar até *quase* em cima da praia. (CP Ext 16890)

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81 Interestingly, the interpretation of certain examples relies upon the identification of both a semantic and a pragmatic scale, and in some cases the pragmatic scale overrides the scale made available by the lexical meaning of the modified expression. In (i), *quase* operates not so much on the scale provided by the telic predicate “reach”, but rather on the pragmatic ordering of the profits obtained, which renders the modified expression the most informative given the contextual assumptions:

(i) E foi, efectivamente, este o resultado da terceira fase da privatização…depois de sucessivos atrasos de calendário – que, por acaso, também vieram a cair como «sopa no mel» aos industriais do Norte…O «núcleo duro» não só conseguiu os 26 por cento, como os ultrapassou e *quase* chegou aos 27 por cento. (CP Ext 48669)

‘And this was indeed the result of the third stage of the privatization…after a sequence of delays – which, by chance, also happened to be very convenient for the corporate owners from the north…Not only did the “hard core” [sellers] manage to get 26%, but also they went beyond that value, and almost reached 27%.’
‘Those who practice this sport [the jet ski], because they want to show off, frequently endanger the life of the swimmers. They are only allowed to circulate at least at 300m of the shore, but they get as close as even (= até) almost on the beach.’

In (73), the context entails a correlation between two dimensions: the areas where aquatic vehicles may circulate (in terms of distance to the shore) and degree of danger for the swimmers. As made explicit in the context, vehicles are not allowed to circulate at any distance less than 300 meters from the coast, which provides the basis for the following correlation: for any value n-1, that represents the distance from the shore where the “jet ski” circulates, where n = 300m, the lower the value, the more dangerous for the swimmers. Given that the question under discussion in the text is the extent to which “jet ski” vehicles break the law and the ensuing potential danger for the swimmers, the distance which represents the maximum degree of such an illegal act is zero distance to the shore, namely em cima da praia ‘on the beach’.

The contribution of quase in (73) becomes clear against the background of the contextual assumptions. The sentence in which quase occurs means that vehicles approximate the most extreme limit according to what is forbidden; (73) conveys the information that people not only break the law (which they already would if they drove, say, 290m away from the shore), but that they do it to the highest degree, so to say, since they keep the smallest distance possible to the shore and hence potentially endanger the situation of swimmers.

The fact that quase is compatible with até shows that quase may occur in a context in which there is no explicitly provided scale (given that até, unlike mesmo, does not require a contextually accessible cp) and hence provides further evidence for the approach advocated in this chapter, according to which the semantics of quase introduces a scalar interpretation.
In this section, I have compared the interpretation of *quase* with the interpretation of the EP scalar additive adverbs *mesmo* and *até* by analyzing the features of the discourse contexts in which they may co-occur. The purpose of this comparison was twofold. First, the possible co-occurrence of *quase* with both *mesmo* and *até*, i.e., with a relative and with an absolute scalar adverb, shows that the denotation of the expression modified by *quase* does not have to be an absolute scalar endpoint, but may be one. The requirement imposed by *quase* is that the modified constituent, albeit not denoting an absolute endpoint value on a scale, can be mapped onto a uniquely identifiable value on the scale, and hence provide a standard of comparison. Second, the similarity between *quase* and this set of adverbs stems from the fact that they are *additive*. Additive adverbs contribute the implication that at least one of the alternative values on the set under consideration satisfies the predicate that holds of the focused constituent they associate with. I have argued that the comparison introduced by *quase* assigns to the reference value a high degree on the scale, entailing that at least some degree on the scale be assumed of the argument of the predicate. Hence, the co-occurrence with scalar focus adverbs provides further evidence for the scalar semantics of *quase* proposed in this chapter.

5.6 Conclusions

In this chapter, I have analyzed the scalar semantics of *quase* and shown how it relates to the proximal component identified by the Conjunctive Analysis.

The scalar approach proposed allows for a more fine-grained account of the polar component of *quase* and shows that the polar component identified by the Conjunctive
Analysis captures in an adequate manner only a set of the possible interpretations of the adverb.

A possible objection to this account is that it is too unconstrained in the sense that in principle any predicate can instantiate a degree of any property, given the appropriate context, and so the felicitous use of *quase* would almost be impossible to restrict. However, I believe that in a way this is a desirable result. In fact, even if the corpora data clearly display a tendency for co-occurrence of *quase* with predicates whose lexical semantics involves a scalar meaning, a native speaker can arguably make sense of most cases of modification, both with gradable and non-gradable predicates. On this account, a sentence like *O quarto está quase sujo* ‘The room is almost dirty’ will be considered infelicitous but may be rendered felicitous in a relevant context, but this is not the case for *Quase algumas pessoas vieram à festa* ‘Almost some people came to the party’. For native speakers, the latter sentence is clearly less acceptable than the former, if meaningful at all. I believe that this account explains this difference; while an ingenious person may come up with a context where the former sentence can be interpreted, by evoking a certain scale of which “sujo” corresponds to an endpoint value (e.g. as the result of a process of rendering something dirty), there is no such scale for the determiner “algumas” ‘some’ since its semantic value does not allow for a one-to-one mapping with a scale.

Moreover, this account allows for a comparison of the meaning of *quase* with the meaning of other scalar focus adverbs. From a theoretical perspective, such a comparison contributes to a better understanding of the types of standards of comparison and the structure of scales that play a role in the semantics of different syntactic categories.
CHAPTER 6

SCARCITY AND NEGATION: THE CASE OF *MAL*

In this chapter, I focus on a subset of the possible interpretations of approximative adverbs, namely those in which a predicative relation is evaluated as instantiating to a low degree a property which is associated with the predicate in question. More specifically, the predicative relation is evaluated as falling short of a prototypical norm or expectation. In the EP system of approximative adverbs, this interpretation is provided by *mal*. The contribution of *mal* exemplifies the two criteria for the identification of approximative adverbs proposed in this dissertation: (i) evaluation of the applicability of the predicate to its argument and (ii) scalarity.

In this chapter, I focus on the first criterion and show how it is instantiated by the semantic-pragmatic contribution of *mal*. In section 6.1, I present the polysemy of *mal* in contemporary EP and the syntactic and semantic tests that allow us to distinguish the approximative adverb from the manner adverb. In section 6.2, I propose an analysis of the meaning of *mal* that accounts for the meaning components identified by the Conjunctive Analysis. On the basis of the analysis proposed, in section 6.3 I distinguish the manner adverb and the approximative adverb with respect to their semantic and pragmatic properties. In section 6.4, I show how the evaluation of the predicative relation contributed by *mal* can
be made explicit by the focus adverb só ‘only’ and I compare the meaning of the two adverbs.

6.1 Differences between the manner adverb and the approximative adverb: syntax and semantics

In contemporary EP, the lexeme mal is polysemous between a manner adverb and an approximative adverb. There are a number of syntactic and semantic tests that allow us to distinguish between the manner adverb and the approximative adverb. As a manner adverb, mal admits degree inflection, it may occur in comparatives and so...that constructions, as in (1a-c), unlike the approximative adverb (2a-c):

(1) a. O João escreve muito mal.  
   ‘João writes very poorly’.

   b. O João escreve tão mal como/pior do que a irmã.  
   ‘João writes as poorly as his sister/more poorly than his sister.’

   c. O João escreve tão mal que eu não entendi a carta dele.  
   ‘João writes so poorly that I didn’t understand his letter.’

(2) a. *O João muito mal comeu.  
   the João very mal eat:SPAST:3SG

   b. *O João tão mal comeu como a irmã / pior do que a irmã.  
   the João as mal eat:SPAST:3SG as the sister / worse do que a irmã.

   c. *O João tão mal comeu que saiu às 9.00.  
   the João so mal eat:SPAST:3SG that leave:SPAST:3SG at:the 9.00.

As a manner adverb, i.e., as a predicate on the event denoted by the verb, mal is an adverb internal to the VP and its meaning is part of the proposition expressed by the sentence
in which it occurs. It typically occurs in post-verbal position and modifies the content of the verb by providing information about manner (an answer to the question: Como...? ‘How?’). Accordingly, a sentence containing the manner adverb entails the proposition expressed by the sentence which is obtained by removing the adverb, as shown in (3) and (4); mal may occur in cleft constructions, may be under the scope of VP negation, and may be the focus of negation, as exemplified in (5) – (7). As such, mal is generally non-obligatory (it is an adjunct), although it may be the complement selected by certain verbs, as in (8) – (10):

(3) O João escreve mal. ⇒ O João escreve.
    ‘João writes poorly.’ ⇒ ‘João writes.’

    ‘João writes poorly.’ ⇒ ‘João writes and he does so poorly.’

(5) É mal que o João escreve.
    ‘It is poorly that João writes.’

(6) O João não escreve mal (escreve bem).
    ‘João doesn’t write poorly (on the contrary, he writes well).’

(7) Não é mal que o João escreve (é bem).
    ‘It is not poorly that João writes (it’s well).’

(8) O João portou-se mal./*O João portou-se.
    ‘João behaved badly./*João behaved.’

(9) Com o calor, o João sente-se mal./*Com o calor, o João sente-se.
    ‘When it’s too hot, João feels mal./* When it’s too hot, João feels.’

(10) O bolo que fiz ontem saiu mal./*O bolo que fiz ontem saiu.
    ‘The cake I made yesterday turned out mal./*The cake I made yesterday turned out.’

As an approximative adverb, mal may not occur in the focus position of a cleft construction, as shown in chapter 2, and cannot be under the scope of VP negation. The negation of the approximative adverb requires the denial of the whole proposition. Moreover,
the approximative adverb is never subcategorized by a verb. The manner adverb, by virtue of being a VP-internal modifier, may felicitously occur in interrogative sentences and sentences that express an order, which is not the case for the approximative adverb, as shown in chapter 2.

Finally, the approximative adverb, but not the manner adverb, is a proclisis trigger; in (11), but not in (12), the clitic pronoun *se* must occur in pre-verbal position:

(11) O João mal *se* lembra das brincadeiras de infância.  
    the João *mal* CL remember: PRES:3SG of:the play from childhood  
    ‘João *mal* remembers his playing as a child.’

(12) O João lembra-se mal das brincadeiras de infância.  
    the João remember: PRES:3SG: CL *mal* of:the play from childhood  
    ‘João remembers poorly his playing as a child.’

Although the manner adverb occurs typically in post-verbal position, it may occur pre-verbally, i.e., it may be fronted in contrastive contexts, triggering subject inversion, as exemplified by (13).\(^{82}\)

(13) «*Mal* se movimenta um concelho que não coloque os interesses das suas populações acima dos interesses político-partidários». (CP Ext. 188329)  
    ‘Poorly fares a *concelho* [administrative division] which does not place the interests of its people beyond those of politics.’

The tests listed above allow us to identify the manner adverb even if it occurs pre-verbally; the adverb in (13) may undergo degree modification, as in (14):

\(^{82}\) This initial position of the manner adverb is associated with a pitch accent on the adverb.
(14) Muito mal se movimenta um concelho que não coloque os interesses…
‘Very poorly fares a concelho [administrative division] which does not place the interests…’

Furthermore, the manner adverb, but not the approximative adverb, accepts reduplication for purposes of intensification when it is fronted, as in (15):

(15) José Pratas teve um trabalho sofrível. Mal, mal, estiveram os seus dois fiscais-de-linha… (CP Ext 116389)
‘José Pratas [name] had a reasonable performance. Truly bad (lit. poorly poorly) were…’

Unlike quase, mal as an approximative adverb cannot occur in sentence-final position in a separate intonational phrase:

(16) #O João comeu, mal.
the João eat:SPAST:3SG mal.

(17) O João tem uma atitude presidencial, quase.
‘João’s attitude is presidential, almost.’

The only possible interpretation of the adverb in (16) is as an afterthought with respect to the proposition expressed, by specifying the manner in which João ate.

Since Portuguese is a null-subject language, the approximative adverb may occur in sentence-initial position, as in (18):

(18) Mal comeu.
‘(He/she) barely ate.’

If the approximative adverb occurs sentence-initially and the subject is expressed, subject inversion is obligatory and the subject must occur in a separate intonational phrase, as in (19). The same point is made by Bonami et al. (2004) with respect to French à peine,
which may also occur in sentence-initial position integrated into the prosody of the sentence but forces the verb to host an inverted subject clitic.

(19) Mal comeu, o João.
    ‘(He) barely ate, João’

If the subject is not inverted, as in (20), the interpretation of the sentence is different, i.e., *mal* is an adverbial subordinator with the temporal meaning ‘as soon as’:

(20) Mal o João comeu, …
    ‘As soon as João ate…’

Following Ernst (2000, 2002) and a semantically-driven analysis of the distribution of adverbs, I assume that the syntactic properties of *mal* reflect the semantic type or arguments that the adverb takes. The difference between the manner adverb and the approximative adverb can be conceived of in terms of a difference between the argument taken by *mal* in each case. The manner adverb is event-internal; as a consequence, the result of manner modification constitutes only one proposition. The approximative adverb, on the other hand, takes the predicative relation as argument, i.e., it provides an evaluation of the degree to which a predicate holds of its argument. The contribution of the adverb is thus a second proposition (the “proximal component”, according to the Conjunctive Analysis), conjoined to the proposition expressed by the sentence without the adverb.

It is important to point out that the polysemy approximative adverb/manner adverb does not correspond to the well-known clausal/manner distinction of predicational adverbs exemplified in (21) and (22), from Ernst (2002:57). Predicational adverbs have traditionally been analyzed as involving covert adjectival predicates that take either (i) two arguments
(e.g. the subject of the clause and the event, in the case of subject-oriented adverbs like *cleverly*), in their clausal reading, or (ii) an event argument (event-internal modification), in their manner reading.

(21) Rudely, she left.

(22) She left rudely.

In (21), the entity denoted by the pronoun *she* is considered rude because of the event of leaving (when compared to other relevant events in context, i.e., things she could have possibly done, like not leaving). In (22), some property of her leaving (a manner) is considered rude, distinguishing this particular event from other events of leaving. This difference is represented in (23), where (a) provides the interpretation of the clausal adverb and (b) the interpretation of the manner adverb, from Ernst (2002:58, (2.47)):

(23) (a) e [\text{\textit{rel}} warrants positing] more rudeness in Agent than the norm for events.
(b) e [\text{\textit{rel}} manifests] more rudeness in Agent than the norm for Specified Events.

According to (a), the event e stands in the relation “warrants positing rudeness” with the Agent, with respect to all relevant events in the context. In (b), the relation “Manifest” should be understood as “shows properties typical of” (Ernst 2002:56). A crucial component of this distinction is the notion of comparison class, borrowed from the semantics of gradable predicates (assuming a covert adjectival predicate in (21) and (22), RUDE). In (21), the comparison class includes any possible events, i.e., actions she could have taken instead of leaving. On the other hand, in (22) the relevant set of events to which the current leaving is compared only includes other events of leaving (hence, these are called “Specified Events”):
which are distinguished from each other on the basis of their properties (their “manner” characterization).

The clausal/manner distinction just outlined does not capture the distinction between the manner adverb and the approximative adverb. Assuming such an analysis of *mal* would yield an interpretation of the approximative adverb which goes against speakers’ intuitions, i.e., (24) does not mean (25):

(24) O João mal comeu.
‘João barely ate.’

(25) It was bad of John to have eaten.

Rather, if a covert adjectival predicate like “bad” or “poor” is to be assumed, it must qualify predicking “ate” of the argument “João”, when compared to a prototypical representation of an eating eventuality, on the basis of a contextually relevant metric. An analysis along these lines will be proposed in the next section.

6.2 The semantics of the approximative adverb *mal*

In this section, I present the semantics of the approximative adverb *mal*. My analysis relies upon two main assumptions: (i) modification by *mal* involves a comparison with a norm associated with the unmodified predicate, and (ii) the semantics of *mal* involves implicit degree quantification. This analysis builds mainly on two contributions: Ducrot’s (1972) account of the meaning of *peu* ‘little’ and Ernst’s (2000, 2002) account of the syntax/semantics of adverbial modification.
First, I will briefly review Ducrot’s (1972) account of the difference between the semantics of *peu* and *un peu*. Ducrot discusses two main approaches to the meaning of these expressions: (i) on one approach, they denote different degrees on a scale of quantity, where *peu* denotes a lower value on the scale than *un peu*; (ii) on the other approach, the use of *peu* is rather an attenuated negation, and for this reason certain authors have proposed to consider *peu* as being negative, whereas *un peu* should be considered positive (Cf. *Cette situation est peu gênante vs Cette situation est un peu gênante*).

Ducrot correctly points out that the former explanation should be ruled out; if the difference between the two expressions were merely a difference in quantity, then it should be possible to make them equivalent through modification with the appropriate degree adverbs (e.g. *assez peu* and *un tout petit peu*), but this does not neutralize their difference (cf. Ducrot 1972:192-193). As for the latter account, it is not explanatory since it does not tell us to what extent *peu* is negative and *un peu* is positive.

Instead, he proposes to account for their difference in terms of the divide between asserted\(^\text{83}\) and presupposed content. With respect to *peu*, for a certain proposition p, to which we add *peu*, the resulting proposition presupposes p and asserts that the quality, mode, etc. that is modified by *peu* is of a reduced quantity:

> La modification sémantique apportée par *peu* consiste, selon nous, en ce que *A presuppose* ce que *a* posait *a*, et *pose* que, dans le procès ainsi présupposé, la qualité, la fonction ou l’objet designés par le mot auquel se rapporte *peu* sont d’une quantité ou d’une intensité faibles.\(^\text{84}\) (Ducrot 1972:194)

\(^83\) The terms used in the original are *poser* and *presupposer*, which I am translating as “assert” and “presuppose”, respectively.

\(^84\) “The semantic modification contributed by *peu*, according to us, consists of the fact that *A presupposes* what *a* asserts, and *asserts* that in the process thus presupposed, the quality, the function or the object denoted by the word modified by *peu* are of weak quantity or intensity.” [my translation]
To exemplify, on this account, (26) presupposes that Pierre drank some wine (i.e., the proposition expressed by (27)), and asserts that he did so in a reduced quantity (examples (5) and (6) in the original):

(26) Pierre a bu peu de vin hier.  
    ‘Pierre drank little wine yesterday’

(27) Pierre a bu du vin hier.  
    ‘Pierre drank some wine yesterday’

Hence, *peu* should be treated as a degree modifier that combines with the internal argument of the verb. The truth of the predicate is presupposed by the sentence: “La phrase qui comporte *peu* ne pose donc qu’un certain jugement (d’ordre quantitative) à propos d’un object dont la réalité même est presupposée”85 (Ducrot 1972:194).

On the other hand, a sentence containing *un peu*, as in (28), asserts the proposition expressed by the sentence without the adverb (29) and restricts its truth to the assumption that the quantity involved is reduced.

(28) Pierre a bu un peu de vin hier.  
    ‘Pierre drank a bit of wine yesterday’

(29) Pierre a bu du vin hier.  
    ‘Pierre drank some wine yesterday’

Furthermore, Ducrot argues that the “upper bounding” interpretation of *un peu* (i.e. *un peu* implies *pas beaucoup* ‘not much’) results from conversational principles. Although he does not use the term, his analysis suggests a treatment along the lines of a conversational

---

85 “The sentence that contains *peu* only asserts a certain judgement (of quantitative nature) about an object whose existence is presupposed.” [my translation]
implicature triggered by the Quantity maxim, whereas for *peu*, the “upper bounding” is part of the conventional meaning of the word.\(^\text{86}\)

Crucial for our purposes, however, is the relation between the asserted and the presupposed content of *peu* in Ducrot’s account. He points out that in order to predicate of some entity that it exists in a reduced quantity one must assume first of all that the entity in question exists:

> Si donc *peu* prend place dans un mouvement restrictif, son emploi implique l’existence préalable de la quantité restreinte – au même sens où cesser de faire quelque chose implique qu’on ait déjà commencé à le faire.\(^\text{87}\) (Ducrot 1972: 217)

In the present account, I will assume that the meaning of *mal* can be analyzed as involving the degree quantification of *pouco* ‘little, few’ in an indirect way.

This quantifier establishes a relation between a range of values on a scale and some assumed norm \(n\) on that scale, by positing that that range of scalar values is less than \(n\). As is the case with degree quantifiers in general, *pouco* is interpreted with respect to a scale provided by the modified expression and hence the interpretation of the phrase containing *pouco* crucially depends on the structural properties of the expression that it combines with. Thus, in (30a), the ordering on the domain of denotation of the mass noun *lixo*, “garbage”, which can be modelled as a join semi-lattice ordered by the *part-of* relation (Doetjes 1997), provides the domain of quantification required by the semantics of *pouco*. In (30b), on the

\(^\text{86}\) According to Ducrot, *peu* is a mitigated negation: “…*peu* appartient à la catégorie de la limitation, de même que les différents types de négation…” (Ducrot 1972:200) ‘…*peu* belongs to the category of limitation, just like different types of negation do’ [my translation]. I will try to clarify how this intuition can be analyzed with respect to the semantics of *mal*.

\(^\text{87}\) “If *peu* denotes a restriction, its use implies the previous existence of the quantity which is restricted – just like stopping to do something implies that one has already begun to do it.” [my translation]
other hand, the singular count noun *copo* “cup” does not display the same structural properties, and hence cannot co-occur with *pouco*.

(30a) *pouco lixo
    ‘little garbage’

(30b) *pouco copo
    ‘few cup’

In (31a) and (31b), the specification of the meaning of *pouco* relies upon the structural properties of the domain of eventualities, which can be modelled after the domain of objects (Bach 1986, Krifka 1989, 1992, Doetjes 1997). Here, the *part-of* relation is defined in terms of temporal intervals (an event \(e_1\) is part of \(e_2\) if the interval corresponding to \(e_1\) is part of the interval corresponding to \(e_2\)). The predicate in (31a) behaves as a mass noun in that the eventuality it denotes may be divided into sub-eventualities which are also eventualities of working, whereas (31b) behaves as a count noun, and hence is not acceptable with *pouco* (see also section 5.5).

(31a) *trabalha pouco
    ‘works little’

(31b) *acabou pouco o livro
    finished little the book

The degree relation contributed by *pouco* is part of the meaning of *mal*. This is confirmed by the infelicity of (32) and (33); both sentences are contradictory:

(32) #O João mal comeu, mas comeu muito.
    the João *mal* eat:PAST:3SG but eat:PAST:3SG much

(33) #O João mal dormiu, mas dormiu muitas horas.
    the João *mal* sleep:PAST:3SG but sleep:PAST:3SG many hours
However, the contribution of the two adverbs is different. First of all, *pouco* is a VP-
internal adverb, whereas *mal* has scope over the whole VP. Moreover, the scales on which
the adverbs operate may or may not coincide, as shown in (34) and (35):

(34)  *O João trabalha pouco mas quando trabalha, trabalha muito.
     ‘João works little but when he works, he works a lot.’

(35)  João mal trabalha mas quando trabalha, trabalha muito.
     ‘João barely works, but when he works, he works a lot.’

In (34), the degree quantification contributed by *pouco*, which is semantically encoded,
yields a contradiction with the added conjunct. In (35), *mal* quantifies over occurrences of
“working” and evaluates them as scarce (i.e., as being less than the norm which is assumed
for the unmodified predication). In (35) the standard of comparison is a norm pertaining to
the frequency of occurrences of working, which is assumed as the average value expected for
the predicate in question. Another difference between the two adverbs pertains to their co-
ocurrence restrictions; compare (31b) and (36):

(36)  Mal acabou o livro.
     ‘(He/she) barely finished the book.’

Whereas *pouco* may only combine with expressions that display gradability, and hence is not
acceptable with the predicate in (31b), *mal* may combine with non-gradable predicates and
induce a scalar interpretation. In (36), the duration of the time interval during which the
resultant state of the (simple) telic event denoted by the predicate holds is evaluated as being
less than an assumed norm.

The particular contribution of *mal* pertains to the determination of the scalar norm and
the comparison class; *mal* introduces a comparison class of predicative relations which are
mapped onto values on the scale of a property associated with the predicate in question. The current predicative relation is mapped onto a value on the scale of a property associated with the predicate and that value (the reference value) stands in a “less than” relation with the standard of comparison, which is the value assumed as a norm for the predicate (on the basis of what is generally the case for that predicate, or what is expected in the context).

This account builds on Ernst’s (2002) account of manner modification briefly outlined above. For Ernst, one of the differences between manner and clausal modification is the nature of the comparison classes. In the former case, only events of the same type are compared with respect to some property that they may display (so, if \( V \) stands for the event denoted by the verb, only events of \( V \)-ing by the subject will be compared). Ernst calls such events “Specified Events”, to distinguish them from the comparison class of clausal modification, in which all possible events that are relevant in a certain context are compared. By the same token, I will argue that the comparison class introduced by \textit{mal} consists of predicative relations (\( \text{pred}_p\)-rel); they are “Specified predicative relations” in that they pertain to the application of the same predicate (\( p \)), to the same or different arguments, the same way that “Specified events” all pertain to the same event. A predicative relation \( \text{pred}_p\)-rel can be defined as a ‘(contextually restricted) situation in which predicate \( p \) is applied to an argument \( a \).’

The predicative relations are compared with respect to the degree to which they display a property which is associated with the predicate (i.e., some property of the predicate which we generally call a “manner”, and which allows us to distinguish the different predicative relations). This is schematically represented in Figure 6.1:
Hence, I will argue that *mal* denotes a degree relation (*<* ‘less than’) between two values on the scale of a property which is associated with a certain predicate. The reference value is the value onto which the current predicative relation is mapped, and the standard value is the value assumed as the norm for that predicate with respect to the property associated with it.

A predicative relation is a pragmatic notion, in that it involves both the semantic application of the predicate to its argument and the spatio-temporal circumstances in which that application takes place (as well as the relevant metric adopted). As we will see, this is an important component in the interpretation of *mal*.

There are two consequences of this approach to the meaning of *mal*. First, because *mal* is a degree adverb, if several gradable properties may be associated with the modified predicate, it is predicted that more than one interpretation will be available for a sentence in which *mal* occurs (differently from *pouco*). This prediction is borne out, as shown by the ambiguity of (37):

(37) O João mal esteve doente.
    ‘João was barely sick’
In (37), the evaluation contributed by *mal* may either pertain to the time interval during which João was sick (i.e., he was sick only for a very short period of time) or to the seriousness of the disease (i.e., João was not seriously sick). Given the semantics of the predicate, both the time interval during which the eventuality held and the degree to which the disease was serious can be measured against (culturally shared) norms (see also section 7.1.1.1).

