

A note on the analysis of *too* as a discourse marker

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Abstract

Heim (1990) and Kripke (2009) argue that the adverb *too* is a trigger of presuppositions that cannot be accommodated, i.e. a hard trigger (Abusch 2002). Contrary to this view Zeevat (2003,b) proposed that *too* should rather be analyzed as a marker of additive discourse relations, which he argues explains its resistance to accommodation. In this squib, I show that presuppositional analyses of *too* are actually as explanatory as the discourse marker analysis in this respect, and that the latter faces serious issues with sentences with contrastive topics. I conclude that nothing is gained by reanalyzing hard presupposition triggers as discourse markers.

Keywords: presuppositions, discourse markers, *too*

Resumo

Heim (1990) e Kripke (2009) argumentam que a partícula *too* desencadeia presunções que não podem ser acomodadas. Em outras palavras, *too* seria um desencadeador rígido de presunções (Abusch 2002). Ao contrário, Zeevat (2003,b) argumenta que *too* deve ser analisado como um marcador de relações discursivas aditivas, o que explicaria sua resistência ao processo de acomodação. Neste artigo, eu argumento que as análises presunpcionais de *too* são tão explicativas quanto a análise em termos de marcador discursivo em respeito à falta de acomodação. Eu mostro também que esta análise é problemática se consideramos sentenças com tópicos contrastivo. Logo, não é vantajoso reanalisar os desencadeador rígidos de presunções como marcadores discursivos.

Palavras chaves: presunção, marcador discursivo, *too*

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1 Introduction

In a classical analysis (see Kripke 2009, Heim 1990), *too* triggers an anaphoric presupposition which is restricted by association with focus²³. Consider for instance (1) from Kripke (2009). Here, *too* triggers a presupposition that a particular individual, which is salient in the discourse context, is having dinner in New York tonight. The position of focus accent (indicated by capitalizing SAM) constrains the nature of the antecedent that must be resolved in the discourse context: it must be an individual that belongs to the set of alternatives of the focused expression. The background of the sentence further restricts the resolution of anaphora, by requiring that this individual had dinner in New York.

- (1) SAM is having dinner in New York tonight, too.

Kripke and Heim argued that the anaphoric nature of the presupposition triggered by *too* explains why it cannot be accommodated. This line of thought has been developed in subsequent works in dynamic semantics, notably Heim (1991b), and later van der Sandt & Geurts (2001). However, this analysis has been more recently criticized by Zeevat (2003,b). In essence, Zeevat notes that the presupposition of *too* differs in several respects from the presupposition of *bona fide* anaphoric presupposition triggers, such as personal pronouns. Zeevat argues that the impossibility of accommodating the presupposition of *too* is therefore better analyzed in different terms: *too* is not a presupposition trigger, but a marker of discourse relations that hold between the proposition denoted by the sentence marked by *too* and a previously uttered proposition. Both propositions are assumed to be partial answers to a common question under discussion, where the second answer completes the first one.

This note is a critical examination of Zeevat’s proposal, which focuses on his treatment of the additive particle *too*. I raise two objections to Zeevat’s analysis. First, I argue that analyzing *too* as a discourse marker does not explain the impossibility of accommodating its “presupposition” any more than Heim’s and Kripke’s classical analysis. Secondly, I argue that

²Note that Kripke (2009) was initially circulated as a manuscript in 1990 and that Kripke’s views on this issues were already reported in Soames (1989), which Heim (1990) refers to. The author does not have access to the 1990 manuscript.

³On the notions of focus and association with focus, see e.g. Rooth (1985), Kadmon (2001) and references therein.

analyzing *too* only in terms of information structure predicts unattested uses of this particle. Indeed, while Zeevat’s analysis correctly predicts that *too* can associate either with focus or contrastive topics⁴⁵, as in (2) and (3) respectively, is also predicts that *too* can have a ‘mixed’ association with focus *and* contrastive topics, contrary to facts (4):

(2) A: What did Peter eat?

B: Peter ate PASTA_F. He ate HAM_F too.

(3) A: What did Peter and Pia eat?

B: PETER_{CT} ate PASTA_F. PIA_{CT} ate pasta_F TOO.

(4) A: What did Peter and Pia eat?

B: PETER_{CT} ate PASTA_F. PIA_{CT} ate RICE_F (#too).

The structure of this squib is as follows. First, I introduce the classical analysis of *too* from Kripke and Heim. Then, I present Zeevat’s objection’s to this analysis, and his own alternative according to which *too* is a discourse marker. Eventually, I investigate the problems faced by Zeevat’s analysis.