Second, given that the evaluation contributed by *mal* always pertains to a predicative relation, one would expect that modification by *mal* forces the modified expression to be interpreted predicatively. In fact, this is what we find e.g. with singular count nouns. *Mal* may only modify verbal predicates (unlike English *barely* and *hardly*), and moreover it requires that the predicate meets certain aspectual requirements (see section 7.1.1). Hence, *mal* may not modify a singular count noun, as the direct object of the verb in (38). However, if the underlined NP in (38) receives a pitch-accent, the sentence is acceptable. The interpretation obtained presupposes a predicative relation, i.e., João barely wrote “something which is a short story” (like a small clause, cf. Stowell 1981):

(38) O João mal escreveu um conto, e quer dar aulas de escrita criativa!
‘João *mal* wrote a short story, and (he) wants to teach creative writing!’

The interpretation of the first conjunct in (38) is the result of coercion. Crucially, the interpretation obtained pertains to the low applicability of the predicate *conto* to the piece of writing, the latter being presented as lacking a salient or prototypical property associated with the predicate (hence, implicating that João’s writing skills fall short of what would be expected of someone with the qualifications to teach creative writing). The same holds for (39). As shown in section 7.1.1.1, *mal* is not entirely acceptable with stative predicates in the
Present tense. However, if (39) receives a (coerced) interpretation, that interpretation pertains to the adequacy of describing Pedro’s location as “in the garden”, so (39) is true e.g. if Pedro is standing in the garden but very close to a threshold (like a gate).

(39) #O Pedro mal está no jardim.
    ‘Pedro is barely in the garden.’

In this section, I have presented the semantic contribution of *mal*. I have argued that *mal* establishes a comparison between predicative relations with respect to the degree to which the predicate holds of its argument. The standard of comparison is a scalar value assumed as the norm for a contextually specified property associated with the predicate under consideration.

6.2.1 The polar component

In this section, I show how the polar component identified by the Conjunctive Analysis follows from the contribution of *mal* described in the previous section. I argue that the polar component is part of the conventional meaning of *mal* and that it gets added to the Common Ground, albeit in a manner different from the proximal component.

On the account proposed here, *mal* denotes a function that maps a predicative relation onto a degree of a property associated with the predicate in question. Because of the degree relation that underlies the meaning of *mal* and because of the standard of comparison, the adverb asserts that the property holds to an extent which is less than would be the normal degree for that predicate. Note that in order for this comparison to be possible, it must be assumed that the current predicative relation instantiates the predicate under consideration.
The evaluation of the property of the predicate contributed by *mal* requires the assumption that the predicate holds.

The notion of “assumption” that I am adopting here should be understood as a necessary (conceptual) implication of the degree quantification contributed by *mal*. This implication is not an “idiosyncrasy” of the lexical item (i.e., a conventional property of a lexical item, à la Karttunen and Peters (1979), arbitrarily added to the extension of the lexical item). Rather, I assume that such an implication follows from the semantic contribution of the adverb in the sense that it is an entailment of its asserted content. Restricting the degree to which a predicative relation displays a property that is associated with the predicate presupposes that the predicate holds of the entity denoted by the argument of the predicative relation. This underlies the fact that *mal* may not felicitously occur in a sentence in which the falsity of the predicate is entailed, i.e., it is a positive polarity item (PPI). In other words, the evaluation that the adverb contributes cannot be conceived without the assumption that the predicate holds, in the same way that to say something about the quantity of wine that was consumed conceptually requires the assumption that there was a drinking event. Hence, the whole range of the scale which is introduced by *mal* may be truthfully associated with the predicate (in the same way that eating very much, eating much, eating little are all instances of “eating” eventualities).

Hence, adding to a sentence with *mal* a conjunct that negates the polar component yields a contradictory statement, as in (40):

(40)  #O João mal comeu e não comeu.
     ‘João barely ate and he didn’t eat.’
The adverb is only interpreted as contributing a negative polar component in its “inverted readings”, which will be discussed in section 7.4.

This raises the question of the theoretical status of the polar component of *mal*. In the following, I address the question by discussing a number of tests from Roberts (forthcoming) that are diagnostics for various types of contributions to linguistic meaning.

6.2.1.1  The theoretical status of the polar component of *mal*

As pointed out in chapters 1 and 3, there are several sources of evidence for the asymmetric status of the two components, and in particular for the non-assertoric nature of the polar component. It cannot be directly denied or questioned; only by resorting to metalinguistic negation can it be denied, as in (41) (where the capital letters stand for a pitch accent on *mal*):

(41) Não é verdade que o João MAL comeu: ele não comeu nada!
    ‘It is not true that João BARELY ate: he hasn’t eaten anything!’

The polar component of *mal* cannot be cancelled without contradiction (see (40)), which shows that it constitutes part of the conventional meaning of the adverb. In this chapter, I have argued that it follows from the asserted content of *mal* in it is a conceptual prerequisite of the meaning of the adverb. This description closely relates to the notion of “entailed presupposition” (Roberts forthcoming:28), a sub-class of speaker’s presuppositions, associated with factive and aspectual verbs (e.g. *realize*, *stop*):
Since the presuppositions associated with factives or aspectual verbs are conceptual prerequisites on the relation in question obtaining, not only are the complements of factives entailed in the utterances in question, but…they are automatically presupposed by any rational speaker, i.e., they are pragmatic presuppositions (Roberts forthcoming:29)

However, unlike the presuppositions associated with the meaning of factive verbs, which place constraints on the discourse context, yielding a semantic anomaly if not satisfied, the polar implication of *mal* is always informative, and added to the Common Ground once context update takes place, so this classification does not seem entirely adequate.

A relevant question at this point, following Roberts’ diagnostics for non-at-issue types of meaning (Roberts forthcoming), is whether the polar component is independent of the at-issue\(^\text{88}\) (asserted) content. Roberts argues that this is indeed the case for the polar implication of *barely*, since it can be suspended (unlike the proximal component). This is shown for *mal* in (42) and (43), adapted from Roberts’ (forthcoming: (81) and (82)):

(42) (Julgo que) o João mal comeu, se é que comeu (alguma coisa). [implicates that it is possible that he didn’t eat anything]
   ‘I believe that João barely ate, if at all’

(43) Julgo que o João mal comeu, #e talvez nem tenha chegado a quase não comer nada.
   ‘I believe that João barely ate, and perhaps he didn’t even come close to not eating anything’

On the basis of examples (42) and (43), I agree with Roberts’ claim that the polar component of *barely* (and *mal*) can be suspended (unlike the proximal component). However, I do not

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\(^\text{88}\) The term, adopted in Roberts (forthcoming) is originally from Potts (2005). In this discussion, I will use it as a synonym of “asserted” content. The exact nature of “at-issue” is never defined in Potts (2005), where its characterization is left to the distinction posited in the logical system, i.e., by assuming a type-theoretic distinction between “at-issue”(type \(a\)) and “CI” content (type \(c\)).
agree with the claim that “the truth of the polar implication is logically independent of that of
the proximal implication” (Roberts forthcoming:34). The suspension test exemplified in (42)
and (43) does not tell us anything to support such a claim. What (42) shows is that it is
possible to suspend the polar component, if that suspension is compatible with the (negative)
orientation that characterizes the proximal component. In fact, (42) is felicitous precisely
because of the scalar meaning of the adverb (its asserted content). Unlike what happens with
the conventional implicature (CI) triggers presented in Potts (2005), where the truth of the CI
is independent from the truth of the at-issue content, it is not possible to target the polar
component of *mal* alone if that yields an inconsistency with the truth of the proximal
component, as shown by the difference in acceptability between (44) and (45):

(44) O João comeu, e até comeu muito.
    ‘João ate, actually he even ate a lot.’

(45) #O João mal comeu, e até comeu muito.
    ‘João barely ate, actually he even ate a lot.’

Whereas in (46) it is possible to deny the truth of the supplementary relative clause without
affecting the truth of the main clause, this is not the case for the two meaning components of
approximative adverbs.

(46) a. Ames, who stole from the FBI, is now behind bars.
    (from Potts 2005, (2.13b))
    b. Ames, who didn’t steal from the FBI, is now behind bars.

If indeed the two implications were logically independent, one would expect that it would be
possible to suspend one without affecting the commitment to the other (i.e., while still
entertaining the other, as is the case for (46)). However, if we coordinate the suspension of
the polar component with a paraphrase of the proximal component, as in (47), the result is a contradiction:

(47)  #Talvez o João não tenha comido nada e tenha chegado a quase não comer nada.
     ‘Maybe João didn’t eat anything and he came close to not eating anything.’

I believe that the acceptability of (42) relates to the evaluation of the predicative relation as a poor instance of the predicate, contributed by mal. The suspension test targets that aspect of their meaning, by casting doubt on the truth of the modified predicate (hence the improved acceptability with the modal verb, as noted by Roberts (forthcoming:33, footnote 24)). The unmodified predication, i.e., without the verb julgar ‘to believe’, implicates the full commitment of the speaker to the assertion made, which is hard to reconcile with the contribution of mal. Contrast (42) with (48):

(48)  #O João comeu pouco, se é que comeu alguma coisa.
     ‘João ate little, if he ate anything at all.’

The contribution of pouco does not involve a weakening of the speaker’s commitment with respect to the predicative relation, hence the infelicity of (48).

Another criterion for the determination of the theoretical status of an implication is speaker-orientation. According to Potts (2005) and Roberts (forthcoming), an implication is speaker-oriented if its content is necessarily attributed to the speaker, even in an embedded clause. The polar component of mal is not speaker-oriented, as shown in (49):

(49)  Ontem houve um jantar na casa da Paula. Ela disse que o João mal comeu. Eu estive no jantar e vi que ele não comeu absolutamente nada.
     ‘Yesterday there was a dinner at Paula’s house. She said that João barely ate. I was at the dinner and I saw that he didn’t eat anything at all.’
In (49), the polar component of *mal* is associated with the matrix subject of the clause (she), rather than attributed to the speaker.

As for the criterion “constraint on the context”, I agree with Roberts that the polar component of approximative adverbs may be satisfied merely locally (see her (80)), i.e., it does not have to be entailed by the context prior to the utterance that contains the approximative adverb.

The behavior of the polar component of *mal* with respect to the tests for different types of non-at-issue contributions to linguistic meaning, summarized in Table 6.1 (Roberts (forthcoming:40), her table 3), is in the rightmost column of the table.

<table>
<thead>
<tr>
<th></th>
<th>Conversational implicature</th>
<th>Speakers’ Presupposition</th>
<th>Conventional Presupposition</th>
<th>Background implicature</th>
<th>Supplemental CI</th>
<th>Polar component of <em>mal</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional (= cancellable)</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes*</td>
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<tr>
<td>Independent of at-issue Content</td>
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<td>no</td>
<td>yes</td>
<td>no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constraint on context</td>
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<td>yes (anomaly)</td>
<td>yes (truth gap)</td>
<td>no</td>
<td>no*</td>
<td></td>
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<tr>
<td>Speaker-oriented</td>
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<td></td>
<td>yes</td>
<td>no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.1:  Polar component of *mal* with respect to Non-At-Issue Types of Meaning

* The existence of inverted readings makes the decision pertaining to these criteria problematic.

According to this classification, the status of the polar component of *mal* does not correspond to any of the categories presented in the table.

The crucial (and paradoxical) fact about the meaning of *mal*, which was identified by the Conjunctive Analysis, is that its polar component seems to be at odds with the negative evaluation of the predicative relation (i.e., as a “poor instantiation” of the predicate).
It must be noted that the property which underlies the evaluation by *mal* is not just any property, but a necessary and sufficient condition for the application of the predicate to a certain entity in a truthful way. For example, in order to say that someone has eaten, it must be the case that the person has ingested at least some amount of food; in order to say that someone has the habit of smoking, it must be the case that the person has smoked on a regular basis for a certain amount of time, and so on. Interestingly, in some naturally-occurring examples, the low degree of the necessary and sufficient condition for the application of a predicate to an argument is sometimes explicitly conveyed:

(50)  
\[
\text{Mal conheço … Catroga,}
\]
\[
\text{mal know:PRES:1SG Catroga [proper name]}
\]
\[
\text{pois ele só aparece uma vez por outra na empresa. (CP Ext 7182)}
\]
\[
\text{‘I barely know Catroga, since he only shows up very occasionally at the company.’}
\]

A necessary and sufficient condition to know somebody is to have contacted with this person regularly; in (50), the poor evaluation of the predicative relation (as pertaining to a very reduced degree on a scale of acquaintance) is justified in the clause containing *só* ‘only’. This example makes apparent the relation between the meaning of *mal* and *só*: the exclusive implication of the latter (in (50), the implication that he doesn’t show up at the company more frequently) justifies the evaluation contributed by *mal* (i.e., the relation between the current predicative situation and the assumed norm). The relation between the meanings of the two adverbs will be discussed in more detail in section 6.4.

In this section, I have argued that the asserted content of *mal* is the comparison between the current predicative relation and a norm of a property associated with the predicate in question (the “proximal” component), the implication that the predicate holds of the argument (the “polar” component) being an entailment of this comparison.
6.2.2 The proximal component

In this section, I analyze the asserted content of approximative adverbs like *mal* as well as English *barely* and *hardly*, that these adverbs have been classified as “approximate negators” or “quasi-negative”. The goal of this section is to flesh out to what extent their “proximal” component has negative content. I will argue that this subset of approximative adverbs contributes a comment on the chosen predicate (the modified predicate) with respect to the degree to which the argument of the predicate meets the conditions normally associated with the application of that predicate. Hence, approximative adverbs like *mal* and *barely* do not negate the truth of the modified predicate, but rather they restrict the degree to which the predicate holds of its argument, on the basis of the scarcity or lack in the argument of a salient property which is normally associated with that predicate. The negative contribution follows from both their semantic value and pragmatic principles.

Let us consider the meaning of *barely* and *hardly* in the following example, uttered as a comment about a child’s drawing:

(51) It’s barely/hardly a bird.

This sentence can only be translated into Portuguese as in (52), since *mal* may only occur with verbal predicates:

(52) Mal se pode dizer que é um pássaro.
   ‘One can hardly say that it is a bird.’

I believe that most speakers will interpret (52) as a critique of the drawing, assuming that it is supposed to depict a (prototypical) bird, while in the same context (53) can be considered a
compliment, given the same assumption. In other words, whereas in (52) the drawing is described as deviating from the (intended) norm, by lacking a salient property thereof, in (53) it is described as approaching a norm.

(53) É quase um pássaro.
    ‘It’s almost a bird.’

Although both adverbs provide an evaluation of the predication, the application of the predicative nominal “a bird” in each case is presented under a different perspective. Under modification with mal, the argument of the predicate is presented as instantiating poorly the prototype of the category; this can be tested by using the exclusive adverb só to focus on a property that the argument has (i.e., all other properties are excluded). In both cases, what the adverbs are evaluating is the adequacy of a linguistic description.

(54) Mal se pode dizer que é um pássaro (só tem as asas).
    ‘One can hardly say that it is a bird (it only has the wings).’

The negative evaluation conveyed by mal relates to the assertion of a low degree, or scarcity, of an expected property which is salient or typically associated with the predicate in question. In (51), presumably the scale consists of an ordering on the entailments of the predicate “bird”, according to their prototypicality. In most cases the scale is unspecified and can only be determined by contextual information. Thus, the type of standard of comparison involved in the evaluation contributed by mal is particularly important for understanding the negative contribution of the adverb. What is denied by mal is not the truth of the predicate, but rather the value of a property associated with the predicate which is assumed as normal or prototypical for that predicate.
In this respect, modification by *mal* (or by *barely*) is similar to the semantics of what Horn called the “Class B un-noun” in derivational morphology (Horn 2002a, 2002b). On the basis of the meaning of examples like *unwoman* and *unvegetarian*, Horn argues that a noun of the form *unY*, where *Y* stands for a category, denotes a member of category *Y*, but “constitutes a ‘bad’ or peripheral member, one missing a functionally significant property” (Horn 2002a:66). Crucially, this property is associated with the prototypical representation of a member of the category and its lack is to be understood as “absence of what should be expected” (Horn 2002b:3). For example, the newly coined adjective “undead” can be interpreted to the extent “that the someone or something that is undead – e.g. a vampire – fails to conform to one’s expectation that it SHOULD be dead.” (Horn 2002b:11, emphasis in the original).

Interestingly, in (55), the lack of the defining properties of the predicate “a (political) party” is asserted in the context:

(55) «Quando os exilados socialistas portugueses regressaram a Lisboa, em Abril de 1974, não tinham sedes, nem uma rede de contactos, nem organização praticamente nenhuma. *Mal* se podiam chamar um partido», recorda Juliete Antunes Sabloffski, (…). Se, num ano, este pequeno grupo desorganizado e desconhecido se transformou no maior partido português…(CP Ext 98343)

‘When the Portuguese exiled socialists returned to Lisbon, on April 1974, they didn’t have a seat, nor a contact network, nor any sort of organization. They could hardly be called a party” recalls Juliette Antunes Sabloffski, (…). If, in no more than a year, this small, unorganized and unknown group became the biggest Portuguese party…’

The underlined passages provide the justification for the poor evaluation of the adequacy of predicking “a party” of the group of people in question; their group lacked important properties which are expected of such an organization.
On the other hand, in (53) the predicative nominal is presented as corresponding to the endpoint value on a scale of entailments of which the argument of the predicate has all lower values, as shown by the possible paraphrase in (53’):

(53’) É quase um pássaro (só lhe falta o bico).
‘It’s almost a bird (only the beak is missing).’

This case the clause introduced by só denotes the sub-entailment of the predicate that does not hold (since the sentence entails that all or most of the other values of the relevant property hold of the argument of the predicate). The “polar component” associated with the meaning of quase in (53) pertains to privation of a sub-entailment on a scale whose endpoint represents total completion of the requirements for category membership, everything that should obtain for the truthful application of the predicate pássaro to an argument.

A second parallelism between the meaning of mal and the negative affixes studied by Horn (1989) also pertains to the notion of negative evaluation. The affix un-, like iN-, yields adjectives that have an evaluative parameter (following Horn’s terminology, that are “e-neg”, i.e., evaluatively or emotively negative); their semantics develops contrary, affective, depreciatory meanings, according to the following rule:

(56) negative affix + e-pos base → e-neg derived output
    \[(un-, iN-) \quad [happy, due] \quad [unhappy, undue]\] (Horn 1989:274)

The stems that these affixes may combine with are gradable adjectives that either do not correspond to extreme positive values or are evaluatively neutral: “The stem to which a relatively non-productive negative affix can attach tends to be an UNMARKED, WEAK POSITIVE scalar value” ((17) in Horn 1989:286, emphasis in the original). If we extend this
distinction to other predicates, namely to verbal predicates, we verify that *mal* cannot combine with predicates that correspond to extreme positive values, as exemplified in the contrast between (57) and (58), and with e-neg predicates.89

(57)  O João mal jantou.
     ‘João barely ate anything at dinner.’

(58)  ?O João mal devorou o jantar.
     ‘João barely devoured dinner.’

Interestingly, in the diachrony of *mal* it is possible to find the use of the adverb with adjectival predicates yielding a negative interpretation, similar to that of the negation prefixes *in-* and *des-* (cf. Amaral 2006a, as in (59):

(59)  (...) os passos mal seguros
     (...) the steps *mal* firm
     ‘(...) her steps unfirm’

In this section, I have argued that the “attenuated negative meaning” associated with the proximal component of *mal* and the corresponding words in other languages stems from the elements of the comparison contributed by the adverb, in particular from the degree relation and the type of standard of comparison. The negative character of the adverb is the result of the pragmatic principle of understatement: “All instances of understatement involve saying less than one means…” (Van der Wouden 1997:216). The understating character of *mal* has an underlying evaluative component that can be compared to the meaning of epistemic modifiers. In an utterance without an epistemic modifier, the speaker implicates full commitment to the truth of the proposition expressed. On the other hand, if an epistemic

89 Klein (1998) makes a similar point with respect to Engl. *barely* and *hardly*; these adverbs modify mainly “positively evaluated predicates”.

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modifier is introduced, the commitment to the truth of the proposition is relativized (to a horizon of expectations, etc.). The meaning of mal also involves relativizing the commitment to a predicate, not so much to its truth but to its appropriateness, on the basis of the expected or normal conditions for that predicate to hold.

The use of mal indicates that although a certain predicate has been chosen, the conditions considered normal or usually associated with that predicate do not obtain, i.e., in the predicative relation a relevant property normally associated with the predicate falls short of the normal or expected value. These conditions may pertain to the entailments of the predicate, as well as to world knowledge. The use of mal introduces a comparison with the unmodified predication, i.e., with the premises that underlie its application. Hence, the negative character of mal follows from the comparison with the prototypical or normal case; it is not the truth of the proposition which is negated, but rather the existence of the normal conditions (or premises) underlying the speaker’s full commitment to the assertion of the proposition.

The negative evaluation contributed by the proximal component of mal can be made apparent by considering (60), where the sentence with mal constitutes the full clause in the quanto mais ‘let alone’ construction. The question under discussion in the example is the possibility of adding another private channel to the market:

(60) Não é difícil compreender que a eventual privatização da RTP… teria consequências ainda mais desastrosas. É sabido como o fraquissimo mercado publicitário português já mal sustenta dois canais privados, quanto mais três. Seria a falência certa de um deles e a perversão completa do mercado da publicidade.” (CP Ext 546271)

‘It is not hard to understand that making the RTP [public TV channel] a private channel would have even more negative consequences. It is well known how the weak Portuguese market of advertising already mal allows for two private channels, let alone three. It would certainly mean bankruptcy for one of the channels and the utter perversion of the advertising market’
I begin by summarizing Fillmore et al’s account of the semantics of *let alone*. According to Fillmore *et al* (1988), the structure of a sentence with the *let alone* construction can be represented as in (61), where A and B stand for sentences (the latter being usually deleted), F is an operator (e.g. negation), and X and Y stand for possible values in an open proposition, which are ordered along a certain dimension.

\[(61) \quad F <X A \text{ let alone } B Y>\]

When F is grammatical negation, the sentence asserts both “not (X A Y)” and “not (X B Y)”, where the relation between the first and the second sentences is one of entailment. Kay points out that “the entailment in this case must be against the background of a presupposed semantic scale” (Fillmore *et al* 1988:523), i.e. the two propositions must be ordered on a scale with respect to a certain property. This ordering can be stated as follows:

“the two propositions (represented by the full clause and the reduced clause) are of the same polarity; and… one of the two propositions, syntactically that expressed by the initial, full clause, is stronger than the other.” (Fillmore *et al* 1988:528)

According to Fillmore *et al* (1988), there are some pragmatic conventions associated with the use of the *let alone* construction; the proposition expressed by the B clause requires a context proposition (cp), which it either accepts or rejects, and moreover the (cooperative) speaker indicates that there is an even more informative proposition, that denoted by the A clause (since this proposition pragmatically entails the B proposition).

The pragmatic conventions identified by the authors for the *let alone* construction that can be observed in (61) are schematically given in (62):
Given the semantic value of *mal* described above, the cp entails that the market entails *at most* two channels, and hence it implies a scalar bound (namely, that the market does not permit *more than two* channels). The tp is pragmatically entailed by the cp, since $3 > 2$. Crucially, not only is the tp understood as a negative proposition (i.e., the market does *not* permit three channels), but also the felicity of the construction relies upon the negative evaluation of the predicate contributed by *mal* in the cp.

The analysis proposed in this section supports the claim that natural languages provide grammatical devices that encode different types of negation (not only negation of the truth of a proposition); negation may operate on an implication which is assumed or inferable in the discourse context (Horn 1985, 1989, 2002b, Schwenter 2005) or it may operate on an expected norm.

6.3 Differences between the manner adverb and the approximative adverb: semantics and pragmatics

In the previous section, I have presented an account of the meaning of the approximative adverb *mal*. In this section, I build on this account to compare the manner adverb and the approximative adverb with respect to their semantic and pragmatic properties.

As an approximative adverb, *mal* does not entail a manner modification of the event denoted by the predicate under its scope (which is the meaning of the manner adverb). Therefore, (63) is not redundant, unlike (64). The former is true if João goes to the office...
very rarely and the quality of his work is poor, whereas the latter can only be felicitous in a context in which the speaker, for pragmatic reasons, deliberately echoes his/her opinion:

(63) O João mal trabalha e trabalha mal.
    ‘João barely works and he works poorly’.

(64) #O João trabalha mal e trabalha mal.
    ‘João works poorly and he works poorly’.

However, examples (65) through (68) show that although the negative evaluation is not semantically encoded, it seems to be implicated, since (65) and (66) are infelicitous, unlike (67) and (69):

(65) #O João mal trabalha e não trabalha mal.
    ‘João barely works and he doesn’t work poorly’.

(66) #O João mal trabalha e trabalha bem.
    ‘João barely works and he works well’.

(67) O João mal trabalha, mas não trabalha mal.
    ‘João barely works but he doesn’t work poorly’.

(68) O João mal trabalha, mas trabalha bem.
    ‘João barely works but he works well’.

The infelicity of (65) and (66) can be explained by the fact that the second conjunct goes against the expectations created by the first. Crucially, in (67) and (68) the denial of expectation (cf. Lakoff 1971)\(^90\) is made explicit by the adversative conjunction *mas* ‘but’. In (67) and (68), the negative evaluation (“João works poorly”) is implicated but is not a

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\(^90\) Following Ducrot and Anscombe’s (1977) analysis of *mais* ‘but’, if \(r\) is the possible conclusion drawn from \(p\), and \(q\) an argument against that conclusion, (1e) and (1f) would be an instance of “\(r = \sim q\)”.

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conventional part of the meaning of the approximative adverb, since it can be cancelled without contradiction.

In the following, I argue that this inference follows from the semantics of the adverb together with conversational maxims and world knowledge, but is not part of the semantic core of the adverb. I have argued elsewhere (Amaral 2006a) that the inference pertaining to the manner evaluation should be seen as an instance of the “Principle of Persistence” (Hopper 1991:28-30), given the diachronic relation between the manner adverb and the approximative adverb *mal*. According to this principle, earlier components of the meaning of a lexical item that undergoes semantic change are retained, possibly as conversational implicatures, in their polysemies, However, the felicity pattern with the conjunctions *and* and *but* shown in (69) through (72) undermines this view, unless we assume that a similar diachronic claim holds for *barely*, and hence that from the denotation of the manner adverb “in a bare manner” the same inference follows:

(69)  #John barely works and he works well.

(70)  John barely works but he works well.

(71)  John barely works and he works poorly.

(72)  #John barely works but he works poorly.

Rather, the manner implication can be explained in synchrony by the asserted content of *mal*, i.e., by the evaluation of the application of the predicate “works”, which is contributed by the adverb, to the argument “John”. The meaning of approximative adverbs is underspecified; although the most natural reading underlying the negative evaluation pertains to “how much” John works, this interpretation does not exhaust the contribution of *mal* or *barely*. Given
normal circumstances and according to world knowledge, it is hard to conceive that someone who works very little works well (although such an assertion would not be contradictory). Hence, the sentences in (63)-(68) and (73)-(74) share the felicity contrast just noted, but the first conjunct in (63) allows for a broader range of interpretations than those in (73)-(74):

(73) #O João trabalha pouco e trabalha bem. ‘João works little and he works well.’

(74) O João trabalha pouco mas trabalha bem. ‘João works little but he works well.’

The evaluation contributed by the proximal component of mal relies upon the quantificational force of the adverb, namely with the evaluation of “less than a norm”.

Moreover, there is linguistic evidence to the effect that the conceptual notions of quantity/degree and manner are frequently conflated (cf. the semantics of well (Kennedy and McNally 2005) and bem ‘well’ (Lopes 2004), e.g. Ele escreve bem ‘He writes well’ and Ele escreve bem depressa ‘He writes very fast’ (cf. English well vs well-worn or well-known)).

Moreover, (75) is ambiguous between a quantity and a manner reading (see also Ducrot 1972:254-5):

(75) Ele comeu bem. ‘He ate well’

Both synchronic and diachronic data provide examples of the use of mal that are ambiguous between a manner and a degree interpretation, as in (76) and (76) (cf. Amaral 2006a):

(76) Esta gaveta fecha mal. ‘This drawer doesn’t close well (i.e. not completely, in an insufficient manner)’
(77) quando // homem // come muito acedado e mui golosam (en)t(e) e muito asinha, 
assi que p(er) t(ri)guança mastigua mal sua vianda, (Castelo Perigoso, lib.1, cap. 12, 
f. 8r, CIPM, 15th century) 
‘when one eats very hurriedly and with much greediness and very quickly, so that 
because of haste one chews mal his food’

I have argued at several points that it is possible to paraphrase sentences in which mal occurs 
by using the scalar focus adverb só ‘only’ and an explicit mention of the low degree of a 
necessary and sufficient condition that underlies the evaluation. For this reason, it may be 
useful at this point to compare the meanings of the two adverbs.91

6.4 Difference between só ‘only’ and mal

In all the examples that will be analyzed in this section the constituent focused by the 
adverb só ‘only’ is the VP. The adverb só can associate with other focused constituents, with 
a truth-conditional effect, but mal always has scope over the VP.

Although a detailed analysis of the meaning of só is beyond the scope of this 
dissertation, I will assume that the semantic contribution of the adverb can be analyzed 
through the implications in (78’) and (78’’) (see König 1991, Horn 1996, Roberts 
forthcoming):

91 Across the Romance languages, there is an interesting correlation between the exclusive focus adverb and the 
approximative adverb. The cognates of the Portuguese adverb apenas ‘only’ (which differs from só in terms of 
register) are Sp. apenas, Fr. à peine and It. appena ‘barely’. Lang (2006) points to uses of the adverb so in the 
Portuguese-based creole of Santiago that are parallel to the use of mal as a temporal subordinator: Mal arranje 
outro trabalho, …. These uses are also possible in EP, as made apparent by (ii):

(i) So N ta atxá otu trabádju, N ta sai di li. (Lang 2006) 
‘As soon as I get another job, I’ll leave.’

(ii) É só eu arranjar outro trabalho, vou-me embora. 
be:PRES:3SG só I find:INF another job, go:PRES:1SG:CL away 
‘As soon as I get another job, I’ll leave.’
Given that in (78) the focus of the adverb is the verb phrase, the domain of the operator só is restricted to a set of contextually-relevant alternatives to the focus (presumably {it snowed, there was lightning,…}). König points out that only may or may not induce an ordering on the alternatives under consideration; a scalar interpretation may arise in certain contexts, although only the exclusive meaning is semantically encoded (see König 1991:99 ffw.). Whether only receives a scalar or a non-scalar reading depends on the lexical specification of the focus, as well as on contextual information. Hence, in (79), the non-scalar reading is obtained (at least in the absence of a particular context) whereas (80) can be used to assert that the person in question has no higher social rank than the one denoted by the focus of the adverb (König 1991:100; the use of capitals stands for prosodic prominence):

(79) Only JOHN came.

(80) He is only a PLUMBER.

The conjunction of the implications of só in (78’) and (78’’) shows that the prejacent implication of só (78’) is the same proposition as the polar component of mal; (78), like a
sentence containing *mal*, implies\(^92\) the truth of the proposition expressed by the sentence once the adverb is removed. Now, compare (81) with (82) and (83):

(81) Ontem mal choveu.
    ‘Yesterday it barely rained.’

(82) Ontem só choveu muito pouco.
    ‘Yesterday it only rained very little.’

(83) Ontem só choveu durante muito pouco tempo.
    ‘Yesterday it only rained for a very short period of time.’

The paraphrases of (81) given in (82) and (83) crucially rely upon the exclusive meaning of *só*; in (82), the contribution of *só* is to assert that all higher values on a scale of amount of rain are excluded (i.e., it didn’t rain more than a little bit). In (83), the relevant scale pertains to the duration of the eventuality of raining (it rained for a very short period of time). Both quantitative scales may be associated with the interpretation of (81) and are interrelated (presumably due to world knowledge), as shown by the infelicity of (84) and (85).

(84) #Ontem mal choveu, mas choveu durante muito tempo.
    ‘Yesterday it barely rained, but it rained for a very long time.’

(85) #Ontem mal choveu, mas choveu muito.
    ‘Yesterday it barely rained, but it rained a lot.’

Since (81) may be interpreted as entailing either (82) or (83) (or both), (81) induces an exclusive implication pertaining to whichever property is assumed as relevant for the

\(^92\) The discussion of the theoretical status of the prejacent of *only* (i.e., whether it is a presupposition, an implicature or an entailment) and its corresponding word in other languages is beyond the scope of this dissertation. For a thorough discussion of the arguments of each position see Roberts (forthcoming) and Horn (1996).
interpretation of the sentence: all degrees of the property that are higher than the low degree which is asserted are excluded.

The purpose of the comparison between só and mal in this section is twofold. First, the exclusive implication of só, as exemplified in (82) and (83), makes apparent the property and the degree quantification contributed by mal. Unlike what happens with só, in the case of mal the scalar value (which relates to the implicit pouco quantification) is semantically encoded. To paraphrase the contribution of mal to the meaning of a sentence by using só consists of making explicit the exclusive implication that can be drawn from the scalar semantics of the approximative adverb, and hence provides a justification for the evaluation of the applicability of the predicate, which is contributed by mal.

Second, the comparison between the “exclusive” implications of the two adverbs sheds light on the contribution of mal. The exclusive implication of mal follows from its scalar meaning and the corresponding stance of the speaker on the modified predicate; the choice of other possible predicates that are in paradigmatic opposition with the chosen one (e.g. in (81), choveu muito ‘it rained a lot’) is excluded. The predicate modified by mal is presented as “the most that the speaker can say” to describe the actual situation.

In the naturally-occurring example in (86), an episode that took place in the Russian Congress is described as a part of a (predicted) sequence of events through the use of ainda ‘still, yet’, namely Ieltsin’s fights against the Russian Congress, metaphorically referred to as “o braço-de-ferro” ‘wrist-wrestling’:

(86) Moscovo aguarda contra-ataque de Ieltsin. Congresso russo resiste. Ieltsin voltou a perder no Congresso, mas o braço-de-ferro ainda mal começou. (CP Ext 49524) ‘Moscow is waiting for Yeltsin’s counter-attack – The Russian Congress resists. Ieltsin lost again in the Congress, but the wrist-wrestling has barely started (lit. has still barely started).’
The presuppositions contributed by *ainda* and by the lexical semantics of *começar* introduce a sequence of events. Although both the meaning of *mal* and the meaning of *só* share the implication that the predicate holds, the evaluation of the current situation with respect to the description “*começar* (braço-de-ferro)” is contributed only by *mal*. The episode under consideration is described as a poor instantiation of the beginning of the fight between the two parties, on the basis of a comparison with what would be expected. Crucially, in this case the evaluation contributed by *mal* relies upon a comparison with a contextually assumed scalar norm (the speaker’s expectations pertaining to Yeltsin’s behavior and the intensity of his reaction).

The presence of *mal* means that the predicate *começou* is not entirely adequate to describe the situation, because what has been seen so far falls short of the reaction expected from Yeltsin, i.e., when compared with an “actual” or “real” attack from the President. Interestingly, the continuation of the passage confirms this interpretation:

(86’) Moscovo aguarda contra-ataque de Ieltsin Congresso russo resiste. Ieltsin voltou a perder no Congresso, mas o braço-de-ferro ainda *mal* começou. Ausente e em silêncio, o Presidente e primeiro-ministro, conhecido pela sua habilidade em se desembaraçar dos obstáculos, tem a última palavra. E só a usará no momento mais conveniente. (CP Ext 49524)

‘Absent-minded and silent, the President and Prime-Minister, who is well-known for his ability to overcome the obstacles, will certainly have the last word. And surely, he will only use it at the most appropriate moment.’

The prejacent and the exclusive implications of the constructed sentence in (87), where the adverb *só* ‘only’ replaces *mal*, are given in (87’) and (87’’). The relevant alternatives to the focused constituent, in this case the VP – i.e., the future events on the expected sequence – are excluded as of utterance time:
(87) …mas o braço-de-ferro ainda só começou.
…but the wrist-wrestling still only started

(87’) O braço-de-ferro começou.
‘the wrist-wrestling has started’

(87’’) Nenhuma outra fase do braço-de-ferro aconteceu.
‘Nothing but the start of the wrist-wrestling has happened’

Whereas (87) asserts that all higher values in the sequence of events are excluded, mal casts doubt on the predicate “começou”, on the basis of the scalar norm which is contextually assumed. Given that the observed reaction cannot be properly considered a start, the passage in (86) entails that, as of now, the predicted fight between President and Congress has not had more intense developments. The event is evaluated as not being a good instance of the “beginning” of the confrontation. In (86), the exclusive meaning of mal pertains to higher degrees on a scale of intensity of possible reactions, the current situation being assigned a low degree on such a sequence.

The previous example has shown the difference in meaning between só and mal. However, it is possible to find examples in which only one of the adverbs is possible, so (89), but not (88), is infelicitous:

(88) Quando o sol ainda mal ilumina a cidade, figuras de cabeça rapada e envoltas em panos cor de açafrão deslocam-se serenamente pelas ruas. (CP Ext 62490)
‘When the sun barely lightens the city (literally, still barely lightens), bald figures in saffron-colored clothing move about the streets calmly.’

(89) #Quando o sol ainda só ilumina a cidade when the sun still only lighten:PRES:3SG the city

In (88), the presence of mal asserts that the sunlight is very weak, the intensity of the sunlight at a later moment in the day being presumably the norm against which the current situation is described. Following Lübner (1989), I will assume that the adverb still presupposes a phase,
located after the phase that contains the event time, in which the negation of the predicate holds, i.e., in which the sunlight is not weak. Thus, in (88), the contribution of ainda ‘still’ is the presupposition that there will be higher degrees of intensity of the sunlight. Note that só would not be felicitous, as shown in (89), given its asserted exclusive meaning: there is no set of alternatives to the focused constituent that is contextually relevant (given world knowledge). Modification by mal in (88) pertains to the evaluation of the predicate on the basis of the property “strength of intensity”; higher degrees of intensity are excluded, as can be shown by the paraphrase of (88) with só:

(90) Quando o sol ainda só fracamente ilumina a cidade,…
    ‘When the sun only lightens the city in a weak manner (literally still only weakly)’

According to Ducrot’s (1972) analysis of the difference between seulement and à peine, both à peine and seulement presuppose the truth of the proposition obtained by removing the adverb, and differ in terms of their asserted content. According to Ducrot, the contribution of seulement and à peine can be analyzed as follows:

(91) seulement Y (where Y denotes the focused constituent): rien d’autre que Y (‘not other than Y’)

(92) à peine Y (where Y denotes the focused constituent): rien de plus que Y (‘not more than Y’)

Given that in certain contexts the constituent which is focused by seulement can only be interpreted as denoting a scalar value, the implication “not other than” amounts to “not more than”, as in (93) and (946), respectively (from Ducrot 1972):

(93) Il gagne seulement mille francs.
    ‘He only earns 1000 francs’
(94) Il gagne à peine mille francs.
‘He barely earns 1000 francs’

According to Ducrot, in this case, because the denotation of the focused constituent is an element of a total order, the interpretation of the two adverbs is equivalent. However, for the reasons pointed out above, I do not think that the two adverbs are ever equivalent in interpretation, even when the focused constituent is necessarily given a scalar interpretation. In (93), the sentence asserts that the person earns 1000 francs, and no more than that, whereas in (94) the sentence asserts an evaluation of the mentioned amount, on the basis of a comparison with an expected value (as constituting less than that value).

Moreover, Ducrot could not predict the difference in acceptability in the examples below, which constitute a modified version of the naturally-occurring (86):

(95) Ieltsin voltou a perder no Congresso, mas o braço-de-ferro ainda só começou. Nos próximos dias continuará o aceso confronto entre Presidente e Congresso.
‘Yeltsin lost again in the Congress, but the wrist-wrestling has only started (lit. has still only started). In the next days the intense confrontation between President and Congress will continue.’

(96) Ieltsin voltou a perder no Congresso, mas o braço-de-ferro ainda mal começou. #Nos próximos dias continuará o aceso confronto entre Presidente e Congresso.
‘Yeltsin lost again in the Congress, but the wrist-wrestling has barely started (lit. has still barely started). In the next days the intense confrontation between President and Congress will continue.’

The infelicity of (96) can be explained by the fact that the anaphoric presupposition of the verb “continuar” ‘to continue’ must be satisfied, i.e., the context must provide an instance of intense confrontation between President and Congress. Since só simply excludes further developments in the confrontation, this presupposition may be accommodated in (95). However, the asserted meaning of mal restricts the degree to which the actual start
instantiates a confrontation (since its “intensity” falls short of what would be expected), so not only does the sentence with *mal* not provide such an antecedent, but it would also yield a contradiction if such an assumption was accommodated, hence the continuation is infelicitous.

The difference between the exclusive implications of the two adverbs can be made apparent by comparing (97) and (98). Assume the following context: in a bike tour to Portugal, the competitors must go through the following sequence of cities, in this order: Sagres > Lisboa > Coimbra > Porto > Braga.

(97) O João só chegou a Lisboa.
    ‘João only made it to Lisbon’

(98) O João mal chegou a Lisboa.
    ‘João barely made it to Lisbon’

In this context, (97) means that João managed to complete successfully the first two stages of the competition, but not the other three. Crucially, (97) can be true if João managed to arrive at a point to the north of Lisbon, like Leiria, but didn’t ride farther north and didn’t reach Coimbra, which would be the next stage included in the set of alternatives to the focused constituent. In other words, the exclusive meaning of *só* pertains to the relevant alternatives in the contextually provided set. On the other hand, (98) means that João reached Lisbon, but asserts that he encountered difficulties even in the early stages of the competition (where, say, he came crawling into Lisbon). So, the truth of (98) does not allow for contexts in which João managed to ride beyond Lisbon (as is the case in (97)).

The crucial distinction between (97) and (98) pertains to the nature of the exclusive implication in the interpretation of the two adverbs. In the case of *só*, from a set of
alternatives \{p,q,r\}, só p asserts that q and r do not hold. In the case of *mal*, given the degree evaluation contributed by the adverb, the focused constituent constitutes the upper bound. Negating this bound yields an infelicitous utterance, as shown in (99), although if a marker of counter-expectation is provided, as in (100), the sentence is more acceptable (whereas (101) is clearly a contradiction).

(99)  #O João mal chegou a Lisboa, e possivelmente a Coimbra.
     ‘João barely made it to Lisbon, and possibly to Coimbra’

(100) O João mal chegou a Lisboa, mas mesmo assim conseguiu chegar a Coimbra.
     ‘João barely made it to Lisbon, but even still he managed to get to Coimbra.’

(101) #O João só chegou a Lisboa, mas mesmo assim conseguiu chegar a Coimbra.
     ‘João only made it to Lisbon, but even still he managed to get to Coimbra.

The difficulty in defeasing this implication relates to the proximal component of *mal*; the exclusive implication follows from the scalar meaning. Given the evaluation of the predicate which is contributed by the adverb, commitment to any stronger value than the modified predicate (on a contextually-assumed set of alternatives) is ruled out.

The implications contributed by the two adverbs can be summarized as follows:

<table>
<thead>
<tr>
<th></th>
<th>Truth of modified predicate</th>
<th>Exclusive</th>
<th>Scalar</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>mal</em></td>
<td>yes [polar component]</td>
<td>with respect to the property associated with the predicate: semantically encoded</td>
<td>semantically encoded, asserted</td>
</tr>
<tr>
<td><em>só</em></td>
<td>yes [prejacent implication]</td>
<td>semantically encoded, asserted</td>
<td>not semantically encoded</td>
</tr>
</tbody>
</table>

Table 6.2: Theoretical status of the implications of *mal* and *só*
The relation between the meanings of *mal* and *só* relates to the fact that both adverbs are “understaters”, following Israel’s (1996) terminology, i.e., they have a low informative (i-) value. With respect to *mal*, this can be shown by the following *or at least* and *in fact* tests borrowed from Horn and applied by Israel (1996:632-633):

(102) O João não dormiu, ou pelo menos *mal* dormiu.
    ‘João didn’t sleep, or at least (he) *mal* slept.’

(103) #O João *mal* dormiu, ou pelo menos *não* dormiu.
    ‘#João *mal* slept, or at least (he) didn’t sleep.’

(104) O João *mal* dormiu, na verdade não pregou olho.
    ‘João *mal* slept, in fact he didn’t sleep a wink.’

(105) #O João *não* pregou olho, na verdade *mal* dormiu.
    ‘#João didn’t sleep a wink, in fact he *mal* slept.’

This set of tests for pragmatic scales allows for the comparison of the relative position on a scale of forms that are in paradigmatic opposition. The use of the coordinating conjunction *ou pelo menos* ‘or at least’ is only felicitous if the first conjunct is a stronger term than the second, as shown by the contrast between (102) and (103), in which the stronger term is represented by the use of sentential negation. In (104) and (105), modification by *mal* is again compared to a stronger term, the VP idiom *pregar olho* ‘not to sleep a wink, literally “to nail an eye”’, an NPI that, according to Israel’s classification of minimizers, can be characterized as having a low quantitative value and a high informative value (i.e., is an “emphatic”, in Israel’s terms). As pointed out by Israel, understaters typically denote values

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93 Diachronically, one could hypothesize that the semantic change undergone by these items (PPI low scalar understaters) has to do with an increase in abstraction of their q-value, while keeping the same i-value (cf. *barely*). In other words, these items start by denoting a low point on a definite scalar dimension and this low scalar value becomes more abstract in that it extends to other possible semantic dimensions (in the case of *barely*, originally “without cover, naked”, in the case of *mal*, a deontic dimension).
that “tend to lie in the middle of the scale, clustering around the scalar norm” (Israel 1996:628). Another argument for treating *mal* as an understater is the fact that understaters cannot be combined with hedged constructions, unlike emphatics, hence the felicity contrast between (106) and (107):

(106) A Ana literalmente não pregou olho antes do dia do exame.
     ‘Ana literally didn’t sleep a wink before the day of her exam.’

(107) #A Ana literalmente *mal* dormiu antes do dia do exame.
     ‘#Ana literally *mal* slept before the day of her exam.’

In this chapter, I have focused on the semantic-pragmatic properties of *mal*, and I have argued that they exemplify the two criteria for the identification of the class of approximative adverbs, namely (i) evaluation of the applicability of the predicate to its argument and (ii) scalarity.
CHAPTER 7

THE SCALAR SEMANTICS OF MAL

In this chapter, I focus on the second criterion for the identification of approximative adverbs proposed in this dissertation, namely scalarity. I analyze the scalar meaning of mal and the way in which it sheds light on the linguistic construal contributed by the adverb, which was presented in chapter 6. In section 7.1, I flesh out the quantificational contribution of mal by showing how it underlies the semantic co-occurrence restrictions of the adverb, and I focus on the aspectual properties of the predicates that mal may co-occur with. In section 7.2, I show that besides aspectual constraints, mal displays polarity sensitivity and crucially interacts with the speaker’s presuppositions pertaining to the conditions for an eventuality to take place, as encoded in the semantics of implicative verbs. In section 7.3, I compare the meaning of mal with the meaning of post-verbal por pouco. In section 7.4, I demonstrate how the sensitivity of mal to contextual coordinates, as described in the previous sections, has a bearing on the determination of the truth conditions of the sentence, as shown by the inverted readings of mal. Section 7.5 provides concluding remarks.
7.1 Semantic co-occurrence restrictions of *mal*

In this section, I analyze the behavior of *mal* as a durative and a frequency adverb, and argue that like other degree adverbs *mal* is semantically polymorphic in that it is flexible with respect to the type of scale that it may combine with, the scale being provided by the modified expression (Doetjes 1997, Abeillé and Godard 2003, Abeillé et al 2004). In 7.1.1, I focus on the aspectual restrictions imposed by the adverb on the expressions that it may modify. In order to fully understand the range of interpretations obtained, it is necessary to consider the interplay between tense, aspect, and Aktionsarten. In 7.1.2, I describe the restrictions pertaining to the polarity of the modified predicate and I argue that these restrictions follow from the degree relation that *mal* introduces.

7.1.1 Aspectual restrictions imposed by the quantificational nature of *mal*

There are three main types of interpretations obtained with *mal*, all involving a different dimension of measurability of the modified predicate: (i) reduced number of instantiations of the eventuality\(^{94}\) within a certain time interval, (ii) reduced duration of the time interval during which the eventuality holds, and (iii) reduced quantity or extent of the implicit theme argument of the verb. The three types presuppose that the eventuality can be counted or measured along a certain dimension, and hence involve restrictions on the aspectual profile of the eventuality.

\(^{94}\) I will be using this term in the sense of Bach (1986).
7.1.1.1 Atelic predicates

Starting with the interpretation in (i), *mal* is a degree adverb that can have either a quantificational or a non-quantificational reading like “weak frequency adverbs”, e.g. French *souvent, rarement* (de Swart 1991:265-6). In this case, *mal* quantifies over times or events. Following de Swart (1991), I assume that *mal* may yield either a proportional or a frequency reading, and that in both cases the meaning of *mal* is vague, similarly to the meaning of the determiner *few*. The two types of interpretation are exemplified in (1) and (2):

(1) Quando estava a escrever a tese, o João mal ia ao cinema.
    ‘When he was writing his dissertation, João barely went to the movies.’

(2) O João mal vai ao cinema.
    ‘João barely goes to the movies (i.e., he goes to the movies very rarely).’

In (1), the meaning of *mal* can be analyzed as a tripartite structure, i.e., as involving a relation between two sets of times or occasions, along the lines of a generalized quantifier (proportional or relational reading, cf. de Swart 1991): of all the times where João could have gone to the movies during the period in which he was writing his dissertation, very few were times in which he went to the movies. According to the semantic analysis of *mal* proposed in section 6.2, the number of times that he went to the movies is less than some contextually assumed norm *n*. Hence, in (1), *mal* takes narrow scope over the *when*-clause, a test used to distinguish frequency from iterative adverbs, the latter taking wide scope over a *when*-clause (Johnston 1995). In (2), either a contextually defined time interval is assumed (an extended present that includes speech time) or, in what seems to be a more natural interpretation, the sentence means that in general João goes to the movies very rarely. This is a non-
quantificational reading which is cardinal but differs from the interpretation of iterative adverbs in that the meaning of *mal* is “sensitive to the recurrence of a type of event after a certain time” (de Swart 1991:267), i.e., it requires the plurality of discrete events of the same type.

In both cases the meaning of the adverb displays vagueness, albeit in a different way. In (1), the proportional reading is vague in that the (small) proportion of eventualities of going to the movies with respect to the total number of possible occasions within the time interval denoted by the *when*-clause is left unspecified. In (2), both the number of eventualities of going to the movies and the choice of time unit (as well as the size of the intervals between the eventualities) are unspecified.

In the interpretations exemplified in (1) and (2), *mal* behaves as a frequency adverb because it denotes a (vague) quantity of eventualities as relativized to a certain period of time, rather that an absolute quantity (a simple “counting” of events). The meaning of *mal* requires the notion of cyclic iteration of (ordered) instances of an eventuality-type over a time interval which may be either bounded or unbounded (unlike iterative adverbs, which necessarily quantify over closed sets of eventualities). However, unlike frequency adverbs like *frequently*, which involve a regular distribution of events over the time axis (Stump 1981, de Swart 1991), intuitively *mal* does not seem to require such regularity. Rather, what seems to be crucial is the iteration of occurrences of the same eventuality-type; such pluralization allows the occurrences to be counted and hence allows for their cardinality to be compared with a contextually assumed quantitative norm.