2 The classical analysis

2.1 Kripke on presupposition and anaphora

Some of the most influential analyses of *too* as a presupposition trigger were existential: the sentence *JOHN will have dinner in New York, too* would presuppose that there is someone other than John who will have dinner in New York. This seems to be the case in Karttunen & Peters’s (1979) analysis, who argue that many putative presuppositions are really conventional implicatures, and propose an existential analysis of the implicature conventionally attached to *too*:

(5) (...) “*JOHN drinks too*”, where *too* focuses on John, conversationally implicates that there is someone else who drinks besides John. (Karttunen & Peters 1979)

⁴On the notion of contrastive topics, see e.g. Büring (2007) and references therein.

⁵In the rest of the paper, constituents that receive focus accents or contrastive topic accents are capitalized. Constituents that are interpreted as focused have a subscript F and those that are interpreted as contrastive topics have a subscript CT.

This position was criticized in Kripke (2009), who argues that a number of presuppositions that were analyzed as involving existential quantification over entities, are actually singular propositions involving anaphoric reference to discursively salient entities.

According to Kripke, *too* in (6) is anaphoric to a salient individual, and triggers the presupposition that this individual is not Sam and is having dinner in New York. This contrasts with the existential presupposition that would be attributed to the sentence, which is that there is someone other than Sam who is having dinner in New York.

(6) SAM is having dinner in New York tonight, too.

One argument advanced by Kripke is that (6) is infelicitous when it is uttered ‘out of the blue’, when no context is given in which the interlocutors are concerned about someone having dinner in New York. This is unexpected if the presupposition triggered by *too* is that someone other than Sam is having dinner in New York, for surely it is common knowledge that millions of men and women do so every night. On the other hand, Kripke’s proposal predicts that an utterance of (6) out of the blue will lead to a presupposition failure, since *too* cannot find a proper antecedent in the absence of a previous context.

A consequence of this analysis is that we must say that the presupposition of *too* cannot be accommodated. In this respect, *too* contrasts with other presuppositions, such as the ones triggered by possessive pronouns. Kripke remarks for instance that if one utters (7), the hearer would naturally infer that the speaker has a sister, although this information is not asserted but is presupposed. (Lewis 1979) dubbed this process presupposition accommodation.

(7) I am going to meet my sister.

In the terminology of Abusch (2002), *too* is therefore a hard trigger: it resists presupposition accommodation, as opposed to *soft triggers* like possessive pronouns, whose presuppositions can be accommodated.

Kripke offers a second argument to support the anaphoric analysis of *too*, which builds on the projection of its presupposition from the consequent of conditionals. Consider the following sentence:

(8) If Herb comes to the party, the BOSS will come, too.

According to [Karttunen & Peters \(1979\)](#), the presupposition (or rather, conventional implicature) of the conditional is “if Herb comes, someone other than the Boss will come.” Nevertheless, Karttunen and Peters recognize that one infers from (6) that Herb is not the boss, and propose that this inference arises as a conversational implicature. The idea is that one might wonder on what grounds the speaker asserts that Herb’s coming to the party entails that someone other than the Boss will come. A reasonable explanation is that the speaker knows that Herb is not the boss. Whatever the plausibility of this argument, Kripke notes that it collapses in more complex cases such as (9)

(9) If Herb and his wife come to the party, the BOSS will come, too.

It is trivially true that situations in which at least two people come to the party are situations in which someone other than the boss comes to the party. The boss might be Herb, his wife, or even someone else. In all cases, the consequent of the conventional implicature will follow from its antecedent, and therefore the conversational implicature should not arise. However, as Kripke points out, we infer from (9) that neither Herb nor his wife is the boss. This is not explained in [Karttunen & Peters’s \(1979\)](#) account. Kripke proposes that it is possible to account for the inference that neither Herb nor his wife is the boss if we assume that *too* is anaphoric to a salient individual in the context. There are two complications however.

First, satisfaction theories of presuppositions generally predict that presuppositions triggered by lexical items that are embedded in the consequent of a conditional do not project to the highest level: a conditional *if p_A then q_B* (where *p* presupposes *A* and *q* presupposes *B*) globally presupposes *A* and *if p then B*. In that case, the presupposition of (8) is predicted to be *If Herb comes to the party, then Herb is not the boss*, rather than the expected *Herb is not the boss*. This issue was dubbed the *proviso problem* by [Geurts \(1996\)](#). Kripke is aware of this complication and proposes a Gricean explanation for the global inference that Herb is not the boss, following [Karttunen & Peters \(1979\)](#):

(10) “However, one could give a Gricean reply as proposed by Karttunen and Peters and argue that since there is already a unique boss (of the company or group), the only grounds for asserting the material conditional can be truth-functional knowledge of the

consequent. There is no connection between Herb’s coming to the party and whether or not he is the boss.” (Kripke 2009)

Much progress has been made on the proviso problem since Karttunen & Peters (1979) and Kripke (2009) (which was initially circulated in 1990). Since this issue is orthogonal to the argument of this squib, I will not address it. For recent discussions of the problem, the reader is referred Geurts (1996), Singh (2007) and Schlenker (2011).