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95 Another way of accounting for these two readings, which would be compatible with the semantics of *mal* proposed in 6.2, would be to assume that *mal* modifies the operators *FREQ* or *HABIT* (conceived as predicates over eventualities that introduce a frequentative or a habitual interpretation), and denotes a comparison between the number of occurrences of the eventuality that hold in the described situation and the norm required by those predicates.
I argued in section 6.2, the meaning of *mal* involves an implicit quantifier *pouco* which maps the predicative relation onto a value on a scale, and denotes a relation between this value and a scalar norm. In this section, I will argue that the aspectual restrictions displayed by *mal* support this analysis;\(^{96}\) *mal* requires the verbal predicates that it may occur with to display cumulative reference.

Following Krifka (1989, 1992), I assume that a (nominal or a verbal) predicate has cumulative reference if and only if when applied to an entity \(x\) and to an entity \(y\), it equally describes the sum of those two entities. On the other hand, if a predicate has quantized reference, the entity of which the predicate is true does not contain a proper part which qualifies as the same predicate. The two properties are defined by Krifka as in (3) and (4):

\[
(3) \quad \forall P \left( CUM \left( P \right) \iff \forall x,y \left[ P(x) \land P(y) \rightarrow P(x \lor y) \right] \right) \text{ (the predicate } P \text{ has cumulative reference)}
\]

\[
(4) \quad \forall P \left( QUAN \left( P \right) \iff \forall x,y \left[ P(x) \land P(y) \rightarrow \neg \left( y < x \right) \right] \right) \text{ (the predicate } P \text{ has quantized reference)}
\]

To exemplify, in the nominal domain, the mass noun “tea” can be used to refer to the sum of several portions of tea. By the same token, in the verbal domain, the predicate “dance” can be used to denote a variable quantity of eventualities of dancing, as well as a single eventuality of dancing. On the other hand, the singular count noun “table” is quantized in that something which is a table does not contain a proper part of which “table” can be predicated. In the domain of eventualities, the proper sub-parts of the telic event of writing a sonata are eventualities of “writing”, but not of “writing a sonata”.

\(^{96}\) Although this particular case is not analyzed by de Swart (1991), she considers that iterative and frequency adverbs are quantifiers which have corresponding elements in the domain of determiners. Note that *few* also imposes semantic restrictions on its nominal arguments (in this case, countability and plurality).
The predicates with which the frequency interpretation of *mal* is obtained, exemplified in (5)-(7), meet the cumulative reference property. In these examples the adverb is interchangeable with *quase não* ‘almost not’:

(5) O João mal fuma.
the João *mal* smoke:PRES:3SG
‘João barely smokes.’

(6) O João mal vai ao cinema.
the João *mal* go:PRES:3SG to:the movies
‘João barely goes to the movies (i.e. he goes to the movies very rarely).’

(7) O João mal tem visitado a avó.
the João *mal* have:PRES:3SG visit:PPART[PPC] the grandmother
‘João has barely been visiting his grandmother (i.e., he has been visiting her very few times).’

In EP, the Present Tense receives either a habitual or a generic interpretation, with the exception of its co-occurrence with achievement predicates (in which case it is interpreted as a historic present or as an “immediate report”, normally restricted to certain genres). Because of the semantics of the Present Tense in Portuguese, both the predicates in (5) and (6) receive a habitual interpretation. In (5) and (6) *mal* describes the frequency with which João smokes or goes to the movies (in general) as very low. The aspectual restrictions are respected because both predicates are atelic, and hence display cumulative reference. Due to the habitual interpretation of the Present, the instantiations of the eventuality denoted by the predicate are viewed as plural and the eventuality as “iterable” (de Swart 1991). The connection between frequency adverbs and the semantics of “mass-like” predicates is also established in de Swart (1991:291).
Note that if the tenses that may contribute a habitual interpretation (the Present Tense and the *Imperfeito*) are interpreted as denoting a single eventuality, due to adverbial modification (e.g. with a subordinate clause, as in (8)), modification by *mal* is not acceptable. If, on the other hand, the temporal clause introduces a time interval to which the relevant plural instances of the eventuality are restricted, as in (9), modification by *mal* is possible:

(8) O João mal fumava quando a Ana entrou.
‘João was barely smoking when Ana came in.’

(9) Quando ele vivia em Portugal, mal fumava.
‘When he lived in Portugal, (he) barely smoked.’

In (9), the contribution of *mal* is to establish a relation between the predicate (*smoke*) and the time interval introduced by the *when*-clause (the time during which he lived in Portugal), such that the former predicate is instantiated very few times within that time interval. Crucially, a verb in the Present Tense if modified by *mal* cannot receive a “property” interpretation. So, although the sentence in (10), without the adverb, can mean “João is a student”, with *mal* the sentence is only acceptable under the frequency interpretation, as made apparent by its most natural paraphrase in (11):

(10) O João mal estuda.
‘João barely studies.’

(11) O João quase nunca estuda.
‘João almost never studies.’

Note that *mal* (unlike English *barely* and *hardly*) cannot modify a nominal predicate, as shown in (12):
(12)  *O João mal é estudante.
    ‘João is barely a student.’

In (7), *mal modifies an activity verb in the *Pretérito Perfeito Composto* (Present Perfect). In Portuguese, in main clauses this tense may yield either a continuative interpretation, on which the state may or may not obtain at utterance time (with stative predicates), or it may yield an iterative interpretation of the eventuality (with non-stative predicates). In (7), the iterated (plural) instances of visiting the grandmother are mapped onto a value that is less than a certain assumed norm on a quantitative scale.

The different interpretation of the EP Present Perfect with stative and non-stative predicates explains the difference in acceptability of *mal* in (13) and (14):

(13)  #O João mal tem estado doente.
    ‘João has barely been sick.’

(14)  O João mal tem lido o livro.
    ‘João has barely been reading from the book.’

In (13), the predicate in the *Pretérito Perfeito Composto* receives a continuative interpretation and is described as a single unbounded state; the boundaries of the time interval are not determined (João may be sick or not up till speech time). Hence, (13) is infelicitous and the only interpretation it could receive (if at all) would pertain to an evaluation of the seriousness of the disease experienced by João, where the gradability of the seriousness of the disease provides the scale that *mal* selects for. As for (14), in EP, the predicate *tem lido o livro* (i.e., unmodified by the adverb) denotes different occasions of reading which are separated by intervals. Crucially, it is interpreted as “reading from the book”, hence the iteration pertains to eventualities of reading parts of the (same) book, and
the predicate does not receive a telic interpretation. Since the *Pretérito Perfeito Composto* triggers an iterative interpretation with non-stative verbs, the adverb quantifies over the number of iterations of the book-reading eventuality and the sentence is felicitous.

The proportional or relational interpretation of *mal* may depend on adverbial modification, as in (15) and (16):

(15) O João *mal* foi à escola em Janeiro, porque esteve doente muitas vezes.  
    ‘João barely went to school in January, because he was sick many times.’

(16) O João *mal* escreveu cartas em Janeiro (mas escreveu muitos emails).  
    ‘João barely wrote letters in January (but he wrote a lot of emails).’

In (15) and (16), *mal* evaluates the number of times that the eventualities of João going to school and João writing letters, respectively, obtained during a certain period of time, as restricted by the temporal adverbial “em Janeiro” (‘during the month of January’). The restriction introduced by the temporal adverbial contributes the determination of the domain of quantification for the adverb *mal*. The presence of the adverbial is crucial, since both sentences *O João *mal* foi à escola*, *O João *mal* escreveu cartas*, without the temporal modification, are infelicitous.97 Without the adverbial, the predicates could be felicitously modified if occurring in a tense denoting iterated occurrences of an eventuality, like the *Pret. Perfeito Composto*, as in (7) above: *O João *mal* tem ido à escola* ‘João has barely been going to school (these days) ’, *O João *mal* tem escrito cartas* ‘João has barely been writing letters’.

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97 In an out-of-the-blue context, the most likely interpretation of (15) involves adding an (implicit) adverbial like “during his whole life” that restricts the domain of quantification (hence, the meaning would be that he attended school on very few occasions during his whole life). But crucially this interpretation requires that the speaker assumes a certain time interval (in this case, the period of time in one’s life during which it is normal to go to school); the restriction could be paraphrased as “For all occasions that are occasions of João going to school, these occasions are few”. The same interpretation would be obtained with the verb in the *Imperfeito do Indicativo*; modification by *mal* would be acceptable only with an adverbial clause restricting the domain of quantification: (i) *Quando vivia em Lisboa, o João *mal* ia à escola.* ‘When he lived in Lisbon (=during the time interval in which he lived in Lisbon), João barely went to school.’
These data provide further evidence to treat *mal* as a “weak frequency adverb”; according to de Swart, such adverbs are “expressions of cyclic iteration” (de Swart 1991:293) which introduce a quantity of times relativized to a time interval.

These examples show that the scalar nature of *mal* imposes specific semantic restrictions on the predicates that it may modify; the eventualities must display cumulative reference and it must be possible to identify discrete individual occurrences of the same eventuality, a condition which is fulfilled by the construal of indefinite plural events, i.e., events that are “iterable”. As pointed out by Doetjes (2001), the denotations of predicates that display the cumulative reference property can be conceived of as a scale, since they may vary in quantity while qualifying as the same predicate, hence allowing for combination with degree adverbs. In fact, we verify the unacceptability of *mal* with predicates that denote a “one time event”; this is shown in (17), where world knowledge prevents an interpretation in which there are plural occurrences of the same eventuality:

(17) #Em 1498, Vasco da Gama mal descobriu o caminho para a Índia.
‘In 1498, Vasco da Gama barely discovered the (maritime) way to India.’

As predicted from the generalization above, with stative verbs in the Present Tense, *mal* yields unacceptable sentences (see (18)-(20)):

(18) *O João mal tem os olhos azuis.
‘João barely has blue eyes.’

98 For degree adverbs that may modify both nominal and verbal expressions, like French *beaucoup*, the polymorphism of the adverb can be seen by the fact that despite the possibility of combination with different syntactic categories, the distribution of the adverb is determined by its semantic restrictions (Doetjes 2001:126-7):

(i) #beaucoup de cheval
(ii) beaucoup de thé
(iii) Anne danse beaucoup.
In (18), co-occurrence with *mal* is ruled out, since a permanent property of an individual cannot be temporally circumscribed and this particular property is not measurable (unlike, e.g. “to know French”, which may hold to varying degrees). However, the predicates in (19) and (20) are acceptable with *mal* if they occur in the *Pretérito Perfeito Simples*[^100] and not in the Present tense, and in this case a durative interpretation is obtained. In (19’) and (20’), the adverb measures the duration of the time interval during which the eventuality obtained (again, as being less than *n*, a contextually given norm). By locating the eventuality in a time which is prior to speech time, the *Pretérito Perfeito Simples* introduces a temporal boundary to the eventuality, and implicates that the eventuality does not hold at speech time. So, in the absence of more information, from the unmodified predicates in (19’) and (20’), one can infer that the contrary state holds at utterance time, namely that João is not sick anymore and that João does not live in Lisbon at the present time (although it is not contradictory to assert, after a sentence with this tense, that the eventuality still holds at speech time).[^101]

[^99]: If acceptable at all, this sentence can only be interpreted if we assume that *mal* modifies the locative PP, and hence evaluates the applicability of the predicate “in Lisbon” to the location in which João lives. The same interpretation would be obtained with the *Imperfeito do Indicativo*: (i) #O João mal vivia [live:IMPF:3SG] em Lisboa. Another possibility of rendering (20) acceptable is by creating a context that induces the individuation of occasions of living in Lisbon (e.g. by contrasting them with amounts of time spent living in other European cities).

[^100]: Although the *Pretérito Perfeito Simples* is a past tense that normally has a perfective aspectual value, it is not necessarily the case that it always conveys perfective aspect. A detailed analysis of the semantic and pragmatic value of this tense is beyond the scope of this dissertation (see Oliveira 2004, Lopes and Oliveira 1995, Cipria and Roberts 2000 for Spanish).

[^101]: The predicate in (18) may not occur with the Simple Past on independent grounds, since the state in this example is an Individual Level Predicate (ILP), i.e., it denotes a permanent property of its argument. Since the
The contribution of *mal* in (19’) and (20’) is to measure the duration of the time interval during which the state obtained as being very reduced. In both examples, adequate paraphrases of the contribution of *mal* could be provided by adding to the verb phrase the adverb *só* with focus on the durative adverbial phrase *durante muito pouco tempo*, i.e., ‘only VP-ed for a very short period of time’. Given the semantics of the *Pretérito Perfeito Simples*, the time interval during which the state obtains may be measured.

The aspectual restrictions of *mal* and the differences in interpretation obtained according to the aspectual characterization of the predicate are consistent with the analysis of *mal* as denoting a measure (either of a time interval or of a number of instantiations of an eventuality within a time interval), which is determined by comparison with a norm. This underlies the unacceptability of modification by *mal* with the *Imperfeito do Indicativo* in the predicates in (19) and (20) are Stage Level Predicates (SLP), i.e., they denote temporary properties of the argument and hence are temporally restricted, their semantics is compatible with the semantics of the *Pretérito Perfeito Simples*.

102 According to some native speakers, in (19’) a less natural but possible interpretation pertains to how serious the disease was. This issue pertains to the versatility of the interpretation of degree adverbs: like other degree adverbs, which are also semantically polymorphic, *mal* is versatile because the notion of degree can involve different scales, e.g. a scale of quantity, a scale of intensity, etc.. This point relates to the difference between the meaning of *mal* and *pouco* described in chapter 6, since it explains why the interpretations of (19’) and *O João esteve pouco doente* ‘João was little (=not very) sick’ are different. The sentence with *mal* is underspecified as to the property or properties that underlie the negative evaluation of the predicate, by comparing the situation in the actual world with a scalar norm, whereas the sentence with *pouco* can only refer to how serious the disease was (in order to refer to duration, the circumstantial information would have to be made explicit, as in *O João esteve doente pouco tempo* ‘João was sick for a short amount of time’). In (19’), due to world knowledge, the length of a disease is likely to correlate with the degree to which it is serious.
cases in which the predicate denotes a single unbounded eventuality and hence a “countable” interpretation is not possible.

Here, a distinction between (a)telicity and (un)boundedness becomes relevant (cf. Depraetere 1995); although the eventualities in (19)-(20) and (19’)-(20’) are atelic, in that the situation they describe does not contain an inherent endpoint, in (19’) and (20’) the time interval during which they are said to hold is temporally bounded, due to the meaning of the \textit{Pretérito Perfeito Simples}.

A durative interpretation is also obtained with activity verbs, as in (21) and (22). In these examples, there is a correlation between the time interval during which the predicate was true and the amount of the unspecified argument of the verb that was consumed (the cigarette was lit for a very small amount of time, the amount of food consumed was very small). In this case, the eventuality may be measured along two (correlated) dimensions:

(21) O João mal fumou.
    ‘João barely smoked.’

(22) O João mal comeu.
    ‘João barely ate.’

The same interpretation is obtained if the boundedness of the eventuality is given not by tense, as in (21) and (22), where the verb occurs in the \textit{Pretérito Perfeito Simples}, but rather by an adverbial clause, as in (23); each eventuality of being nervous was such that João smoked a little bit:

(23) Todas as vezes que estava nervoso, o João mal fumava.
    ‘Whenever (he) was nervous (lit. all the times that he was nervous), João barely smoked (i.e., he only smoked a little bit).’
In (23), *mal* denotes a very short duration of each eventuality of smoking, correlating with the amount of the implicit argument that was consumed.

The semantic restrictions observed so far (only taking into consideration atelic predicates) can be summarized as follows:103

The eventuality over which *mal* has scope must be “measurable” with respect to at least one of the following parameters:

(i) duration of time interval during which the eventuality holds: durative interpretation of *mal* (with stative SLP and activity verbs, if bounded), e.g. *mal viveu em Lisboa, mal dormiu*;
(ii) number of instantiations of the eventuality: frequency interpretation of *mal* (either quantificational or non-quantificational), if identification of individual occurrences of the same eventuality is possible, e.g. *fuma*;104
(iii) quantity or extent of the unspecified object of the verb, e.g. *mal fumou, mal comeu*.

If the predicate does not display measurability along any of these parameters and the time interval during which it holds is unbounded (e.g. stative eventualities in the Present or in the *Imperfeito*, e.g. *vive, vivia em Lisboa*), co-occurrence with *mal* is ruled out. Crucially, besides the aspectual properties analyzed, both the lexical semantics of verbs and more general properties of the predicates (e.g. the ILP/SLP distinction) play a role in determining whether the predicate displays “measurability”.

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103 A note on terminology for this section is called for. The “bounded/unbounded” distinction (from Depraetere 1995) pertains to grammatical aspect (Smith’s “viewpoint aspect”), whereas the “telic/atelic” distinction pertains to lexical aspect. In the examples discussed, the “bounded/unbounded” distinction is given through the use of the *Pretérito Perfeito Simples* versus the *Imperfeito do Indicativo* or the *Presente do Indicativo*, respectively.

104 This issue hinges on the question of what is the correspondent, in the verbal domain, to plural marking in the nominal domain (cf. Cusic 1981, Doetjes 1997, Van Geenhoven 2004), and in particular what is the generalization that captures the “iterability” and possibility of individuation of certain eventualities. The co-occurrence restrictions of *mal* summarized here suggest that *mal* displays sensitivity to “ pluractional” operators (of which frequentative aspect may be an instance, as proposed by Van Geenhoven 2004).
To sum up, in this section I have analyzed the correlation between the durative and frequency interpretations of *mal* with the aspectual characterization of the modified predicates. The semantic restrictions imposed by *mal* on the modified predicates are countability and cumulative reference. Both restrictions follow from the semantics of the adverb that was proposed above. The former follows from the quantificational nature of the adverb; evaluating a certain quantity as being *less than a norm* presupposes that that quantity can be determined in the first place, i.e., that the entities can be “counted”. The requirement of cumulative reference directly correlates with the scalar semantics of the adverb; only predicates that display either plural or “mass” behavior can define a scale, since the minimal parts in their domain of denotation (parts of “stuff” in the case of mass predicates) can be ordered with respect to each other by the *part of*-relation (see Doetjes 1997 for a formal implementation). The “countability” requirement of *mal* relates both to cumulative reference and to the pluralization of events enforced by *mal*: “…as far as temporality is concerned, counting implies reference to a succession of eventualities or moments of time. ‘Non-counting’, on the other hand, implies global reference to a single eventuality (moment of time).” (Molendijk 2001:68)

### 7.1.1.2 Telic predicates

With telic eventualities, both simple and complex, the acceptability of *mal* decreases. Because of the semantic restrictions just described, the adverb cannot modify achievement or accomplishment predicates, since they do not meet the cumulative reference requirement.
Like singular count nouns, achievements and accomplishments display quantized reference.

The infelicity of achievement predicates with *mal* is exemplified in (24) and (25):

(24) #O João *mal* chegou.\(^{105}\)
    the João *mal* arrive:SPAST:3SG

(25) #O João *mal* alcançou o topo.
    the João *mal* reach:SPAST:3SG the top

As pointed out by Dowty (1979, 1987) with respect to the discussion of the durative vs punctual character of achievement predicates, the question is not so much whether achievements have any duration *per se*, but rather how they are perceived. Achievements are perceived as a change of state, as the transition from a state of affairs to another state of affairs. Given the non-durative nature of achievement predicates, the duration of the time interval during which the event takes place cannot be evaluated.

Interestingly, *mal* may co-occur with achievement predicates if a time located after the event time of the predicate is either contextually or explicitly provided. This allows for the identification of a bounded interval of time that spans between the onset of the resultant state of the telic event and the following time point. In this case, what is evaluated is the duration of the interval (which again is homogeneous), hence yielding a durative interpretation of the adverb. These interpretations may be regarded as cases of aspectual coercion (Moens and Steedman 1988, de Swart 1998).

The shift enforced by *mal* in sentences with achievement predicates induces an interpretation in which what is measured is the duration of the state brought about by the achievement, in particular the time interval during which the resultant state holds. This is

\(^{105}\) But the sentence in (i) is perfectly acceptable (the adverb is evaluating the predicate *a tempo*).

(i) O João *mal* chegou a tempo.
    ‘João barely arrived on time.’
exemplified in (26), where *mal* evaluates the time interval during which the plane is on the ground:

(26) **Mal** poisou na pista
    *mal* set-foot:SPAST:3SG in:the runway
    mas o tempo foi suficiente para os tripulantes trocarem saudações civis com os nossos protectores! (CP Ext 55741)
    ‘(It) barely touched the ground but the time was enough for the people on board to exchange greetings with those protecting us!’

In (26), the resultant state of the achievement (here, the state of the plane being on the ground) has duration, albeit a very reduced one. The left boundary of the time interval whose duration is evaluated is the onset of the resultant state of the first event. As pointed out above, the time interval under evaluation must be bounded; in fact, in many examples it is possible to find an explicit sequential relation between two eventualities, as in (27):

(27) João *mal* chegou, e já queres que saia contigo!
    ‘João has just (*mal*) arrived, and you already want him to go out with you!’

This example can be paraphrased as in (27’):

(27’) O João ainda só agora chegou,¹⁰⁶ e já queres que saia contigo!
    the João still only now arrive: SPAST:3SG,…

¹⁰⁶ It is important to point out that in out-of-the-blue examples the interpretation with achievements is only possible by implicitly creating a right boundary to the time interval, the most natural one being speech time, in (27’) explicitly indexed by the presence of *agora* ‘now’. In the example *As aulas mal começaram* ‘The classes have barely started’ discussed above, the process brought about by the predicate is assumed to be ongoing, and takes place within a time interval which is bounded on the left by the inception of the process and on the right by speech time. The acceptability of these examples improves considerably if we add to the achievement predicates the adverb *ainda* ‘still’.
The reduced duration of the time interval between the two eventualities is reinforced by the contribution of já ‘already’, which signals the earliness of the second eventuality (Löbner 1989) in the naturally-occurring example below:

(28) Mal chegaram e já de partida... (CP Ext 73934)

*mal* arrive: SPAST:3PL and *already* leaving

‘They have barely arrived and they (must) already leave’

The event time of the achievement predicate in the Simple Past in (29) (*iniciou*) is retrieved by the anaphoric adverb *logo* ‘immediately after’, and provides the reference time for the second event:

(29) Mal tomou posse e iniciou os trabalhos, a comissão enfrentou *logo* a polémica e dividiu-se, com o PSD e PS, cada um pelo seu lado,… (CP Ext 182711)

‘(He) had barely assumed the office and started working, the commission immediately after that had to face the dispute and it got split, with the PSD and PS, each taking a different side…’

With accomplishments or complex telics, modification with *mal* in out-of-the-blue contexts yields infelicitous utterances, as in (30) and (31).

(30) #O João mal escreveu um romance.

the João *mal* write:SPAST:3SG a novel

(31) #O João mal comeu o bolo.

the João *mal* eat: SPAST:3SG the cake

Since the semantics of accomplishment predicates involves duration, given the co-occurrence restrictions of *mal* presented above, one would expect that they are compatible with *mal*. However, there is a crucial difference between this case and that of states and activities mentioned above. Whereas atelic predicates display cumulative reference, accomplishments
are heterogeneous and hence display quantized reference, according to the definition provided above. Accomplishments have a complex internal structure in which the telos plays a crucial role.

As with achievements, the sentence becomes more acceptable if the context provides a bounded time interval whose beginning is the onset of the resultant state of the accomplishment, as in (32):

(32) O João *mal* comeu o bolo, pediu Logo outro.

Moreover, the telic component of the semantics of the past participle (cf. Bosque 1989) explains the same value in absolute constructions like the following:

(33) *Mal* sentados, eis que nos chega o excelente pão galego… (CP Ext 115502)

‘Barely (were we) seated, there it comes, the excellent Galician bread…’

Similar examples with telic predicates, yielding the coerced interpretation, are found with the *Mais-que-perfeito do Indicativo* (Past Perfect). The semantics of this tense provides the time interval whose duration may be measured by *mal*. This tense is anaphoric in that it requires a contextually-provided reference time, as schematically given in the Reichenbachian representation in (34), where the underscore represents a precedence relation on times:

(34) Past Perfect: E_R_S
In examples with the Past Perfect, the time interval whose duration is measured by \textit{mal} extends from the onset of the resultant state of the event denoted by the verb in the Pluperfect up till the beginning of the event that provides the reference time (given by a past tense: either the \textit{Pretérito Perfeito Simples} or the \textit{Imperfeito}):

\begin{equation}
\textbf{(35)} \quad \text{Mal tinha sido engolida a sobremesa, já José Megre subia para cima de uma carrinha de caixa aberta, megafone em punho, e anunciava a primeira prova. (CP Ext 20385)} \quad \text{‘Barely had the dessert been swallowed, José Megre [proper name] gets up on a truck…announcing the first competition round.’}
\end{equation}

In some of these examples with telic predicates \textit{mal} is ambiguous between the approximative adverb and the adverbial subordinator with a temporal value, as in (36):

\begin{equation}
\textbf{(36)} \quad \text{Mal arrancaram as primeiras notas, viu-se logo como ia ser. (CP Ext 26312)} \quad \text{‘As soon as the first notes had started/Barely had the first notes started, one could immediately see how the whole thing would be’}
\end{equation}

In diachronic terms, these examples can be interpreted as “bridging contexts” (Heine 2002), i.e., ambiguous contexts providing the conditions for semantic change, which are at the origin of the temporal meaning of \textit{mal} ‘as soon as’ (cf. Amaral 2006a).

There is a test that allows us to distinguish between \textit{mal} as an approximative adverb and as a temporal adverb: only the former can be modified by \textit{ainda} ‘still’ and \textit{já} ‘already’, as shown by the ungrammaticality of (37) and (38) (see Ernst (2002) for the syntactic restrictions of aspectual adverbs):
(37) *Ainda mal o João chegou a casa,  
still mal the João arrive:SPAST:3SG at home,  
tocou o telefone.  
ing:SPAST:3SG the phone
(38) *Já mal chegou a casa,  
already mal arrive:SPAST:3SG at home, 
tocou o telefone.  
ing:SPAST:3SG the phone

Note that in (36) the adverb is in paradigmatic opposition with assim que, depois que ‘as soon as, right after’, and the sentence could not felicitously occur in isolation:

(36’) #Mal arrancaram as primeiras notas.  
mal start:SPAST:3PL the first notes

However, (36’) may felicitously occur in isolation if the context entails the existence of a bounded time interval during which the resultant state holds, and whose extent is evaluated by the adverb. Imagine the following context: two friends go to a concert, and the second one arrives late. When he enters the concert hall, the dialogue in (39) takes place. Crucially, the time at which A enters the concert hall provides the rightmost boundary of the time interval during which the resultant state of the event denoted by the predicate arrancaram holds:

(39) A: Já começou há muito tempo?  
‘Has it started a long time ago?’
B: Não, mal arrancaram as primeiras notas.  
‘No, the first notes have barely started.’

In this context the sentence is felicitous; an adequate paraphrase would be (39’):

(39’) B’: Ainda só arrancaram as primeiras notas,  
still only start:SPAST:3PL the first notes
B’: ‘Only the first notes have been played.’
In this section, I have described the aspectual restrictions of *mal* and I have argued that *mal* may only combine with eventualities that are countable and display cumulative reference. This restriction may trigger aspectual coercion, as shown by the interpretation obtained with telic eventualities.

### 7.1.2 Semantic restrictions that pertain to polarity sensitivity

In this section, I show that the co-occurrence restrictions of *mal* cannot be determined solely on the basis of the aspectual characterization of the predicate. In fact, modification by *mal* is acceptable with certain stative predicates, but not with others, as shown by the contrast between (40) and (41). I will show that *mal* imposes polarity restrictions on the predicates that it may occur with, and that these restrictions follow from the semantics of the adverb.

(40) Só o movimento do rio parece pôr vida onde ela já *mal* existe. (CP Ext 21939) ‘Only the movement of the river seems to bring life to a place in which it already barely exists.’

(41) #Já *mal* falta vida no rio.107
already *mal* lack:PRES:3SG life in:the river

The interpretation of *mal* obtained in (40) pertains to a scale made available by the lexical semantics of the verb; *mal* asserts the scarcity of life in the place being described.

Whereas both *mal* and *quase não* may felicitously occur with the predicate *existir* ‘to exist’, only the latter is felicitous with the predicate *faltar* ‘to lack’.

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107 Modification by *mal* is also unacceptable with synonyms of *faltar* ‘to lack’: #mal carece/#mal escasseia/#mal rareia/#mal se torna escasso ‘*mal* lacks’.
The difference is that in (40), *mal* occurs with a predicate that has positive polarity in the sense that it asserts the existence of some entity or some property, whereas in (41) it is not acceptable since it occurs with a predicate that entails a negation.

This polarity restriction arises as a natural consequence of the semantics of *mal* which was proposed above. If the contribution of *mal* to the meaning of a sentence is to restrict the degree to which the argument of the predicate has a presupposed property, it seems only natural that *mal* cannot co-occur with a predicate that asserts the negation of that property (as is the case with *faltar* ‘to lack’). The comparison between the degree to which an entity has a certain property and the value which is the assumed norm for that property requires that the modified predicate asserts that the property holds to some extent of the argument of the verb.

Another example of the polarity sensitivity of *mal* is provided by the pair below; *mal* (and *quase não*) may felicitously occur with the predicate *cumprir* ‘to fulfil, to satisfy a (legal) requirement’, as in (45), but *mal* may not occur with the predicate *deixar por* ‘not to fulfil, not to satisfy a (legal) requirement’, as in (47):

(45) Há criminosos que *mal* cumprem penas e vêem os seus castigos reduzidos em mais de dois terços; como há delinquentes que, condenados, não chegam a cumprir um dia (…) (CP Ext. 25080)
‘There are some criminals who barely (*mal*) serve any of their sentences and have them reduced by more than two thirds; likewise there are some delinquents who are sentenced and yet do not serve for a single day.’

(46) Há criminosos que quase não cumprem penas.
‘There are some criminals who almost do not serve any of their sentences’

(47) #...Há criminosos que *mal* deixam as penas por cumprir.
There are criminals who *mal* leave their sentences unfulfilled.

(48) Há criminosos que quase não deixam as penas por cumprir.
‘There are some criminals who almost do not leave their sentences unfulfilled’

Finally, the same pattern is observed with the pair of predicates *conseguir* ‘manage to, be able to’ and *falhar* ‘fail’; *mal* may modify the former, but not the latter, as shown in (49) and (50). Crucially, *quase* may combine with both types of predicates, as well as with their negation, as shown in (51)-(54):

(49) O David *mal* conseguiu pagar o empréstimo.
‘David barely managed to pay his loan.’

(50) #O David *mal* falhou o pagamento do empréstimo.
#the David *mal* fail:SPAST:3SG the payment of:the loan

(51) O David *quase* conseguiu pagar o empréstimo.
‘David almost managed to pay his loan.’

(52) O David *quase* não conseguiu pagar o empréstimo.
‘David almost didn’t manage to pay his loan’

(53) O David *quase* falhou o pagamento do empréstimo.
‘David almost failed to pay his loan’

(54) O David *quase* não falhou o pagamento do empréstimo.
‘David almost didn’t fail to pay his loan’
In this section, I have shown that *mal* displays sensitivity not only to the aspectual properties of the modified predicate, but also to its polarity (e.g. both *existir* and *faltar* denote states, but only the former may co-occur with *mal*). In this respect, *mal* differs from *quase*, in that, as shown in chapter 4, the distribution of the latter is only restricted by the aspectual class of the predicate (in particular, what is relevant is the correlation between telicity and closure).

The data suggest that *mal* is a polarity sensitive item (PSI), and more specifically a positive polarity item (PPI). The nature of this sensitivity is explored in more detail in the next section.

### 7.2 Polarity sensitivity and more: why are implicative verbs relevant

In this section, I flesh out the polarity sensitivity of *mal* by showing that the adverb may also occur in a sentence in which the truth of a predicate is not asserted but implied. In

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**Footnotes:**

108 It was pointed out above that the semantics of *mal* shares the evaluation of a certain entity as lacking an expected property of a category with the “class B un-noun”. To be precise, in the case of *mal*, the expectation (contributed by the norm which constitutes the standard of comparison) pertains to the degree of a property and not to the property of a category. As pointed out by Horn, the stems with which the affix *un-* (and also *iN-*) may combine must correspond either to extreme positive values or be evaluatively neutral. The nature of the correlation between aspectual properties and the evaluative/emotive value of the predicates with which *mal* and the negative affixes may combine (cf. Horn 1989) is worth further exploration. Note that in Ryle’s (1949) classification of predicates, the word “achievement” (which he coined) did not correspond to an aspectual classification (unlike Vendler’s notion of *achievement*). Although later this terminology was used and tested by purely linguistic (aspectual) criteria, originally it was intended to designate a class of verbs that denote actions expressing success or failure (hence their name). “Achievement words” were understood as “success words” or “got it words” vs “failure words” or “missed it words”: as argued by Ryle, some of these verbs denote sudden climaxes, others denote proceedings with a certain duration (e.g. *win, find, cure, convince, prove, unlock, unearth*). The meanings of these verbs differ from the meaning of related activity predicates, as shown by the following pairs (cf. Kearns 2003):

- Kicking and scoring
- Treating and healing
- Travelling and arriving

Whereas the first verb denotes an activity, the second denotes a successful result which takes place in a particular moment; they are not performances but rather the fact that certain performances have had certain results. “They are not tryings, but things got by trying or by luck” (Ryle 1949:152). Moreover, as noted by Ryle, there can be achievements which are prefaced by no task performance: we can find something without having searched.

109 According to Israel (1996), PPIs are only licensed in neutral or [-Affective] contexts.
particular, I consider the co-occurrence of *mal* with a class of verbs (“Implicative Verbs”, following Karttunen 1971) that encode information about the conditions for the event denoted by its complement clause to hold. This section has two main purposes: (i) to show that the adverb is sensitive to linguistically encoded assumptions about the successful or non-successful realization of an event, and (ii) to show that the semantic behavior of implicative verbs sheds light on the meaning of *mal*, especially on its proximal component.

In the previous section, I observed that the aspectual properties of the predicate cannot entirely account for the co-occurrence restrictions of *mal*. Among stative predicates, only a certain number accept modification by *mal*, like the predicates *dar para* ‘to be enough for, to afford’ and *sustentar* ‘to allow’ in (55) and (56):

(55) «O programa Ciência já não dá para as cadeiras e o nosso orçamento *mal* dá para manter o museu aberto», lamenta o director, pois os 200 mil contos foram gastos num projecto de remodelação integral das instalações (…) (CP Ext 137162)  
‘The Program Science is already not enough for the chairs and our budget *mal* is enough to keep our museum open’, says the director regretfully, as the 200million escudos were spent in a project to totally redo the space…’

(56) É sabido como o fraquíssimo mercado publicitário português já *mal* sustenta dois canais privados, quanto mais três. (CP Ext 546271)  
‘It is well known how the weak Portuguese market of advertising already *mal* allows for two private channels, let alone three’

The modified predicates in (55) and (56) can be grouped together with a set of verbs from other aspectual classes, like *cchengar a* ‘to get to’, *conseguir* ‘to manage’, *atingir* ‘to reach’, *attever-se* ‘to dare’, *attever-se* ‘to manage’, *atrever-se* ‘to dare’, *atingir* ‘to reach’, *ter oportunidade de* ‘to have the opportunity to’, *dar-se ao trabalho de* ‘to bother’, *ter tempo para* ‘to have the time to’. What the meaning of these verbs has in common is that they all contribute a presupposition about the conditions for a
certain eventuality to hold (the eventuality being denoted either by a complement clause or by a nominal complement of the verb).

Such a presupposition may pertain to the speakers’ assumptions about necessary properties of the agent (e.g. with respect to skills, effort involved, willingness to perform the act) or about the general conditions or circumstances normally associated with the eventuality. Hence, in (57), the verb *chegar a* ‘to get to, to reach’ presupposes that some difficulty or obstacle for the realization of the event is assumed, whereas in (58) the presupposition is that the realization of the event requires specific properties of the agent, like courage or willingness to perform a difficult task:

(57) Há aquela história de um aspirante a actor … de nome Jack Curtis, que apareceu um dia na … Factory de Andy Warhol para «ser filmado». … Curtis *mal* chegou a entrar nos filmes. Diz-se que o seu maior «papel» acabou por ser andar pela Factory a observar quem por lá entrava... Seria isso o que este queria dizer com a expressão "15 minutos de fama"? (CP Ext 434789)

‘There is this story of a guy who wanted to be an actor…his name was Jack Curtis…he showed up at Andy Warhol’s Factory “to be filmed”. Curtis *mal* got to enter in the movies. People say that his biggest “role” ended up being walking around in the Factory looking at the people who came in…Maybe this is what this guy meant by “15 minutes of fame”?’

(58) Enquanto os contingentes das Nações Unidas, fracamente equipados e pior coordenados, se remeteram a uma total passividade, *mal* se atrevendo a pôr o pé fora dos quartéis (…) (CP Ext 1460248)

‘While the UN troops, poorly equipped and even more poorly coordinated, started being totally passive with respect to the situation, *mal* daring to get out of the military barracks…’

The presupposition of these verbs invite inferences that may be more or less conventionally associated with the verbs, e.g. whether the action attempted is desired or undesired, whether it is difficult to achieve, etc., hence possibly underlying an “emotive” or evaluative characterization of the predicate (in the sense of Horn 1989).
When *mal* occurs with this class of verbs, the adverb denotes the scarcity of the property which is presupposed by the implicative verb (e.g., the assumed property of the agent which is presupposed by the verb). As argued above, *mal* contributes a restriction on the degree to which an entity has a certain property associated with the predicate (by asserting that that degree is less than expected). The co-occurrence with implicative verbs arises as a special case of that semantic contribution; here, *mal* combines with predicates that presuppose a certain property which is required for the realization of the event denoted by their complement clause.

The property scale that provides the dimension along which the comparison is established is often made apparent in the context. Hence, in (59), it is a scale of ability (in terms of physical condition) and in (60) it is a scale of time (hence, a quantitative scale):

(59) Nicholson (...) socorreu a incômoda situação em que o realizador italiano foi «generosamente» colocado: vítima de um acidente cérebro-vascular, Antonioni, amparado pela sua mulher, *mal* conseguiu pronunciar um «grazie». (CP Ext 89978)

‘Nicholson…rescued the Italian director from the situation where he had “generously” been placed: victim of a brain accident, Antonioni, with the help of his wife, *mal* could pronounce a “grazie”’

(60) Sinatra chegou em cima da hora e partiu logo após o concerto. *Mal* teve tempo para entrar no camarim. (CP Ext 48647)

‘Sinatra arrived exactly at the time where the show was supposed to begin and left right after the concert. He *mal* had the time to get into his dressing room.’

This class of verbs, named “Implicative Verbs” by Karttunen (1971), displays a particular presuppositional behavior. They share with factive verbs like *realize* or *regret* the fact that the truth of a sentence containing such a verb commits the speaker to the truth of the proposition expressed by the complement of the verb. This is exemplified below, where the first sentence of each pair implies the second:
(61) John realized that Sally was wrong. [Factive verb]

(62) Sally was wrong.

(63) John managed to solve the problem. [Implicative verb]

(64) John solved the problem.

However, unlike what happens with factive verbs, this presupposition does not survive under negation; whereas (65) implies (66), (67) implies (68), i.e., the negation of (64):

(65) John didn’t realize that Sally was wrong. [Factive verb]

(66) Sally was wrong.

(67) John didn’t manage to solve the problem. [Implicative verb]

(68) John didn’t solve the problem.

If (67) is true, (68) cannot be false. Moreover, these verbs display cancellation of double negation, a property which is also not shared with factive verbs, so (69) has the positive implication given in (70):

(69) John didn’t manage to not solve the problem.

(70) John solved the problem.

Furthermore, a speaker who utters a sentence containing an implicative verb under the scope of a modal, as in (71), commits himself to the truth of the complement clause under the scope of the same modal, as in (72):

(71) John should manage to solve the problem.

(72) John should solve the problem.
This behavior, as well as a number of requirements involving semantic agreement between the main clause and its complement (Karttunen 1971:345-348), can be explained by the semantics of these verbs:

What does it mean to say, for example, that John managed to do something? All that takes place when John manages to do something is that he does it. While intending to do is one thing and doing another, managing to do is inseparable in space and time from doing; it is the same event. (Karttunen 1971:350)

Karttunen accounts for the contribution of implicative verbs by establishing a distinction between the “propositional content” (which corresponds roughly to the asserted content) and the “presuppositional content”. The former conveys the illocutionary force of the sentence and the latter “expresses the unstated beliefs of the speaker that underlie the proposition” (Karttunen 1971:350). Crucially, the presupposition associated with the meaning of implicative verbs pertains to a necessary and sufficient condition which determines whether the event described by the complement of the verb took place. For example, manage presupposes that the event denoted by the complement clause was at least attempted by the subject (and hence one may infer that the attempt might be successful or not, hence potentially difficult); other verbs may presuppose chance or strong commitment of the subject as a decisive condition for the realization of the act denoted by the complement clause.

The common core of the semantics of this class of verbs is summarized as follows, where \( \nu \) stands for any implicative verb and \( S \) for the sentence expressed by the infinitival complement of the verb (from Karttunen 1971:352):
According to Karttunen, the presuppositional behavior of this class of verbs follows in a straightforward way from its semantics broadly understood. Given that the verb contributes an assumption pertaining to a necessary and sufficient condition for S, the assertion of the truth or falsity of this assumption has a bearing on the speaker’s commitment to the truth or falsity of the event denoted by S. If the necessary and sufficient condition for S is fulfilled, the speaker indirectly commits herself to the truth of S; if the necessary and sufficient condition for S is not fulfilled, then the speaker commits herself to the falsity of S.

The semantics of implicative verbs, as proposed in Karttunen (1971), sheds light on the account of the proximal component of *mal* that was proposed in chapter 6. I have argued that the reason why approximative adverbs like *mal* and *barely* are treated as “approximate negators” relies upon the comparison that they contribute. By assigning to the current predicative relation a low degree on the scale of a property associated with the predicate, these adverbs induce evaluation of the predicative relation, namely a weakening of the speaker’s commitment to the applicability of that predicate. Both in the case of implicative verbs and the interpretation of *mal* (like other “approximate negators”), their contribution differs from the unmodified predication (i.e., simply asserting S and asserting the sentence without the adverb, respectively) in that a comment on the predication is provided. This comment pertains to the conditions or circumstances which are normally expected for the

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110 In Karttunen and Peters (1979), the two types of content of a verb like *manage* are presented as unrelated, namely as the extension and the conventional implicature in the ordered pair that represents the lexical semantics of the verb. This analysis is not relevant for the purposes of this chapter.
predicate to be true. These conditions can be seen as the premises underlying the application of the predicate; hence, this comment has an epistemic character.

Whereas in the previous examples the property associated with the predicate modified by *mal* was contextually retrieved, in the examples with implicative verbs it is lexically encoded (i.e., it is the presupposition contributed by the implicative verb). Here, the property does not pertain to a contextual feature (an index of evaluation), like the temporal coordinates of the event, but rather to the speakers’ assumptions about the realization of an event. In a way, one could argue that the speakers’ perspective on the conditions for the realization of the event, as encoded in the semantics of implicative verbs, provides another index of evaluation, which is added to the world-time coordinates under which the applicability of the predicate.

The epistemic, modal-like character of this contribution is confirmed by the fact that like the meaning of modal verbs, the evaluation contributed by *mal* passes to the complement clause of the implicative verb. Hence, a speaker who utters (74) commits herself to the belief that (75) is true:

(74) O João mal se dá ao trabalho de fazer os trabalhos de casa.
    ‘João barely bothers to do his homework.’

(75) O João mal faz os trabalhos de casa.
    ‘João barely does his homework.’

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111 In this respect, there is a connection between implicative verbs and the semantics of modal verbs. In fact, Karttunen discusses whether verbs like *imagine* or *know* may be implicative, as well as modal expressions, e.g. *be able to* (see Karttunen 1971:354-357). For the similarities between the semantics of implicative verbs and modal verbs, see Bhatt (1999).
The implications of a sentence in which mal modifies a (positive) implicative verb (v) are summarized below:

(76) \( \text{mal}(v(S)) \Rightarrow v(S) \) [entailment]
\( \text{mal}(v(S)) \) implies \( \text{mal}(S) \)

There is an important point to the semantics of mal when compared to the semantics of implicative verbs. We have seen that negating an implicative verb in the main clause amounts to negating the belief in the truth of the complement of the verb, according to the following inference: if the necessary condition for the realization of the event does not obtain, then the event does not obtain. Now, asserting that the necessary condition obtains to a very low degree amounts to a weak commitment from the speaker to the realization of the event. There are two possible interpretations for this weak commitment, as pointed out above: either the current predication is treated as not displaying the degree of an associated property which is deemed normal for that predicate, or the possibility of the event taking place is cast into doubt. The latter case will be analyzed in detail in the next section.

The semantics of implicative verbs is relevant for the purposes of this dissertation to the extent that it shows how the evaluation of the conditions for an event to take place (in this case, the presupposition contributed by the verb) affects the belief or commitment of the speaker pertaining to that event. I have argued for a similar reasoning in the semantics of quase and mal proposed above.

Moreover, the parallelism with the semantics of implicative verbs is consistent with the data from diachrony that relate the meaning of approximative adverbs like Port. mal, French à peine, German kaum with adverbials meaning ‘with difficulty’, ‘with effort’, ‘with
pain’ (cf. Ramat and Ricca 1998, Lima 1998, Amaral 2006a). These adverbials contribute an evaluation pertaining to the circumstances in which a certain event took place, either related to difficulties, effort involved, chance, or related to the subject’s intentions, plans, and willingness to perform the event.

7.2.1 Negative implicative verbs

It was pointed out above that some verbs which entail the negation of their (nominal or verbal) complement, described by Horn as evaluatively negative or “e-neg”, like escapar ‘to escape’, faltar ‘to lack’, falhar ‘to fail’, errar ‘to err’, livrar-se de ‘to get rid of’, deixar por ‘to leave undone’, salvar-se de ‘to get rid of, to save oneself of’, are not acceptable with mal. These verbs display a semantic behavior which is similar to that of implicative verbs. Karttunen calls them “negative implicative verbs” (e.g. forget, fail, neglect, decline, avoid (Karttunen 1971:352)) and analyzes their semantics as adding an incorporated negation to the semantics of (positive) implicative verbs. The same pattern described above for positive implicative verbs holds for this set of verbs, as shown by the following pairs, in which the first sentence, containing the implicative, implies the second:

(77) John forgot to lock his door.
(78) John didn’t lock his door.
(79) John didn’t forget to lock his door.
(80) John locked his door.

The evaluative character of these verbs, noted by Horn and others, is a consequence of their presuppositional behavior and the nature of the inferences that the presuppositions induce. They all pertain to the speaker’s beliefs about the conditions that lead to the events in the complement clause not taking place.
Crucially, none of these verbs can be felicitously modified by *mal*:

(81) #O João mal se esqueceu de trancar a porta.
    the João mal CL forget: SPAST: 3SG to lock the door

(82) #O João mal recusou ser treinador da equipa.
    the João mal refuse: SPAST: 3SG be: INF coach of: the team

Karttunen proposes a semantics for this set of verbs which is parallel to that proposed for positive implicatives; he accounts for the negative implication by incorporating the negation of the complement clause in the presupposition of the verb (Karttunen 1971:353):

(83) PROPPOSITION: v(S) is a necessary and sufficient condition for ~S.
    PROPOSITION: v(S).

Verbs like *faltar, falhar* etc., listed above, behave like negative implicatives, except for the fact that not all select for a complement clause; some select for an NP argument (mostly corresponding to nominalizations). Crucially, their meaning involves an implicit assumption of the speaker pertaining to the subject’s commitment, willingness or skill to perform the event denoted by the complement of the verb. As a consequence, the correspondent implicative pattern can be observed for these verbs: a sentence with a negative implicative verb implies the speaker’s commitment to the falsity of its complement clause, as in (84) and (85). By the same token, negating the negative implicative verb amounts to implying the truth of the complement clause (which is parallel to the examples with double negation above), as in (86) and (87):

(84) O Pedro deixou por fazer os trabalhos de casa.
    ‘Pedro left his homework undone’
With respect to modality, the negative implicative verb passes the modal verb to its complement, provided of course that the incorporated negation of the verb is expressed:

(88) O Pedro devia deixar por fazer os trabalhos de casa.
    ‘Pedro should leave his homework undone.’

(89) O Pedro não devia fazer os trabalhos de casa.
    ‘Pedro shouldn’t do his homework.’

For the verbs that select for a nominal complement, the same pattern is obtained if a verb that denotes an action (and selects for the noun in question) is explicitly added, e.g. *marcar* ‘to score’ in (90)-(93). Hence, the first sentence in each of the following pairs entails the second:

(90) O jogador falhou o golo.
    ‘The player failed the goal.’

(91) O jogador não marcou golo.
    ‘The player didn’t score the goal.’

(92) O jogador não falhou o golo.
    ‘The player didn’t fail the goal.’

(93) O jogador marcou golo.
    ‘The player scored the goal.’
These pairs make apparent the contribution of this class of verbs. In (90) above, a verb like *falhar* ‘to fail, to miss’ adds to the semantics of *não marcar* the assumption that the act which was attempted involves some degree of skill, competence or ability from the agent. The nature of these assumptions induces a number of related inferences, like a speaker’s evaluation or attitude towards the eventuality denoted by the complement of the verb. These verbs may encode assumptions which pertain to more than one argument of the verb, e.g. *escapar* ‘to escape’ presupposes that the patient must have some chance, and moreover that the source is potentially regarded as bad, prejudicial or generally worth avoiding; *deixar por* ‘to leave undone’ implies that the agent has the possibility to choose whether to perform an action or not, and that the action is an obligation imposed on the agent.

Modification by *mal* is not acceptable with negative implicative verbs. According to the semantics of *mal* proposed above, this can only be expected. On Karttunen’s account, the semantics of negative implicatives incorporates a negation (namely, the negation of their complement clause). Since *mal* may only combine with a predicate if its truth is either asserted or implied, and a sentence with a negative implicative verb commits the speaker to the falsity of the complement clause, negative implicative verbs cannot be compatible with the semantics of *mal* (just as plain negation of the VP is not compatible with *mal*, yielding a semantic anomaly: *O João mal não comeu*). 113

On a hypothetical basis, if we imagined an adverbial just like *mal* but compatible with the class of negative implicative verbs, that adverbial would evaluate the degree to which the necessary and sufficient condition for ~S obtained. Interestingly, this function is fulfilled by

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113 This sentence is only felicitous if *mal* is pitch-accented and if used in a contrastive context (*mal* being a manner adverb), e.g. *O João MAL não comeu, comeu até muito bem.* 'João didn’t eat poorly, quite the opposite, he even ate very well.'
the semantics of *por pouco* when it occurs in post-verbal position, as shown in the next section.

7.3 The meaning of the post-verbal use of *por pouco*

In this section, I describe the meaning of post-verbal *por pouco*. I will argue that this adverbial is a negative polarity item (NPI) and occurs only with telic predicates. Because of this aspectual restriction, it evaluates the conditions for a certain event to be true and hence induces a comparison between a course of events in the actual world and an alternative course of events.

The post-verbal use of *por pouco* should be distinguished from the prepositional phrase with an instrumental meaning headed by the preposition *por*, with the structure [PPP[NP]], in which the noun may sometimes be omitted, as in (94).

(94) Vendo-te o meu carro por pouco (dinheiro).
    ‘I sell you my car for little (money).’

A number of tests justify this distinction: since *pouco* is an adjective, it can be modified by a degree adverb, as in (95), and it displays gender and number agreement, as in (96):

(95) Fui de férias por muito pouco dinheiro.
    ‘I went on vacation by very little money.’

(96) Aborreces-te por pouca coisa.
    ‘You get upset by a little thing.’
On the other hand, in the post-verbal use that we will focus on here, *por pouco* behaves as an adverbial phrase with the structure [P N], exemplified in (97). In (97), *por pouco* is the focused constituent to which the focus adverb só ‘only’ associates.

(97) A excepção aconteceu quando Fertout, a mais de 30 metros, executou um chapéu que só não deu golo por pouco. (CP Ext 157766)  
‘The exception occurred when Fertout, from a distance of more than 30 m, made a chip shot that only by little did not become a goal.’