Second, independently of the solution that is given to the proviso problem, the inference observed in (9) cannot be accounted for only by assuming that *too* is anaphoric to a salient individual α and presupposes that α is not the boss. Since there are two possible antecedents for *too* in the antecedent of the conditional, there should be at least two possible interpretations of the presupposition triggered by *too*: that Herb is not the boss, and that Herb’s wife is not the boss. These two interpretations do not predict the inference that the boss is neither Herb nor his wife. Alternatively, *too* might be anaphoric to Herb and his wife, as a plural individual, and the presupposition would then correctly be interpreted as neither Herb nor his wife is the boss. Judging from the following excerpt, this seems to be what Kripke has in mind:

- (11) “The general idea is that the presupposition arises from the anaphoric requirement that when one says *too*, one refers to some parallel information that is either in another clause (that’s the interesting case for the projection problem) or in the context. (Actually, in what I will later call the “active context” rather than the “passive context.” One might wish to subsume the clause case under the context case in some form of theory, but I won’t commit myself either way here.) When the focused element is a singular term, it is presupposed to be noncoreferential with the other corresponding elements in the parallel clauses or other bits of information in the (active) context.” (Kripke 2009)

There are at least two important ideas in this excerpt. The first one is that in order to resolve the anaphora triggered by *too* one must find in the context some information that parallels the information conveyed by the clause that contains *too*. In the case of examples (8) and (9), this information is the property of coming to the party, which has been mentioned in the antecedent. The second idea is that the denotation of the focused expression is noncoreferential with “other corresponding elements” in the context. These corresponding elements are presumably entities

that are known to be coming to the party, namely Herb and his wife. Importantly, Kripke assumes that the denotation of the focused expression that associates with *too* must be distinct from all these individuals. Only then can we account for the inference that neither Herb nor his wife is the boss, in example (9).

Kripke's paper is programmatic in many respects, and in particular no formal theory of association with focus or anaphora resolution is proposed.

2.2 Heim's analysis

Like Kripke (2009), Heim (1990) is concerned with the problem of presupposition projection. She discusses two views of what presuppositions are and their relation to theories of presupposition projection. According to the first view, defended most notably by Karttunen & Peters (1979), presuppositions are special inferences triggered by some lexical items. Since Karttunen & Peters (1979) analyze them as Conversational Implicatures, Heim calls this position the CI-view of presuppositions. According to the second view, presuppositions are propositions that must be entailed by the common ground for a sentence with the appropriate trigger to be felicitous in the context. The common ground of a context is defined as the set of propositions that the interlocutors take for granted in that context. Heim dubs the second view the 'Acceptance Condition view', or AC-view for short. One of Heim's objectives is to show that the AC-view of presuppositions fares better than the CI-view with respect to the projection problem.

The crucial difference between these two approaches is that in the CI-view presuppositions are inferred from sentences that contain the relevant triggers, while in the AC view presuppositions are (required to be) entailed by the context. This difference manifests itself when the context does not contain the information that is conveyed by the presupposition. This is the case for instance when example (12) is uttered out of the blue, when the interlocutors ignore the fact that the speaker owns a car:

(12) Sorry to be late, my car broke down.

According to the CI-view, nothing particular happens in this case: the presupposition merely adds to the common ground the information that the speaker owns a car, and the conversation proceeds normally. According to the AC-view on the other hand, the fact that the presupposition

is not entailed by the context makes the utterance infelicitous, unless the interlocutors rescue the discourse by accommodating the missing information.

However, it appears that presuppositions cannot always be accommodated. This is the case with presuppositions triggered by *too* and a number of other anaphoric expressions. Heim argues that the CI-view fails to account for a number of properties of these presuppositions. Consider (13). This sentence is infelicitous when it is uttered out of the blue. As Kripke argued using a similar example, this is unexpected if *too* triggers an existential presupposition, given that it is well known that there are many students in Harvard. An anaphoric analysis of *too* can account for this fact. In (13), *too* is anaphoric to a contextually salient individual α , and triggers the presupposition that α is not John and α went to Harvard. This is a singular proposition, and in the absence of a salient antecedent, the interlocutors do not know which of the many possible singular propositions of this form is intended as a presupposition, and therefore accommodation cannot take place.

(13) JOHN went to Harvard too.