In this structure, *pouco* may not undergo degree modification (see (98)) and it shares the distribution of adverbial phrases constituted by a preposition and a noun, as in (99).

(98) #Fertout executou um chapéu que só não deu golo por muito pouco.  
only not yield:SPAST:3SG goal by very little

(99) Fertout executou um chapéu que só não deu golo por acaso / por sorte.  
only not yield: SPAST:3SG goal by chance / by luck

In this use, it is not possible to explicitly add a noun. The interpretation of the phrase in (97) is more abstract than the one obtained in (94), in that it does not denote circumstantial information about the event (pertaining to “means”). Rather, it pertains to an evaluation of the course of events, where the situation in the actual world is compared to an expected, but not realized, outcome.

Whereas the prepositional phrase may occur in both positive and negative sentences and displays no aspectual restrictions as to the types of predicates it may combine with, post-verbal *por pouco* is restricted to negative sentences and may only occur with telic predicates.
There is a (possibly diachronic) connection between the modification contributed by the prepositional phrase and the post-verbal use of *por pouco* considered here, which relates to the lexical semantics of the phrase. The PP is a VP-modifier that evaluates the means or circumstances of the event as falling short of a certain quantitative norm (associated with the semantics of *pouco*). The degree relation is retained in the post-verbal use of *por pouco*, but the standard of comparison is now a more abstract norm that correlates with a change of state (i.e., the adverbial describes the actual situation as falling short of the conditions leading to an expected outcome). In other words, in the post-verbal use of *por pouco*, the norm is not a value on a quantitative scale, but rather an epistemic norm. This meaning is modal in nature, in that it pertains to an evaluation of the (epistemic) premises for the commitment to the truth of a proposition. In the following, I will focus only on the latter use.

In this post-verbal use, *por pouco* either occurs with sentential negation or with a predicate that entails the negation of a certain eventuality. The adverbial occurs with negative implicative verbs like *falhar, escapar a, errar, evitar, deixar passar, salvar-se, livrar-se de*, or with a negated positive implicative verb like *não chegar a* ‘not to get to’, *não conseguir* ‘not to manage’, as exemplified in (100) and (101), respectively:

(100) Este tradicional rali queniano é também famoso pelas súbitas mudanças climatéricas, que já causaram diversos acidentes, e também ontem o sul-coreano Bae Soo‑oh e o seu co-piloto Shabir Haji escaparam *por pouco* a um acidente …, ao conseguirem sair do seu Daewoo quando este já estava a ser arrastado pelas águas. (CP Ext 183721)

‘This traditional Kenyan rally is well-known for its sudden weather changes, which have already caused several accidents; yesterday the South Korean Bae Soo‑oh and his co-pilot Shabir Haji barely (lit. *by little*) escaped an accident, when they managed to exit their Daewoo when it was already being dragged by the waters.’
At 18' and 23' [of the game’s duration], there were new chances to score for Farense [name of a soccer team], through Ricardo and Djukic [names of soccer players], who barely (lit. by little) did not manage to finalize.

The contribution of post-verbal *por pouco* (as is the case with *mal*) does not change the polarity of the sentence in which it occurs. Taking into consideration that *por pouco* only occurs either with sentential negation or with a negative implicative verb, this means that the contribution of *por pouco* does not alter the negation of the clause (it is a veridical operator). The implications of a sentence with a negative implicative verb (*ν*) modified by *por pouco* are summarized in Table 7.1 below:

<table>
<thead>
<tr>
<th></th>
<th>unmodified</th>
<th>with post-verbal <em>por pouco</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ν(S)</em></td>
<td>~S</td>
<td>~S</td>
</tr>
<tr>
<td>~<em>ν(S)</em></td>
<td>S</td>
<td>S</td>
</tr>
</tbody>
</table>

Table 7.1: Pattern of implications of post–verbal *por pouco* with negative implicative verbs

As was the case with *mal*, the contribution of *por pouco* passes to the complement clause, so (102) entails (103):

(102) Os condutores escaparam (por pouco) a um acidente (por pouco).

‘The drivers barely escaped an accident.’

(103) Os condutores não tiveram um acidente por pouco.

There are some uses of post-verbal *por pouco* in which the adverbial occurs neither with sentential negation nor with a verb that entails the negation of its complement, as exemplified in (104) and (105).
generalization provided above about the status of *por pouco* as an NPI. Following Horn (2001), I will assume that these are instances of “Flaubert triggers”, i.e., contexts in which a negative proposition is inferred, although no explicit conventional trigger of negation can be found.

(104) Um francês emigrante que vive no oeste do Quénia…morre no hospital de Nairobi após uma violentíssima hemorragia. Dias depois, o médico que o trata, Shem Musoke, cai doente mas consegue salvar-se *por pouco*. (CP Ext 1059128)

‘A French emmigrant who lives in western Kenya…dies in the hospital in Nairobi after violent bleeding. Some days later, the doctor who has healed him, Shem Musoke, becomes ill and he barely manages to escape.’

(105) O máximo mundial do argelino Noureddine Morceli (em44,39s) sobreviveu *por pouco*, mas deve ter a sentença traçada. (CP Ext 118092)

‘The world maximum attained by the Algerian Noureddine Morceli (44,39s) barely survived, but its must be sentenced already (lit. its end must have been dictated).’

The examples of this type which are found in the corpus are restricted to contexts which either assert or implicate the possibility that the event denoted by the verb does not hold. (i.e., that the doctor does not survive, in (104), and that the best time is not maintained, in (105)). In both cases, it is possible to add the adverb *só* to the sentence while retaining its meaning, which is one of the tests provided for “Flaubert triggers” by Horn (2001).

The data that underlie the classification of *mal* as a PPI and the classification of post-verbal *por pouco* as an NPI can be summarized as in Table 7.2, where “*” means that the combination is ruled out by the semantics of the adverbial and “√” means that the combination is acceptable:
The distribution of *mal* and post-verbal *por pouco* with respect to polarity can be explained by the fact that the negation of the complement clause of the implicative verb can be expressed in two different ways:

(106)

(i) By asserting the negative implicative verb (e.g. *falhar* ‘fail’, *deixar por* ‘leave undone’, etc.):

*O jogador falhou o golo.*

‘The player failed to score.’

(ii) By negating the (positive) implicative verb (e.g. *conseguir* ‘manage to’, *chegar a* ‘get to’, etc.):

*O jogador não chegou ao golo. / O jogador não conseguiu marcar golo.*

‘The player didn’t get to score. / The player didn’t manage to score a goal.’

Whereas *por pouco* may occur both in (i) and (ii) if it occurs post-verbally, pre-verbal *por pouco* is restricted to (ii) unless the verb is in the *Imperfeito* form, in (i) as pointed out in chapter 4.

### 7.3.1 The proximal component of *por pouco*

In this chapter, it has been argued that the negative element associated with the meaning of *mal* follows from the scalar evaluation of the predicative relation. The adverb introduces a comparison between the expected conditions for predicate p to hold and the conditions that hold in an actual situation in which predicate p is applied. This comparison
underlies the “proximal component” identified by the Conjunctive Analysis. In this section, I argue that the proximal component of *por pouco* can receive a similar explanation.

The pattern of implications displayed by implicative verbs, according to Karttunen’s account, shows the following correlation between the meaning of the implicative verb and the commitment to the truth of the verb in the complement clause:

(107) \(v(S)\) holds, where \(v\) stands for the implicative verb and \(S\) for the complement clause

(i) The necessary and sufficient condition for \(S\) holding *implies* belief that \(S\) holds

(ii) The necessary and sufficient condition for \(S\) not holding *implies* belief that \(S\) does not hold

(iii) The necessary and sufficient condition for \(\neg S\) holding *implies* belief that \(\neg S\) holds

(iv) The necessary and sufficient condition for \(\neg S\) not holding *implies* belief that \(\neg S\) does not hold (adapted from Karttunen 1971:352)

In (107), (i) and (ii) pertain to the interpretation of positive implicative verbs, while (iii) and (iv) pertain to the interpretation of negative implicative verbs.

The proximal components of *mal* and *por pouco* can be given an explanation along the same lines. This is summarized in (108) and (109), where \(p\) stands for the proposition expressed by the sentence without the adverbial:

(108) Perspective introduced by the proximal component of *mal*

(i) The necessary and sufficient condition for \(p\) holding to a low degree *implies* low commitment to \(p\)

(109) Perspective introduced by the proximal component of *por pouco*

(ii) The necessary and sufficient condition for \(\neg p\) holding to a low degree *implies* low commitment to \(\neg p\)
The crucial element to understand the perspective introduced by *por pouco* is the epistemic evaluation that follows from the degree relation it denotes. A low belief that \( \sim S \) induces an inference to the effect that the possibility of \( S \) existed. This modal interpretation was depicted in Figure 4.4 above in terms of a branching structure representing the counterfactual meaning of *por pouco* in pre-verbal position. Given that *por pouco* may only co-occur with telic verbs, the connection with the counterfactual interpretation of *quase*, which also pertains to the evaluation of the possibility of a certain event, becomes apparent.

The inference that underlies the interpretation of *por pouco* summarized in (109) can be seen as a form of litotes. Traditionally, litotes is defined as the expression of an affirmative proposition through the negation of its contrary (Jespersen 1917, Horn 1989, Van der Wouden 1997), i.e., as involving double negation. For example, the interpretation of the litotetic expression *not unwise* is represented in Table 7.3.

<table>
<thead>
<tr>
<th></th>
<th>unwise</th>
<th>……………</th>
<th>wise</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>not wise</td>
<td>………</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>………</td>
<td>not unwise</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>………</td>
<td>not unwise</td>
<td>………</td>
</tr>
</tbody>
</table>

Table 7.3: Pragmatics of litotes (from Van der Wouden 1997:217, fig. (69))

In Table 7.3, the (a) row represents a scale of the property “wisdom” and the two contradictory terms, “unwise” and “wise” denote the extremes on the scale. Rows (b) and (c) represent the contraries of each of these adjectives (their logical denotation). Row (d) represents the area on the scale that corresponds to the interpretation of litotes, on the basis of Horn’s (1991) principle of “Division of pragmatic labor”. According to Horn, the use of a
longer and marked expression when the speaker could have chosen another, unmarked, expression, signals that the speaker could not employ the latter felicitously.

It has been pointed out that weak negative terms like certain monotone decreasing operators (e.g. *hardly*, *scarcely*) may also trigger litotes, and that double negation is only one possible (presumably more frequent) case thereof. I have argued that when *mal* and *por pouco* occur with implicative verbs, they evaluate the degree to which the necessary and sufficient condition (presupposed by the implicative verb) for the complement clause to be true holds. Since in the case of *por pouco* this condition, which is evaluated as holding to a low degree, is the condition for ~S, the adverbial has an effect of weakening the negation contributed by the sentence.

Crucially, litotes with non-gradable predicates is either ungrammatical or infelicitous. This is important because unlike the contradictory gradable predicates in Table 7.3, a proposition p and its contrary (~p) are non gradable (a certain proposition is either true or not true under the same indices of evaluation). However, the proximal component of *por pouco* introduces a scalar interpretation.

The degree relation contributed by *por pouco* is interpreted with respect to a gradable dimension, namely the notion of possibility. In other words, although the transition between p and ~p is not gradable, the possibility that p or ~p is true is a scalar notion that relates to an epistemic evaluation of the necessary and sufficient conditions for p. So, asserting that the condition for ~p holds to a very low degree amounts to entailing that the course of events may be described as leading to p (although p is not the factual outcome). This can be seen as a scale reversal; a high degree of the conditions for p corresponds to a low degree of the conditions for ~p, and vice-versa, as in (110):
(110) It is very likely that it rains tomorrow. \(\leftrightarrow\) It is very unlikely that it doesn’t rain tomorrow.

The relation between the interpretation of *por pouco* and the interpretation of *quase* with implicative verbs is represented in Table 7.4, where \(\nu\) stands for a negative implicative verb:

<table>
<thead>
<tr>
<th>(\nu(S))</th>
<th>Unmodified</th>
<th>with post-verbal <em>por pouco</em></th>
<th><em>quase</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>~S</td>
<td>~S</td>
<td>S</td>
<td>~S</td>
</tr>
<tr>
<td>S</td>
<td>S</td>
<td>~S</td>
<td>S</td>
</tr>
</tbody>
</table>

Table 7.4: Pattern of implications of *quase* and post–verbal *por pouco* with negative implicative verbs

Given the entailments of opposite polarity, in order for *quase* and *por pouco* to yield the same interpretation, the polarity of the implicative verbs must be reversed, as in (111):

(111) O jogador falhou o golo por pouco. \(\leftrightarrow\) O jogador quase conseguiu marcar golo.

‘The player barely missed [Neg. Imp. Verb] the goal (lit. missed by little). \(\leftrightarrow\) The player almost managed [Pos. Imp. Verb] to score the goal’

Given the evaluation of the conditions for \(\neg p\), as expressed by litotes, in both cases the situation is described with respect to \(p\) (the expected outcome). This can be tested by comparing the contexts in which *por pouco* and *quase* may felicitously occur. In the naturally-occurring example in (112), the scalar contribution of *por pouco* introduces a perspective on the achievements of the competitor, namely by minimizing the conditions for \(\neg p\). Hence, the same context is compatible with the truth of \(p\) (implied in (113) by the positive implicative verb *chegar a*) and with the co-occurrence of *quase* with the corresponding positive implicative verb in (141):
(112) O melhor foi João Antunes, actual líder do campeonato nacional, que chegou aos oitavos-de-final e falhou a fase seguinte por pouco. (CP Ext 7426)
‘The best [runner] was João Antunes, the current leader of the national championship, who reached the final eight and barely failed to get into the next round (lit., failed the next round by little).’

(113) O melhor foi João Antunes, actual líder do campeonato nacional, que chegou aos oitavos-de-final e chegou à fase seguinte.114
‘The best [runner] was João Antunes, the current leader of the national championship, who reached the final eight and got into the next round.’

(114) O melhor foi João Antunes, actual líder do campeonato nacional, que chegou aos oitavos-de-final e quase chegou à fase seguinte.
‘The best [runner] was João Antunes, the current leader of the national championship, who reached the final eight and almost managed to get into the next round.’

On the other hand, the occurrence of either *mal* or of the unmodified negative implicative verb in (115) and (116), respectively, would yield infelicitous utterances:

(115) #O melhor foi João Antunes, actual líder do campeonato nacional, que chegou aos oitavos-de-final e mal chegou à fase seguinte.
‘The best [runner] was João Antunes, the current leader of the national championship, who reached the final eight and barely got into the next round.’

(116) #O melhor foi João Antunes, actual líder do campeonato nacional, que chegou aos oitavos-de-final e falhou a fase seguinte.
‘The best [runner] was João Antunes, the current leader of the national championship, who reached the final eight and failed to get into the next round.’

The perspective introduced by *mal* in (115) and by the negative implicative verb in (116) is incompatible with the meaning of the degree words in the context (e.g. *melhor* ‘best’, *líder* ‘leader’) as well as the meaning of the positive implicative verb *chegou a*. These contribute the speaker’s commitment to a positive evaluation of the rank of the player.

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114 The VP *chegar à fase seguinte* ‘got into the next round’ should in this context be interpreted as *chegar a ser apurado para a fase seguinte* ‘manage to get into the next round’, which maintains the syntax of implicative verbs (i.e., the fact that they select for a sentential complement).
The pre-verbal use of *por pouco* with the positive implicative verb in the *Imperfeito* (hence receiving a counterfactual interpretation) would also be felicitous, for the reasons just presented. In this use *por pouco* is synonymous with the use of *quase* as a sentential adverb.

(117) O melhor foi João Antunes, actual líder do campeonato nacional, que chegou aos oitavos-de-final e por pouco chegava à fase seguinte. ‘The best [runner] was João Antunes, the current leader of the national championship, who reached the final eight and almost got into the next round (lit., by little would get into the next round).’

Intuitively, there seems to be an evaluative component associated with the predicates with which *por pouco* co-occurs. Typically, implicative verbs denote either successful or unsuccessful outcomes of attempted events. The evaluative character of the predicates that *por pouco* co-occurs with relates both to the semantic value of implicative verbs and to the contexts in which the use of *por pouco* is relevant. On the one hand, implicative verbs contribute presuppositions pertaining to the speaker’s assumptions and beliefs about the conditions for the realization of an event, many of which involve assumptions about purposes and intentions of the entities denoted by the arguments of the verb (see Falkenberg 2001). On the other hand, from a pragmatic point of view, events which are perspectivized as either advantageous or potentially harmful are worth mentioning getting close to (precisely because of their possible consequences for the entity denoted by the agent or by the theme of the verb). The evaluative character of the adverbial can hence be derived from the inferences induced by the meaning of the verbs it co-occurs with and their likely contexts of use. These inferences seem to be conventionally associated with the meaning of the adverbial, as its occurrence in an out-of-the-blue context with a predicate with no evaluative component yields an infelicitous utterance, as exemplified in (118):
Given the polarity of the sentence and the aspectual class of the predicate, one would expect (118) to be felicitous, but this is not the case. The contribution of por pouco is hard to reconcile with the “neutral” character of the predicate. Of course, in an appropriate context in which the event of writing a certain book is associated with positive or negative consequences, the sentence can be rendered felicitous. In conclusion, both the presuppositions contributed by implicative verbs and the nature of the contexts in which the use of por pouco is relevant induce inferences that yield the intuitively perceived evaluative meaning associated with the adverb.

7.4 The inverted readings of mal

The Portuguese adverb mal exhibits some uses in which its polar component is negative, not positive. To exemplify, the first conjunct of (119) entails that João works, i.e., it has a positive polar component, whereas the first conjunct of (120) entails that Pedro did not know what was going to happen to him. In this section, I will refer to the former case as the canonical interpretation of mal and to the latter case as the inverted reading of mal, following Schwenter (2002a) and Horn (2002a). The different interpretations can be tested by the contrast in felicity between (119’) and (120’):

(119) O João mal trabalha, e a Ana também.
‘João barely works, and Ana likewise.’

(119’) *O João mal trabalha, e a Ana também não. [only OK if ironic]
‘João barely works, and Ana doesn’t either.’
(120) *O Pedro mal sabia o que lhe ia acontecer e a Ana também.
    ‘Pedro hardly knew what was going to happen to him and Ana likewise.’

(120’) O Pedro mal sabia o que lhe ia acontecer e a Ana também não.
    ‘Pedro hardly knew what was going to happen to him and Ana didn’t either.’

In the canonical interpretation of *mal* exemplified in (119), a negative conjunct (the elided conjunct in (119’)) is not acceptable, whereas in the inverted reading exemplified in (120) and (120’), it is indeed the acceptable option.

In the inverted readings, *mal* cannot be replaced by *quase não* ‘almost not’ (contrast the canonical interpretation in (121) with the inverted reading in (122):

(121) O João mal trabalha.
    ‘João barely works.’

(121’) O João quase não trabalha.
    ‘João almost doesn’t work.’

(122) Mal sabia o João que ia ser atropelado nesse dia…
    ‘João hardly knew that he was going to be run over that day…’

(122’) *Quase não sabia o João que ia ser atropelado nesse dia…
    ‘João almost didn’t know that he was going to be run over that day…’

This impossibility does not relate to the syntactic position of the adverb, as shown by the following examples:

(123) O João mal sabia que ia ser atropelado nesse dia.
    ‘João hardly knew that he was going to be run over that day.’

(123’) *O João quase não sabia que ia ser atropelado nesse dia.
    ‘João almost didn’t know that he was going to be run over that day.’

Moreover, unlike the canonical use of the approximative adverb, inverted *mal* cannot occur at the absolute beginning of discourse.
The negative readings of *mal* are restricted to a certain construction, namely when the adverb occurs with epistemic stative verbs (*saber* ‘to know’, *imaginar* ‘to imagine’, *acreditar* ‘to believe’) in a form with imperfective aspectual value. The verb may select either for a sentential complement or for a nominal complement. This is represented in (124), for the former case:

(124) \[ Mal V \ que \ S \]

\[ \text{[epistemic state]} \]

\[ \text{[imperfective aspect]} \]

In this construction, there is an implication as to the speaker’s commitment to the truth of S. In most cases of inverted readings of *mal*, the event denoted by the complement of the epistemic verb is located at a time which is posterior to the time at which the epistemic state denoted by the main clause is located. The subject, if overtly expressed, occurs typically in post-verbal position, although this is not obligatory.

The inverted use of *mal* is highly context-dependent, in that it is restricted in a systematic way by particular requirements on the discourse structure. First, it requires a structured set of propositions which are part of the shared background of speaker and hearer at the time of utterance. These propositions are ordered in a contextually-determined pragmatic scale (cf. Fauconnier 1975) such that propositions higher on the scale conversationally implicate all propositions lower on the scale. There are two conditions for the licensing of inverted *mal*, presented in (125):

(125) Discourse-structure conditions that license the inverted readings of *mal*

(i) There is an explicitly-expressed proposition accessible in the discourse, the context proposition or cp (cf. Kay 1990; also Fillmore, Kay, and O’Connor 1988), and
(ii) the proposition expressed by the complement clause of the epistemic verb, the text proposition or tp, is more informative than the negation of cp because tp conversationally implicates ~cp on a pragmatic scale.

In the following, I exemplify the inverted readings of mal and the discourse conditions that license them. The context proposition (cp) is underlined in all the examples. In (126), the temporal mismatch between the time at which the epistemic state is located and the time at which the eventuality denoted by the complement clause of the epistemic state is located is exemplified:

(126) O “EF Language”, o Merit Cup” e o “Innovation Kvaerner” …foram apanhados pela calmaria. “Lutámos durante quatro horas para percorrer 100 metros em dez minutos. E parece que isto não vai melhorar nas próximas 20 horas”, exclamou Paul Cayard, do “EF Language”, mal sabendo ainda que a sua táctica de navegação renderia ótimos dividendos dias depois. (CP Ext 54806)
‘The “EF Language”, the “Merit Cup” and the “Innovation Kvaerner” [names of yachts]…were caught in the calms. “We’ve fought for four hours to advance 100m in ten minutes. And it seems that this is not going to improve in the next 20 hours”, said Paul Cayard from “EF Language”. Little (mal) did he know at that point that his navigation technique would yield great results some days later.’

The discourse structure licensing the inverted reading of mal in (126), without the tense of the clauses, is summarized in (127):

(127) cp = ‘This [the EF Language’s place in the race] does not improve’
~cp = ‘It is not true that the EF Language’s place in the race does not improve, i.e. by double negation, the EF Language’s place in the race improves’

tp = ‘The captain’s navigation technique yields great results’

On the corresponding pragmatic scale, the tp expresses a proposition denoting a higher value than that of ~cp; the truth of the tp implicates the truth of ~cp, as shown in Figure 7.1:
I have argued that the tp entails the negation of cp. A relevant question at this point is what is the difference between the inverted reading of *mal* and the use of sentential negation. Note that in a way the use of sentential negation would be utterly uninformative; given the temporal location of the epistemic state and the temporal location of the event denoted by the sentential complement of the verb, it would be trivial to say that the sailors did not know what was going to happen to them.

According to this analysis, the inverted reading places a particular requirement on the discourse structure. First, the discourse structure must include an ordered set of propositions. Second, this reading of *mal* contributes the negation of an upper-bounding scalar implicature; the tp expresses a proposition which conversationally implicates ~cp on the pragmatic scale, i.e., it is not true that *no value higher than* ~cp (*‘The EF Language’s place in the race improves’*) holds.

The temporal mismatch found in the examples with the inverted readings of *mal* can be seen as an additional requirement on the discourse structure, and one which crucially interacts with the semantics of the adverb proposed in this chapter and in chapter 6. This requirement involves a comparison between the conditions or premises for two epistemic states which are located at different points in time, and pertains to the contravention of an expectation. The time at which the epistemic state is located is prior to the time at which the
eventuality in the complement clause is located. The former coincides with the time of utterance of the cp, which makes a prediction about the place of the EF Language (contravened by the facts, as expressed by the complement clause of the epistemic verb). In sum, the speaker has information that the holder of the epistemic state did not have, and on the basis of the information available to the latter, he committed himself to a proposition which turned out to be false.

Crucially, the temporal mismatch is also an epistemic mismatch; Paul Cayard could not have known what was going to happen to his yacht in the course of the race. In this context, the contribution of mal is not that the conditions for the predicate “to know” to obtain are minimal (here, presumably related with the information about the weather), but rather that they are misleading, in that they lead to a prediction which is contrary to the way that facts turn out. Given the lack of temporal perspective, and the information that was available to Paul Cayard, he could not have known what the course of events would be; hence, what underlies the inverted reading is the denial of the possibility of knowing.

Although not all examples display the temporal mismatch in the way presented above, all display a scalar relation between the propositions assumed to be shared by speaker and hearer. This is the case in (128), whose discourse structure is represented in (129). In principle, Godard could have known when Oliveira started to make movies (since it happened in the past):

(128) «... o Oliveira continua, porque *começou tarde* e tem possibilidades que outros não têm, que Bresson não tem», dizia Godard. Uma referência de que Oliveira não gostou muito. «*Mal* sabe ele que, quando nasceu, eu já fazia cinema...», desabafa. (CP Ext 992396)
‘…Oliveira [a film director who is 90 years old] goes on making movies, since he started late and he has possibilities that other directors don’t have, for example that Bresson doesn’t have”, said Godard. A comment that Oliveira did not like at all. “Little (mal) does he know that when he was born, I was already making movies”, he says.’

(129)
\[
\begin{align*}
\text{cp} & = \text{“Oliveira started making movies late”} \\
\text{~cp} & = \text{“It is not true that Oliveira started making movies late, i.e. Oliveira started early”} \\
\text{tp} & = \text{“When Godard was born, Oliveira was already making movies”}
\end{align*}
\]

To sum up, the inverted reading of mal places specific constraints on the discourse structure and differs from standard negation. First, it requires a particular grammatical construction involving a temporal mismatch between an epistemic state and an eventuality which is located in a time posterior to the time at which the state obtains. Second, it places specific constraints on the ordering, as defined on a pragmatic scale, between a proposition entailed in the context and the proposition denoted by the complement clause of the epistemic verb.

The inverted reading of mal does not involve just the inversion of the polarity of the polar implication (i.e., the original sense of the term proposed by Schwenter); the proximal component of mal is also affected in the inverted reading. In fact, under this interpretation mal contributes the negation of the closeness to the epistemic state denoted by V in (124). Given that the premises or pre-conditions for the epistemic state that are available are misleading, since they lead to the commitment to cp, the holder of the epistemic state did not have the possibility of knowing and hence was not even close to knowing.\(^{115}\) There is also an inversion of the exclusive implication of mal that was presented in section 6.4 and is

\(^{115}\) One way of modelling the inverted readings of mal in modal terms would be to stipulate that in no other possible world in which the same premises obtain does the holder of the epistemic state know that tp.
associated with the proximal component of the adverb. In the scalar model, this is shown by
the fact that the tp conversationally implicates ~cp, i.e., the tp is more informative than ~cp.
Moreover, the interpretation obtained with this construction relates to a temporal contrast, or
rather, the contrast between two epistemic states located at different times. The event time of
the sentence that expresses the cp (which overlaps with the time at which the epistemic state
of the subject is located, through the use of either the Imperfeito do Indicativo, Presente or
the Gerúndio)\textsuperscript{116} is prior to the event time of the sentence that expresses the tp.\textsuperscript{117} A corollary
of this is that the epistemic verb frequently co-occurs with ainda ‘still’ (the semantics of
which comprises a presupposition to the effect that a certain state of affairs p is followed by a

The information conveyed by the construction that licenses the inverted reading of
mal pertains to the conditions that obtained at a certain time and those that obtained later
(determining two different epistemic states); this relates to the strong contextual dependence
of this construction. The inverted readings of mal clearly support the claim put forward in
this dissertation that the contribution of mal involves a comparison with a contextually
assumed norm.

In the canonical interpretation of mal, I have argued that the adverb restricts the
degree to which a certain property associated with the predicate holds of its argument.
Moreover, I have argued that this contribution underlies the positive polar component of mal:

\textsuperscript{116} The use of the Imperfeito, as pointed out by Kamp and Rohrer (1983) and Matos (1996), does not advance
event time (rather, event time overlaps with the reference time provided by the previous context). There are
certain examples of inverted readings of mal in which the verb occurs in the Gerund (e.g. ...mal sabendo, mal
supondo), which has the same effect in terms of time overlap (Mateus et al 2002). Such examples frequently
include anaphoric adverbials like então ‘at that moment, at that point in time’ (cf. Amaral 2006a).

\textsuperscript{117} Some naturally-occurring examples found in the corpus do not display the temporal relation of succession
between the state in the main clause and the eventuality in the complement clause. However, in all the examples
the context entails the existence of an epistemic mismatch between the speaker and the holder of the epistemic
state which justifies the “impossibility of knowing” of the holder of the epistemic state.
in order to assert a restriction of the degree of a certain property, it must be assumed that the property holds to some extent (and hence that the predicate which is associated with this criterial property also holds). In the examples analyzed in this section, on the other hand, the context entails that the property does not hold, and hence that the predicate does not hold (the polar component is “inverted”). The existence of inverted readings confirms the claim that the polar and the proximal components of *mal* are not independent from each other. Crucially, the speaker’s assumptions about the spatio-temporal circumstances of the predicative relation, understood as premises for an epistemic state, may lead to the inversion of the polarity of the polar implication.

There is a similarity between the use of *mal* in these constructions and with implicative verbs.\(^{118}\) The examples in which *mal* occurs with epistemic verbs can be paraphrased by a modal construction with “poder” (e.g. *O Pedro mal podia saber o que lhe ia acontecer* ‘Pedro could have hardly known what was going to happen to him’).\(^{119}\) In the inverted reading of *mal*, it is entailed by the context that the necessary and sufficient condition for the predicate (in this case, the epistemic verb) to hold does not obtain, e.g. in (126) by the lack of temporal perspective.

The parallel with the semantics of implicative verbs is important to understand why the inverted readings arise in this case and not when *mal* occurs with implicative verbs. As shown in section 7.2, asserting that the conditions for a certain event hold commits to speaker to the belief in the truth of that event, and negating the conditions commits the speaker to the

\(^{118}\) In fact, Karttunen (1971) points out that in Finnish epistemic verbs like *to know, to imagine* etc. display the patterns of presuppositions of implicative verbs.

\(^{119}\) It is worth pointing out that *mal* may only occur with modal verbs that express possibility, not necessity (cf. *mal deve*... ‘barely must/should’), i.e., *mal* is only acceptable with modal verbs that existentially quantify over possible worlds.
non-belief. In the construction with epistemic verbs like saber, presented in this section, the context always provides the information that the conditions for the epistemic state do not hold, hence the speaker could not know, could not have known, and consequently the sentence mal sabia (‘barely knew’) entails não sabia (‘did not know’). The question that naturally arises is why use mal instead of não in this case. This is the question that I will address in the following.

As pointed out in Amaral and Schwenter (2005, 2007), not only mal, but also the Engl. approximative adverbs barely and hardly share a common context for inverted readings, namely neg-raising constructions with epistemic verbs. Crucially, hardly, which also presents a conventionalized negative meaning, is more restricted than the negative adverb not in that its licensing imposes specific requirements on the structure of the discourse context, as shown in the examples below. Interestingly, the contexts exemplify the explicit use of this adverb as evaluating the applicability of the predicate over which it has scope. The question under discussion in examples (130) through (132) is whether the predicate (stupid, retired) adequately and truthfully applies to the argument (opossums, the webpage, Julie Foudy). To exemplify, whereas the use of not would descriptively negate the predicate (e.g. in (130), ~Stupid(o)), the use of hardly conveys the negation of the applicability of the predication; it is not adequate to predicate “stupid” of the argument “opossum”, given what is stated about opossums in the context.

(130) Q: Why are the roads littered with dead possums -- are they really that stupid?
A: Opossums have small brains but they're hardly stupid. Their brains has evolved sufficiently to insure the survival of their species. Cars and other dangers of the modern world are relatively new -- there hasn't been enough time to develop a defense. (from www.clcookphoto.com/possum.htm)
The discourse context asserts that a salient property of the category denoted by the predicate stupi
d holds of the argument, and yet that is not a reliable criterion for category membership.

In (130)-(132), the underlined expression provides the premises on the basis of which
category membership could be established.

(131) **The Stupid Page of Rocks.** This page is hardly stupid. In fact it is a very attractive,
non-technical, education site on rocks and rock formation. The three categories of
rocks are discussed in turn and information about their formation and properties is
presented. There are also short descriptions and characterizations of the most
common types of igneous, sedimentary, and metamorphic rocks. Recommended.
(from www.nearctica.com/geology/mineral/rocks.htm)

This interpretation of hardly exemplifies the inversion of its “canonical” use (i.e., with a
positive polar component). Canonical hardly asserts a low degree of a salient property as a
criterion for non-prototypical category membership to the denotation of the predicate (and
hence exploits our expectations: from lack of a salient property of P to weak adequacy of P,
along the lines of the account proposed for mal). On the other hand, inverted hardly negates
category membership but requires a context in which the fact that the salient property for that
category holds is asserted (and hence assumes our expectations concerning the presence of a
property and category membership but contravenes them). Again, the relation between the
property in question and category membership is provided by a norm or an expectation, as
schematically represented in (130’) and (131’):

(130’) small brains ↔ stupid
    small brains ↔ not stupid    (EXPECTED)
    (ACTUAL)

(131’) “stupid” ↔ stupid
    “stupid” ↔ intelligent    (EXPECTED)
    (ACTUAL)
In (130), *hardly* denies the expectation that animals with small brains are stupid, and gives justification for opossums seemingly stupid behavior. In (131), *hardly* functions at the level of metalinguistic appropriateness to deny the expected correlation between an object labeled as “stupid” and its evaluation as stupid. The ensuing description of the page gives reasons for why the correlation could be misleading, since the page is actually *far from* stupid. Similar metalinguistic examples abound on the internet:

(132) Retired? **Hardly**.

Julie Foudy is busier now than when she was playing.

Julie Foudy has played soccer twice since her farewell match with Mia Hamm last December, both as part of promotional appearances. Well, three times.

(from www.signonsandiego.com/uniontrib/20050504/news_lz1s4foudy.html)

(132’) “retired” athlete => not playing (EXPECTED)
“retired” athlete => still playing (ACTUAL)

**Hardly** in (132) denies the expectation which is associated with retirement from a sport, and thereby denies the appropriateness of the term “retired” as a descriptor of the situation, in light of the observable facts (Foudy has played three games since her farewell match, i.e. since “retiring”).

The inverted readings of *mal* and *hardly* again point to the two aspects of the meaning of approximative adverbs identified above. On the one hand, we find the negation of a

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120 A dialogical example of the inverted interpretation of *hardly* is given in (i):

(i) FBI person: Was Luke unfriendly to you?
   Luke's former high school colleague: **Hardly**, he was actually very nice. He even apologized for his behavior when we were in high school. (from the TV show "Without a trace"):
   The use of *hardly* as a stand-alone answer in (i) can be seen as referring to the predicative situation (“One can hardly say that the predicate “unfriendly” applies to “Luke” in this situation”). The discourse structure that licenses the inverted reading in (i) can be represented as in (ii):
   (ii) cp = “Luke was unfriendly to his classmate”;
   ~cp = “Luke was not unfriendly to his classmate” (+ Luke was friendly to him);
   tp = Luke was very nice.
   Crucially, note the co-occurrence of *hardly* in (i) with other markers of expectation contravention, *actually* (which contravenes the cp directly) and *even* (which makes explicit the scale of “friendliness” and situates Luke’s behaviour at a high point on that scale).
predicate, based on the contravention of a prototypical association between a property associated with a category and the category denoted by that predicate. On the other hand, we find the negation of the possibility that a certain state of affairs (an epistemic state) holds, with *mal* and epistemic verbs. In this case, the adverb signals a temporal mismatch that underlies the lack of conditions for a certain epistemic state to hold (on the basis of the normal conditions deemed necessary for such a state to obtain).

Crucially, in both cases the adverbs place specific constraints on the structure of the context, by requiring that a proposition pertaining to the conditions normally associated with the modified predicate be entailed in the context. These inverted readings differ from sentential negation in that they introduce a relation between propositions in terms of a scalar model.

In Schwenter (2002a), the inverted reading of *casi* ‘almost’ in Valencian Spanish is presented (see (133). Here, the polar component is “inverted” in that the context entails the truth of the proposition over which the adverb has scope.

(133) [Speaker is waiting for a friend outside the theater. The friend arrives just one minute before the session starts]
¡Casi llegas! ‘You almost did not arrive’ (literally: ‘You almost arrive’)

This use is grammatically restricted in that it only occurs with verbs, and only in the simple present tense. In (133), the event is presented as having been on the verge of non-realization, since a temporal expectation is contravened (an expectation about the friend’s expected time of arrival). Again, this interpretation depends on the relation between the (expected) conditions for an event to take place and the possibility that the event takes place, as evaluated by the speaker.
The inverted reading of *casi* requires the consideration of two propositions and two times which are ordered, namely the times with respect to which the truth of two propositions are evaluated. Assuming that $t_0$ is the speech time in (133), the proposition entailed by the context at $t_0$ (*Arrive* (a)), $t_p$, is the negation of a contextually available proposition, $c_p$ ($\neg$*Arrive* (a)), which was expected at $t_1$ by the speaker to happen at $t_0$ (where $t_1$ precedes $t_0$). This expectation is contravened by the facts.

So, in this case the propositions ($c_p$ and $t_p$) are not ordered on a pragmatic scale, as in the case of *mal* and *hardly*, but they are temporally ordered. Note that $c_p$ ($\neg$*Arrive* (a)) holds only in the speaker’s world of expectations (what he thinks may happen in the future, according to some set of premises available to him at a point in time). The grammatical restriction on the inverted reading of *casi* (verb occurs in the Present tense) can be correlated with the contextual restrictions of this reading; the proposition ($c_p$), negated at $t_0$, was expected at $t_1$ to be true at a later time, but such expectation is contravened at $t_0$.

A more complex example is provided in (134), from Schwenter (2002a:166):

(134) [Context: Speaker opens a bag of cookies two days after having bought them and sees that there are just a few left. Looking at her spouse, she says]

¡*Casi quedan*!

almost they:remain

‘There are almost none left!’

Since under the canonical interpretation of *casi* the sentence in (134) would denote that no cookies remain (the negative polar component), and in (134) the context entails that the speaker knows that some cookies remain, this constitutes an example of the inverted reading of the adverb. Crucially, this interpretation relies again on the contravention of an

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121 In *Arrive* (a), “a” is intended to stand for the addressee of the speaker.
expectation and the temporal ordering of two propositions, as in the previous example. However, unlike what happens in (133), (134) does not mean that 2 days ago, or some time ago, the speaker has thought that at a later time there would be more cookies remaining than those that remain at speech time. Rather, the tp (‘There are very few cookies remaining’) constitutes the negation of a contextually accessible proposition, cp (‘There are many cookies remaining’) that would be expected to obtain at utterance time. This expectation is due to the epistemic premises upon which the speaker relies: the speaker knows that only a short period of time has elapsed between the time at which the bag was bought and utterance time. The inverted reading of casi signals a mismatch between the expected correlation between time elapsed and amount of cookies eaten and the actual amount of cookies remaining. In this case, the underlying comparison could be paraphrased as ‘There are very few cookies remaining, compared to what one would expect’.

Because approximative adverbs (both in their canonical and in their inverted readings) compare the conditions under which a predicate may be applied to an argument, they are highly contextually sensitive. Crucially, the relation between the conditions for an eventuality to hold and what is know about the situation in the actual world is evaluated on the basis of speaker’s assumptions and norms based on world knowledge. The examples presented can be grouped as follows: (i) mal and casi: both involve temporal circumstances (an expectation involving a temporal ordering); (ii) mal and hardly: both involve an ordering on propositions along a pragmatic scale. What is common to (i) and (ii) is the fact that in both cases an epistemic mismatch underlies the inverted reading of the adverbs.

In this section, I have argued that what is common to all inverted readings is the contravention of an expected correlation between the conditions for a predicate to hold and
the applicability of that predicate (either with respect to category membership or possibility of truth of a proposition). Inverted readings constitute a crucial case to understand the semantic-pragmatic properties of approximative adverbs; they make apparent that the main contribution of this class of adverbs is a comparison with an expected or contextually assumed norm.

7.5 Conclusions

In this chapter, I have analyzed a set of the possible interpretations of approximative adverbs, namely those in which the actual predicative relation is assigned a low degree on the scale of a property associated with the predicate.

In the system of approximative adverbs in EP, such an interpretation is contributed by *mal*. This property is either lexically or contextually associated with the predicate in question and it constitutes a condition for that predicate to hold. The quantification contributed by *mal* corresponds to the vague quantifier *pouco*, i.e., it maps the situation in the actual world onto a set of scalar values that are less than the norm which is assumed for that predicate.

The semantic contribution of *mal* imposes a number of semantic co-occurrence restrictions on the modified predicate. First of all, *mal* requires that the modified predicate holds, since asserting a low degree of a certain property of a predicate which is applied to an argument presupposes that the predicate in question holds of that argument (albeit to a reduced extent). Hence, *mal* is not compatible with a negated predicate (in Israel’s (1996) terms, it is a polarity sensitive item (PSI) and more specifically a positive polarity item (PPI)). This fact accounts for the “polar component” correctly identified by the Conjunctive
Analysis. Second, the denotation of the modified predicate must be measurable along some dimension.

The pragmatic contribution of *mal* is closely related to the semantics of the adverb; the approach adopted in this chapter and in chapter 6 draws from a large body of literature on scalar inferences and the pragmatics of quantification (Horn 1972, 1989, among others). The proximal component of *mal* follows from the comparison that the adverb introduces; the actual predicative relation is viewed as falling short of meeting the requirements for the normal applicability of the predicate in question. This comparison induces an inference to the effect that the current predicative relation only instantiates the predicate in a marginal way. This pragmatic inference explains the asymmetry of the propositional conjuncts noted by the Conjunctive Analysis; given that the actual predicative relation is evaluated as a poor instance of the predicate, the implication that the predicate holds seems to be paradoxically associated with this evaluation. Since the quantification conveyed by *mal* assigns to the conditions enabling the predicate in question a value which is below the norm, this induces an epistemic weakening of a (fully committal) assertion of the predicate in question. Hence, *mal* has an understating function, when compared to the use of sentential negation (Huddleston & Pullum 2002, Klein 1998, Horn 2002a).

What is common to the three adverbials that instantiate the class of approximatives in EP is the fact that they encode a comparison between the actual and the expected conditions for a certain predicate to hold. The inverted readings of approximative adverbs analyzed in this chapter make apparent an important feature of the semantics of this class of adverbs and of how the semantics/pragmatics interface is crucial for a full understanding of their behavior. Because approximative adverbs encode information pertaining to the speaker’s
beliefs about the conditions for a predicate to hold, they manifest a particular sensitivity to contextual information, as this information provides the premises for the scalar evaluation of the predicative relation. The meaning of approximative adverbs crucially interacts with contextual coordinates, such as time (which gives rise to the frequent polysemies involving temporal values, which are cross-linguistically attested). This sensitivity to contextual information has a bearing on the truth conditions of the sentence.
CHAPTER 8

CONCLUSIONS

The goal of this dissertation was to investigate to what extent the meaning distinctions encoded by the EP system of approximative adverbs shed light on the characterization of these adverbs as a class and on the challenges raised by their semantic-pragmatic properties. In particular, I have focused on the intuitive notion of closeness associated with the meaning of these adverbs and the related question of the asymmetry of the two meaning components identified by the Conjunctive Analysis.

The main claim of this work is that the notion of “closeness” corresponds to an evaluation of the applicability of a predicative expression along a scalar dimension, on the basis of a comparison between the conditions that hold in the actual predicative relation and the conditions that are expected and assumed as a norm for that predicate to hold.

In chapter 2, I have reviewed some of the properties displayed by approximative adverbs cross-linguistically and more specifically in European Portuguese. I have argued that approximative adverbs as a class display two main properties: (i) evaluation of the applicability of the predicate, and (ii) scalarity. Both properties are interrelated, in that the evaluation of a certain predicative relation relies upon a comparison between two values on the scale of a property which is normally associated with the predicate in question.
Approximative adverbs provide a way to assess categorization and do so through a highly context-dependent metric; the metric is provided by a scale which is contextually established.

The experimental data reported in chapter 3 argue for a pragmatic distinction between the meaning components of approximative adverbs. The proximal component is the asserted contribution of approximative adverbs and plays a crucial role in textual coherence, whereas the polar component is entailed, and hence added to the Common Ground, but not asserted. In particular, the results obtained for *almost* show that the polar component, as understood by the Conjunctive Analysis, cannot adequately capture the full range of interpretations of this adverb. The theoretical consequences of these results are explored in the two subsequent chapters.

The analysis of the Portuguese data, pursued in chapters 4 through 7, shows that the evaluation contributed by approximative adverbs may yield two main types of interpretations. If the meaning of the predicate involves a change of state, the adverb qualifies the conditions for that change of state to happen, whereas if it does not involve a change of state, it qualifies the extent to which the predicate applies to its argument.

In chapter 4, I have analyzed the meaning of *quase* and have argued that it exemplifies both types of interpretations. In the case of *quase*, this distinction correlates with a difference in the scope of the adverb; when the adverb has scope over the whole proposition, it contributes the former type, i.e., a counterfactual interpretation. When the adverb does not have scope over the proposition, it evaluates the applicability of the modified predicate to its argument. The meaning of *por pouco*, on the other hand, only exemplifies the counterfactual interpretation; a restriction on the type of scales it can occur with (a scale of possibility) is inherent in its semantics. This relates to the observation that preverbal *por*
pouco may only co-occur with telic verbs, the same types of predicates that yield the
counterfactual interpretation with quase. The meaning of mal, which is analyzed in chapters
6 and 7, exemplifies the second type of interpretation, i.e., the evaluation of the applicability
of the modified predicate.

According to this proposal, it is possible to conceive of the EP system of
approximative adverbs as represented in Table 8.1, which yields the pairs in A and B:

<table>
<thead>
<tr>
<th></th>
<th>Evaluation of the applicability of the predicate</th>
<th>Possibility (counterfactual interpretation)</th>
<th>Polarity sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>quase</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>mal</td>
<td>yes</td>
<td>no</td>
<td>yes (PPI)</td>
</tr>
<tr>
<td>por pouco</td>
<td>no</td>
<td>yes</td>
<td>yes (NPI)</td>
</tr>
</tbody>
</table>

Table 8.1: The EP system of approximative adverbs

A) quase and mal

Both contribute an evaluation of the applicability of the predicate, and can be
analyzed as involving a comparison with a norm (on the basis of the degree of a
property associated with the modified predicate). In this use, quase may be
paraphrased by aproximadamente (although, as shown in chapter 5, the two
adverbs are not entirely equivalent) and not by pre-verbal por pouco. The adverb
mal is more restricted in terms of the syntactic categories that it can modify (it
can only modify VPs, unlike quase).

B) quase (as a sentential adverb) and por pouco

Both convey a counterfactual interpretation (i.e., both may be analyzed as
expressing an implicit counterfactual). In this use, quase may not be
paraphrased by aproximadamente. The counterfactual interpretation can never
be obtained with mal. Note that mal differs from barely in this respect, since
according to Sevi’s (1998) analysis of Engl. barely, this adverb may receive a
counterfactual interpretation (see Sevi 1998:64, ex. 43a).

The distinctions summarized in the pairs in A) and B) contribute to a better understanding of
why quase and mal cannot be analyzed as “mirror-images”, as claimed by the Conjunctive
Analysis for almost and barely (Horn 2002a). In chapter 3, I have provided experimental
evidence against such an approach to the meaning of almost and barely. In the following, I
summarize the arguments that follow from the analysis of the Portuguese approximative adverbs that bear on this issue.

### 8.1 Against a mirror-image analysis of *quase* and *mal*

Although Horn (2002a) only argues for the equivalence between *almost not* and *barely*, Sevi (1998:4 and *passim*) argues for the equivalence of each adverb with the inner negation of the other. The two sides of Sevi’s account of the interdefinability of the adverbs are represented in (1):

(1)  
   a. almost not ≈ barely  
   b. barely not ≈ almost

The equivalence given in (1b) is not observed in EP, given the ungrammaticality of the sequence *mal não*. The left term in (1b) is occupied in EP by the adverbial *por pouco* in clause-final position. This fact has a bearing on the understanding of the semantic properties of this class of adverbs, since it makes apparent the different values of *almost* and their relation to the meanings of *barely*, which are conflated in English.

The cases in which the two adverbs can be interchangeable are actually a consequence of the pragmatic inferences that relate to scalar reasoning. I have claimed that *quase* assigns to a predicative relation a high degree of a scalar property, through closeness to the endpoint of the scale, whereas *mal* assigns to the predicative relation a low degree of a property associated with the predicate (i.e., less than *n*, where *n* is the norm assumed for that predicate). Since negation reverses the order of a scale, in contexts with the inner negation of 

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*quase*, the scalar endpoint is the minimum value on the scale. If the scalar endpoint denoted by the expression modified by *quase* is zero (or a minimum value on a scale which is not quantitative), given that *mal* denotes a set of low values on a scale, then both adverbs denote the same range of values on the scale and may be used interchangeably, as in (2) and (3):

(2) O João quase não dormiu.
   ‘João almost didn’t sleep.’

(3) O João mal dormiu.
   ‘João barely slept.’

The standard of comparison selected by *quase* in (2) is a minimum endpoint value on a scale of time, since the negation of the predicate *dormir* ‘to sleep’ entails *not to sleep for any amount of time*. In (3), *mal* receives the durative interpretation described in chapter 7, and denotes a very reduced duration of the time interval during which the sleeping eventuality holds. Thus, the range of scalar values on the scale of time denoted by the output of modification by *quase* coincides with the values which are less than the expected norm evoked by *mal*. In (2) and (3), both adverbs contribute a low value on a scale associated with the meaning of the predicate *sleep*.

This meaning is expressed in two different ways: with *quase*, by asserting the scalar proximity with the minimum value on the scale of time, and with *mal*, by asserting that the actual predicative relation falls short of the temporal norm which is assumed for the predicate in question.

There are cases in which the two adverbs are not interchangeable. Both *quase* and *mal* contribute a comparison with a norm. However, the norm selected by *quase* is a scalar endpoint which in the case of telic predicates corresponds to a change of state, yielding a
counterfactual interpretation. As shown above, the counterfactual interpretation cannot be obtained with *mal*. This reason underlies the infelicitous use of *mal* in (5), based on example (4) with Hebrew *bekoši* ‘barely, hardly’, discussed in Sevi (1998:2, his example (1c)):

(4) dani bekoši tiken et ha-mexonit ha-zot, mazal še-sofsof hitpana lo kcat zman.
    ‘Danny barely fixed this car; luckily at last he had some free time.’

(5) #O Dani mal compôs o carro.
    the Dani *mal* fix:SPAST:3SG the car

According to Sevi, “Here *bekoši* means something like *almost didn’t happen*; i.e. not fixing the car was a close possibility.” (Sevi 1998:2) Crucially, in this example *mal* would not be felicitous; *mal*, unlike *barely*, does not contribute an evaluation of the possibility of the truth of a proposition.122 In the EP system of approximative adverbs, this function is fulfilled by *por pouco*, as exemplified in (6):

(6) O Dani não deixou este carro por compor por pouco; ainda bem que conseguiu ter tempo para o compor.
    ‘Dani barely fixed this car (lit. *didn’t leave this car unfixed by little*); it’s good that he had time to fix it eventually.’

Given the aspectual co-occurrence restrictions of *mal*, (5) is acceptable only under a coerced interpretation, i.e., as measuring the duration of the time interval during which the resultant state of the fixing event holds (for how long the car has been fixed), assuming that the right boundary of the time interval is the speech time. This is precisely the interpretation obtained in (7), but not in (8), where the use of *quase não* is infelicitous:

122 This is true for the canonical interpretation of *mal*, but not for the “inverted readings”, as pointed out in chapter 7.
(7)  As aulas mal começaram, e já queres ir de férias!
‘Classes have barely started, and you already want to go on vacation!’

(8)  #As aulas quase não começaram,
  the classes almost not start:SPAST:3PL
  e já queres ir de férias!
  And already want:PRES:2SG go:INF on vacation

It is possible to paraphrase (7) with the same predicate, and to explicitly add the reason for
the evaluation contributed by mal – denoted by the focused constituent, with which the focus
operator só associates in (7’) – namely the reduced time interval which has elapsed since
classes started (up till speech time):

(7’)  As aulas só começaram há muito pouco tempoFOCUS.
  the classes only start:SPAST:3PL there:is very little time
  ‘Classes have started only very little time ago.’

In the first conjunct of (8), on the other hand, the contribution of quase yields a
counterfactual interpretation. As predicted by the analysis developed in this dissertation, the
meaning of quase in this example is roughly equivalent to (9):

(9)  Por pouco as aulas não começaram!
  by little the classes not start:SPAST:3PL
  ‘Classes almost didn’t start!’

The first conjunct of (8), in isolation, means that the beginning of classes was expected not to
happen. This interpretation yields an infelicitous utterance with the continuation provided in
(8) since the question under discussion pertains to the limited amount of time between the
two eventualities (classes have begun, addressee wants to go on a vacation), as made explicit
by the phasal adverb already. According to Löbner (1989), already introduces the
perspective of a temporal development; the event over which the adverb has scope is
presented as taking place earlier than expected. Consequently, the co-occurrence with *mal* is felicitous because the adverb attributes to the time interval which has elapsed since the beginning of classes a reduced duration.

In certain contexts, the use of either *mal* or *quase não* seems to be interchangeable:

(10) A aveia *mal* chegou a brotar.
    ‘The oat barely got to germinate.’

(11) A aveia *quase não* chegou a brotar.
    ‘The oat almost didn’t get to germinate.’

Both sentences entail that the oat did germinate, as conjunction with the negation of this proposition yields contradictory statements. However, the evaluation of insufficiency or lack of a salient property which is part of the asserted content of *mal* has a bearing on the possible issue which is under discussion in the continuation, as shown by the naturally-occurring example in (12):

(12) … os animais estão tão cansados de comer farinhas que uma das vacas tem de estar sempre amarrada para não saltar o arame farpado que isola quatro hectares semeados com aveia – que *mal* chegou a brotar mas é infinitamente mais apetitosa do que os grãos de alimento industrial. (CP Ext 1433758)
    ‘…the cattle are so sick of eating feed that one of the cows has to be constantly tied, so that it won’t jump over the barbed wire surrounding four hectares sown with oat – oat which barely (*mal*) got to germinate but is much tastier than industrial feed.’

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123 The use of *already* in this example is similar to that analyzed by Löbner as the “type 3”: “Sentences of type 3 have the presupposition that the event referred to takes place at some time. The crucial question is whether it takes place later or earlier than at the time specified.” (Löbner 1989:194). This use relates to an inference commonly associated with the use of *already* in the so-called type 1 (sentential adverb) and type 2 (focus adverb) uses. As pointed out by Löbner, although only the transition from the first to the second semi-phase is relevant for the determination of the truth conditions of a sentence containing *already*, there is frequently an inference as to the reduced distance between the time of evaluation (t₁) and the transition point, an inference which is probably due to relevance considerations (arguably, the transition is at issue, and hence worth mentioning, if it is close to the time of evaluation).
Replacing *mal* with *quase não* in this context yields an infelicitous utterance, as in (13):

(13) #…aveia que quase não chegou a brotar mas é infinitamente mais apetitosa…
     ‘…oat that almost didn’t get to germinate but is much tastier…’

The first conjunct of (13) has a counterfactual interpretation which is not obtained with *mal*; it was almost the case that the oat did not germinate (but eventually it did). Despite the fact that (13) entails the truth of the predicate, the sentence is not felicitous because the continuation builds on the expected correlation between quantity of the cereal and its potential to please the animals. The test crucially depends on the contribution of *mas* ‘but’ and its implication of counter-expectation: the question under discussion is precisely the preference of the animals for the cereal naturally grown, albeit small or reduced in quantity (a concessive inference is invited: the oat was small, yet tasty). With a continuation favoring the counterfactual interpretation we find the inverse felicity pattern:

(14) …a aveia que quase não chegou a brotar, mas conseguiu nascer graças a uns dias de bom tempo.
     ‘…oat that almost didn’t get to germinate, but managed to sprout thanks to some days of good weather.’

(15) #…a aveia que mal chegou a brotar, mas conseguiu nascer graças a uns dias de bom tempo.
     ‘…oat that barely got to germinate, but managed to sprout thanks to some days of good weather.’

Example (14) is felicitous because the continuation builds on the asserted counterfactual content (“If there hadn’t been some days of nice weather, the oat would not have sprouted”).

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124 According to Anscombe and Ducrot’s (1977) analysis of French *mais*, the two propositions conjoined by *but* have opposite argumentative orientation, i.e., the conjunct prefaced by *but* denotes the negation of the conclusion which can be drawn from the premise expressed by the first conjunct.
The difference between quase and mal that relates with the counterfactual interpretation of quase makes apparent that the contribution of the two adverbs crucially involves a comparison with a norm. This comparison introduces a perspective that can be tested only by the felicity of possible continuations. When the first conjuncts of (7) and (8), or (14) and (15), are interpreted in isolation and only the entailments are taken into consideration, the sentences seem to be interchangeable, given that both quase não p and mal p entail p. However, the felicity of the possible continuations shows that whereas quase introduces a comparison with a standard value which is a change of state, the norm introduced by mal consists of a scalar value corresponding to what would be normal or expected for a certain property.

8.2 The asymmetry of the meaning components of approximative adverbs

The main challenge raised by the behavior of approximative adverbs, as presented in chapter 1, is to explain the asymmetry of their meaning components identified by the Conjunctive Analysis and the relation between them. In this work, I have argued that the asserted meaning of approximative adverbs consists of a comparison with a scalar value (a norm) and involves an assessment of the applicability of the modified predicate.

The choice of the standard value of comparison is crucial to the linguistic construal of the situation, as encoded by approximative adverbs, and hence constrains the possible discourse contexts in which the adverbs may felicitously occur.
I have argued that the polar component follows from this asserted meaning, in that it is entailed by the comparison introduced by the approximative adverb.125 I have provided empirical evidence (both from experimental results and corpora data) that the polar component of *quase* should be understood as the negation of the standard value of comparison, but not necessarily as the negation of a proposition, since the adverb need not have propositional scope. Moreover, I have shown that the computation of the polar component requires that the proximal component be added to the common ground, i.e., it requires the retrieval of the relevant scale and the identification of the standard value of comparison.

This approach is confirmed by the phenomenon of inverted readings. This phenomenon shows that the two meaning components of approximative adverbs are not independent; not only does the polar component undergo inversion, but the proximal does also, as shown by the restrictions placed on the discourse structure with respect to the contravention of an expectation.

The relevance of the present study to current linguistic theory relates to this point. The interpretation of approximative adverbs, as presented in this work, shows the strong contextual dependence of this class of adverbs and in particular how the determination of the truth conditions of a sentence containing an approximative adverb (i.e., the determination of the polar component) ultimately depends on contextual information, as required by the lexical meaning of the adverb. As shown in chapter 7, what underlies the inverted reading of *mal e.g. with an epistemic verb like to know* is the denial of the *possibility of knowing*, given

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125 This approach raises some interesting questions in the perspective of research on acquisition. Given the results from acquisition studies reported in chapter 3, in particular the fact that the polar component of French *presque* seems to be identified by subjects later than the proximal component, one may hypothesize that the acquisition of the meaning of adverbs that contribute multiple implications to the meaning of a sentence advances stepwise, the asserted content being acquired earlier.
the circumstantial information entailed by the context (most often, the lack of temporal perspective of the holder of the epistemic state, and the premises he relies on, as contrasted with the perspective of the speaker). The theoretical interest of this class of adverbs resides exactly in this function; their interpretation shows that speakers’ assumptions about the normal conditions of use of a predicate crucially affect their commitment to the applicability of a predicate in a certain situation and even to its truth.

8.3 An exercise in lexical pragmatics

This dissertation can be situated in the field of lexical pragmatics, in that it investigates Grice’s conception of meaning as a composite notion by addressing it from the perspective of lexical semantics.

I have shown that the meaning of approximative adverbs as a class displays strong contextual dependence; the values of the semantic parameters that define the comparison introduced by these adverbs are contextually retrieved. Hence, pragmatic information is at the very core of the lexical meaning of these items (in the same way that a parameter needs to be filled by contextual information in the lexical entry of gradable adjectives). The co-occurrence restrictions of the EP approximative adverbs show that the pragmatic component is grounded in the lexical meaning in constrained and complex ways. Moreover, it is possible to identify implicatures that are systematically associated with the contexts of use of this class of adverbs; these implicatures arise partly as a function of the adverbs’ lexical semantics.
In this dissertation, I have focused on a language-internal analysis of the meaning of approximative adverbs. From a theoretical perspective, the adoption of a systemic approach to the semantic-pragmatic properties of a class of words relates to the general goal of pursuing an investigation in lexical pragmatics. In order to understand the multiple implications that a lexical item contributes to the meaning of a sentence, it is necessary to tease apart the entailments from the inferences that arise in frequent contexts of use and that may relate to the semantic class of the item. Moreover, it is necessary as well as to consider idiosyncratic properties that follow from its diachrony and from the systemic relations between members of the same class within a given language. Such an approach also makes it possible to analyze the patterns of co-occurrence of approximative adverbs with other classes of words with related meanings in the same language (e.g. phasal adverbs and scalar focus particles), an endeavor that targets a broader notion of compositionality of meaning (at the discourse level).

Approximative adverbs, as has been argued in this dissertation, are a type of degree adverbs. It is well-known in the literature that degree adverbs change the standard value of comparison on the scale associated with the predicate they modify (Klein 1980, Abeillé et al. 2004:196). For example, a degree modifier like very alters the standard of comparison of a certain adjective by raising it (Klein 1980, Kennedy & McNally 2005). I have argued that the interpretation of approximative adverbs requires the identification of a standard value of comparison, and that this standard plays a crucial role in the evaluation contributed by the adverbs. Whereas in the case of quase and por pouco the standard value is always an endpoint on a scale, in the case of mal the standard value is a quantitative norm conventionally or prototypically associated with the predicate.
The main claim of this work is that the scalar evaluation encoded by approximative adverbs is at the very core of the “perspective” that they contribute. As summarized in section 8.1, the particular perspective contributed by each adverb can only be fleshed out by comparing possible contexts of use in which the approximative adverbs may felicitously occur. This relates to the strong context sensitivity displayed by approximative adverbs and to the role that they play in “argumentation” (in the sense of Anscombe and Ducrot 1983), a topic still requiring much research. The experiments reported in chapter 3, the analysis of the co-occurrence patterns of approximative adverbs with scalar adverbs and the constraints that inverted readings impose on the discourse structure suggest some ways in which this line of research can be pursued.

The notion of “perspective” is ill-defined and has not been systematically investigated in the literature on semantics and pragmatics (but see Löbner 1989). When I say that approximative adverbs contribute a “perspective”, I do not mean that the contribution of approximative adverbs is necessarily imputable to a particular speaker and to her subjective beliefs or opinions. The view advocated here also differs from the notion of “speaker orientation” proposed in Potts (2005), whereby the content of a set of linguistic expressions (conventional implicature (CI) triggers) must necessarily be assigned to the intensional model of the speaker (or the hearer, in certain cases).

Rather, I have shown that by choosing to use an approximative adverb, the speaker chooses to describe a certain state of affairs by comparing it with a scalar value of a relevant property, this value being assumed as a norm. This comparison determines a particular linguistic construal of the situation, which ultimately serves the speaker’s communicative goals.
APPENDIX A

MATERIALS OF EXPERIMENT 1

List of critical items

1. John can almost swim. / John can barely swim.
   A+, B- So he’ll enjoy a day at the pool with his friends.
   A-, B+ So he’s afraid of drowning.

2. Peter can almost dance. / Peter can barely dance.
   A+, B- So he’s agreed to go to the ball.
   A-, B+ So he’s afraid of tripping.

3. Mary can almost ski. / Mary can barely ski.
   A+, B- Consequently, she’ll enjoy her winter vacation.
   A-, B+ Consequently, she’s afraid of breaking a leg.

4. Paul can almost drive. / Paul can barely drive.
   A+, B- So his father just bought him a car.
   A-, B+ So he’s afraid of crashing.

5. Scott can almost write. / Scott can barely write
   A+, B- So his teacher is encouraged.
   A-, B+ So he avoids letter writing.

6. Sally can almost knit. / Sally can barely knit.
   A+, B- So she’s planning on making sweaters for Christmas.
   A-, B+ So she drops lots of stitches.

7. My grandfather can almost walk. / My grandfather can barely walk.
   A+, B- Therefore he sold his wheelchair.
   A-, B+ Therefore he’s going to need a wheelchair.

8. Dave can almost ice skate. / Dave can barely ice skate.
   A+, B- Therefore he’ll enjoy going to the ice rink.
   A-, B+ Therefore he can’t join the hockey team.

9. Steve can almost rollerblade. / Steve can barely rollerblade.
   A+, B- Therefore his parents let him go to the skating party.
   A-, B+ Therefore he’s afraid of falling.

10. Pat can almost sing. / Pat can barely sing.
    A+, B- Therefore she’ll join the choir.
    A-, B+ Therefore she won’t join the choir.

11. Andy can almost pass the ball. / Andy can barely pass the ball.
    A+, B- It’s because he trains every day.
    A-, B+ Consequently, he only plays on defense.

12. Joe can almost pitch. / Joe can barely pitch.
    A+, B- Therefore his coach is happy with him.
    A-, B+ It’s because his arm is not strong enough.

13. My niece can almost read. / My niece can barely read.
    A+, B- Consequently, she’ll be promoted to second grade.
    A-, B+ Consequently, her parents are worried.

14. My youngest son can almost add. / My youngest son can barely add.
    A+, B- Consequently, first grade will be easy.
    A-, B+ Consequently, his teacher doesn’t know what to do.

15. Peter can almost recite the multiplication tables. / Peter can barely recite the multiplication tables.
    A+, B- So he’s doing well in math class.
    A-, B+ So he needs a calculator.

16. Alex can almost dribble the ball. / Alex can barely dribble the ball.
    A+, B- It’s because he’s been practicing lately.
    A-, B+ Therefore he drops the ball all the time.

17. Alice can almost type. / Alice can barely type.
    A+, B- Consequently, her job prospects are improving.
    A-, B+ Consequently, she always writes with a pen.

18. Charlie can almost throw a Frisbee. / Charlie can barely throw a Frisbee.
    A+, B- Therefore he’ll soon be able to play with his elder brother.
    A-, B+ Therefore the other children don’t play with him.

19. Sue can almost ride a bike. / Sue can barely ride a bike.
    A+, B- Consequently, she’ll stop taking the bus to school.
    A-, B+ It’s because her parents drive her everywhere.

20. Ann can almost walz. / Ann can barely walz.
    A+, B- Consequently, she’s willing to show her improvements at the ball.
    A-, B+ Consequently, her partner is discouraged.
List of fillers

C- Sam is an experienced diver. Consequently, he doesn't know anything about buoyancy.
C- Brian doesn't enjoy outdoor activities. Consequently, he's willing to go hiking next summer.
C- Chad is a fast reader. Consequently, it takes him five months to read a book.
C- Mary's daughter can already talk. Consequently, Mary thinks she is a slow learner.
C- Fred is a very good gardener. Consequently, nothing grows in his garden.
C- James has a green thumb. Consequently, nothing grows in his garden.
C- Claire is the worst violin player from the school. Consequently, she got a standing ovation for her performance.
C- Sue plays the piano very poorly. Consequently, she just got an award for excellence.
C- Mark spends every vacation snowboarding. It's because he doesn't enjoy winter sports.
C- Paul is a very good pitcher. It's because he doesn't throw fast enough.
C- Tim is an avid traveller. It's because he hates being away from home.
C- John knows everything about canoeing. It's because he hates paddle sports.
C- Robin is a very bad rollerskater. It's because he is a champion on the roller rink.
C- Frank has two left feet. It's because he was born to be a dancer.
C- Carol is a very good translator. It's because she can't speak any foreign language.
C- Ann knows everything about American history. It's because she failed her history class.
C- Whitney draws very poorly. It's because she never practices.
C- Sue plays the piano very poorly. It's because she practices constantly.
C- Carl is a very bad photographer. So he just got a job at National Geographic.
C- Ted makes many spelling mistakes. So he won the spelling bee.
C- My niece cannot crawl yet. So her parents don't need childproof outlets anymore.
C- My little cousin can already crawl. So her parents don't need childproof outlets anymore.
C- Helen is very bad at math. So she always wins the national math competitions.
C- Jane is a really good jogger. So she doesn't enjoy running.
C- Pat is a very bad gymnast. So she was invited to join the gymnastics team.
C- Martha sings very poorly. So she'll sing a solo in the school concert.
C- Pedro is the worst soccer player in the country. Therefore every team would like to have him.
C- John is a really good rollerskater. Therefore he falls frequently.
C- Kirk is not interested in stamp collecting. Therefore he'll need a magnifying glass.
C- Bob is the best chef I've ever met. Therefore no restaurant is interested in hiring him.
C- June is an excellent cook. Therefore she always burns the stew.
C- My grandmother drives very slowly. Therefore she gets speeding tickets all the time.
C- Amanda is a very poor knitter. Therefore she knows everything about stitches.
C- Lisa never learned to ice skate. Therefore she plans to win the state championship.
C+ My brother always drives too fast. Consequently, he gets speeding tickets all the time.
C+ John has two left feet. Consequently, he steps on his partner.
C+ Sam can run very fast. Consequently, he's been state champion for the past two years.
C+ George is a virtuoso pianist. Consequently, lots of people admire his talent.
C+ Judy can already balance. Consequently, she doesn't need to hold onto the bar anymore.
C+ Allison is an excellent cook. Consequently, she never has to eat in the cafeteria.
C+ Kate is a very good student. Consequently, she received a fellowship for excellence.
C+ Sally is a very slow runner. Consequently, she won't join the race.
C+ Tom has a green thumb. It's because he grew up gardening.
C+ Sam is an expert in chess. It's because he has such a logical mind.
C+ Ted is a very poor rollerskater. It's because he has weak ankles.
C+ Jim is an excellent horseback rider. It's because he learned to ride as a child.
C+ John is unable to ski. It's because he never learned how to do it.
C+ Chris always eats very slowly. It's because he's afraid of choking.
C+ Peter dislikes riding horses. It's because he's afraid of large animals.
C+ Pam is a really bad tennis player. It's because she never took tennis lessons.
C+ Sally plays the cello very poorly. It's because she was always too lazy to practice.
C+ Marie sings very poorly. It's because she's tone deaf.
C+ Peter is a master chess player. So he can teach us how to play.
C+ David can already recite the multiplication tables. So he doesn't need a calculator anymore.
C+ John can play the violin really well. So he was invited to join the state orchestra.
C+ Tim never makes a spelling mistake. So he won the spelling bee.
C+ Sarah is a very talented actress. So her performances are always inspiring.
C+ Abby can draw very well. So she always gets an A in art classes.
C+ Hope excels at diving. So she was invited to join the diving team.
C+ Mike is the best pitcher the team ever had. So the coach is really proud of him.
C+ Mario is the best soccer player in the country. Therefore every team would like to have him.
C+ Alan is a really good rollerskater. Therefore he can teach his younger brother.
C+ Rich is a very poor cook. Therefore he eats in the cafeteria every day.
C+ Adam is a very good gardener. Therefore he has fresh vegetables every day.
C+ Joe is a bad chess player. Therefore he needs to take chess lessons.
C+ Michael wants to start collecting stamps. Therefore he'll need a magnifying glass.
C+ Elizabeth is a very good knitter. Therefore she knows everything about stitches.
C+ Jennifer is outstanding at singing. Therefore she'll sing a solo in the school concert.

Figure A.1: Ratings by item according to type of continuation (barely)
Figure A.2: Ratings by item according to type of continuation (almost)
APPENDIX B

MATERIALS OF EXPERIMENT 2

List of critical items
1. John can almost swim. / John can barely swim.
2. Peter can almost dance. / Peter can barely dance.
3. Mary can almost ski. / Mary can barely ski.
4. Paul can almost drive. / Paul can barely drive.
5. Scott can almost write. / Scott can barely write
6. Sally can almost knit. / Sally can barely knit.
7. My grandfather can almost walk. / My grandfather can barely walk.
8. Dave can almost ice skate. / Dave can barely ice skate.
9. Steve can almost rollerblade. / Steve can barely rollerblade.
10. Pat can almost sing. / Pat can barely sing.
11. Andy can almost pass the ball. / Andy can barely pass the ball.
12. Joe can almost pitch. / Joe can barely pitch.
13. My niece can almost read. / My niece can barely read.
14. My youngest son can almost add. / My youngest son can barely add.
15. Peter can almost recite the multiplication tables. / Peter can barely recite the multiplication tables.
16. Alex can almost dribble the ball. / Alex can barely dribble the ball.
17. Alice can almost type. / Alice can barely type.
18. Charlie can almost throw a Frisbee. / Charlie can barely throw a Frisbee.
19. Sue can almost ride a bike. / Sue can barely ride a bike.
20. Ann can almost walz. / Ann can barely walz.

List of fillers

F C can Mary draws very poorly. / Mary can draw.
F C can Peter makes many spelling mistakes. / Peter can spell.
F C can Pam broke her neck trying to ice skate. / Pam can ice skate.
F C can Sam is a terrible driver. / Sam can drive.
F C can My grandmother needs to use a wheelchair. / My grandmother can walk.
F C can My nephew doesn't know how to add yet. / My nephew can add.
F C can Ann doesn't know the multiplication tables. / Ann can recite the multiplication tables.
F C can Ted is a very poor rollerskater. / Ted can rollerskate.
F C can Bob is unable to ski. / Bob can ski.
F C can Rich is a very poor writer. / Rich can write.
F C can Sue always needs a calculator to divide. / Sue can divide.
F C can Elizabeth sings very poorly. / Elizabeth can sing.
F C can Fred steps on his partner all the time. / Fred can dance.
F C can Carl's photos are so bad that he throws them away. / Carl can take photos.
F  C can     John has two left feet.                      John can dance.
F  C can     My young sister drops the ball during the game all the time. My young sister can dribble the ball.
F  C can     The food Mary cooks is disgusting.               Mary can cook.
T  C can     Peter is a master chess player.                Peter can play chess.
T  C can     Jim is an experienced diver.                 Jim can dive.
T  C can     Bill is a really good rollerskater.          Bill can rollerskate.
T  C can     Sam is a virtuoso pianist.                   Sam can play the piano.
T  C can     Marie is a very fast typer.                  Marie can type.
T  C can     Chad is a fast reader.                    Chad can read.
T  C can     Louise wins the spelling bee every year. Louise can spell.
T  C can     Peter is the best chef I've ever met.         Peter can cook.
T  C can     Sue can already balance.                   Sue can balance.
T  C can     Sue is an outstanding violin player.        Sue can play the violin.
T  C can     Elizabeth knows how to knit.                Elizabeth can knit.
T  C can     Ann sings so well that she wins every singing competition. Ann can sing.
T  C can     Helen never makes a counting mistake.       Helen can count.
T  C can     Paul is an excellent pitcher.                Paul can pitch.
T  C can     Tim has a green thumb.                     Tim can garden.
T  C can     Sally excels at reciting poems.             Sally can recite poems.
T  C can     Pat learned how to swim as a child.          Pat can swim.
F  C cannot  Ann sings so well that she wins every singing competition. Ann cannot sing.
F  C cannot  Sue is an outstanding violin player.        Sue cannot play the violin.
F  C cannot  Helen never makes a counting mistake.       Helen cannot count.
F  C cannot  Peter is a master chess player.              Peter cannot play chess.
F  C cannot  Tim has a green thumb.                     Tim cannot garden.
F  C cannot  Chad is a fast reader.                     Chad cannot read.
F  C cannot  Pat learned how to swim as a child.          Pat cannot swim.
F  C cannot  Elizabeth knows how to knit.               Elizabeth cannot knit.
F  C cannot  Louise wins the spelling bee every year. Louise cannot spell.
F  C cannot  Paul is an excellent pitcher.                Paul cannot pitch.
F  C cannot  Peter is the best chef I've ever met.         Peter cannot cook.
F  C cannot  Sue can already balance.                   Sue cannot balance.
F  C cannot  Jim is an experienced diver.                Jim cannot dive.
F  C cannot  Bill is a really good rollerskater.          Bill cannot rollerskate.
F  C cannot  Marie is a very fast typer.                  Marie cannot type.
F  C cannot  Sam is a virtuoso pianist.                   Sam cannot play the piano.
F  C cannot  Sally excels at reciting poems.             Sally cannot recite poems.
F  C cannot  Tim has a green thumb.                     Tim cannot garden.
T  C cannot  My grandmother needs to use a wheelchair. My grandmother cannot walk.
T  C cannot  Rich is a very poor writer.                Rich cannot write.
T  C cannot  Sue always needs a calculator to divide. Sue cannot divide.
T  C cannot  Ann doesn't know the multiplication tables. Ann cannot recite the multiplication tables.
T  C cannot  John has two left feet.                     John cannot dance.
T  C cannot  Peter makes many spelling mistakes.         Peter cannot spell.
T  C cannot  Mary draws very poorly.                    Mary cannot draw.
T  C cannot  Ted is a very poor rollerskater.             Ted cannot rollerskate.
T  C cannot  The food Mary cooks is disgusting.         Mary cannot cook.
T  C cannot  Carl's photos are so bad that he throws them away. Carl cannot take photos.
T  C cannot  Elizabeth sings very poorly.                Elizabeth cannot sing.
T  C cannot  Fred steps on his partner all the time.    Fred cannot dance.
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Table B.1: Reaction times (RT) obtained in the T/F judgement task (Experiment 2).


Kratzer, Angelika. 1977. What “must” and “can” must and can mean. Linguistics and Philosophy 1, 337-55.