This example creates at least two problems for the CI-view of presuppositions. The first one is that if presuppositions are inferences derived from the sentences that contain the appropriate trigger, there should be no such thing as presupposition failure: the presupposed information should just be added to the common ground without any trouble. The second is that it appears to be impossible to formulate the presupposition of *too* and similar items without reference to the context of utterance. Indeed, there is a non-propositional element of meaning in the presupposition triggered by *too*, which in (13) is an injunction to find an antecedent among the salient individuals in the context of utterance. In Heim's own words:

(14) "The admittance condition for *Bill was at the party too* did not seem to be that the context entail that somebody besides Bill was at the party; but rather that it provide some salient individual (or group) x and entail about this x that $x = \text{Bill}$ and x was at the party." (Heim 1990)

One might try to formulate the presupposition triggered by *too* as a meta-linguistic proposition, thereby rescuing the CI-view from the danger of anaphora. Here is a possible candidate

for the presupposition of *Bill went to the party, too*:

- (15) “the proposition that there is some salient individual which is presupposed to be different from Bill and to have been at the party.” (Heim 1990)

Heim points out, however, that whatever the presupposition of this sentence is, it disappears in the conjoined sentence (16):

- (16) John was at the party, and Bill was at the party too.

This is presumably because the first conjunct entails the presupposition of the second one, thereby satisfying it (in the AC view), or making it redundant (in the CI view). The issue for the ‘metalinguistic’ proposal is that *John was at the party* does not entail the proposition in (15), or anything like it.

In sum, Heim (1990) argues in favor of the AC-view of presupposition from the impossibility to accommodate the presupposition triggered by *too*, and she proposes that this impossibility is due to the anaphoric nature of this presupposition.

3 Zeevat’s analysis

3.1 Criticism of Heim’s and Kripke’s approach

Zeevat (2003) argues that the anaphoric analysis of *too* faces a number of issues. Zeevat discusses van der Sandt & Geurts’s (2001) analysis of *too*, but I believe that his remarks apply directly to Kripke and Heim’s analysis, which already contained the gist of van der Sandt and Geurts’s. The main objective of van der Sandt & Geurts (2001) is to explain the lack of accommodation of the presuppositions triggered by *too*. They argue that these presuppositions consist of a pronominal part and of a descriptive part. In order to resolve them, one must find an antecedent for the pronominal component of *too*. The content of the presupposition can then be resolved by predicating the descriptive content of the antecedent. In the following example, *Harry* is the antecedent of *too*. The descriptive part is predicated of *Harry*, yielding the proposition that *Harry is not John and will have dinner in New York*.

(17) A: Harry will have dinner in New York.

B: JOHN is having dinner in New York, too.

Van der Sandt and Geurts argue that presuppositions triggered by *too* cannot be accommodated precisely because they are partly pronominal: they observe that pronouns do not ‘accommodate’, in the sense that the utterance of a sentence that contains a pronoun whose reference cannot be resolved is infelicitous. That much is fairly similar to Kripke and Heim’s views. The specificity of [van der Sandt & Geurts \(2001\)](#) are not really relevant for our purposes.

Zeevat’s main objection to the anaphoric analysis is that it predicts that the interlocutors should be able to accommodate the descriptive part of the presupposition triggered by *too*, provided there is a contextually salient antecedent for the anaphoric part. The following example (credited to Nicolas Asher) shows that this is not always the case:

(18) A man is walking in the park. JOHN will have dinner in New York (#too).

In (18), the indefinite *a man* provides a suitable antecedent for *too*. Therefore, we might expect that the descriptive content of the presupposition can be accommodated. If this were the case, an utterance of (18) would result in the accommodation of the presupposition that the man who walked in the park is not John and will have dinner in New York, contrary to the facts: (18) is a clear case of presupposition failure. Zeevat points out that this contrasts with the possibility of partial accommodation in (19):

(19) A man is walking in the park. Some children were playing with his dog.

In (19), the antecedent of the possessive pronoun *his* is identified as the man who is walking in the park, and the presupposition triggered by the possessive pronoun, namely that the referent of the pronoun has a dog, is easily accommodated. Zeevat concludes from these observations that the anaphoric theory of presupposition triggers such as *too* is not viable. He then sets out to offer an alternative explanation of the impossibility to accommodate the presuppositions triggered by these particles. His proposal is that interlocutors fail to accommodate these inferences because they are not presuppositions in the first place.

3.2 Too as a discourse marker

Zeevat identifies *too* as a member of a set of discourse particles traditionally analyzed as presupposition triggers, which share a number of unexpected properties. First, these particles have no semantic content of their own: Zeevat cites [Stalnaker \(1973\)](#), who observes that these particles (*too*, *even*, *also*, etc) can make the utterance in which they appear infelicitous, although they can never make it false. In that sense, it seems that particles such as *too* never contribute to the truth conditions of the sentence in which they appear. This is different from other presupposition triggers, such as *stop*: *Martha stopped beating her husband* is true if and only if Martha no longer beats her husband, and these truth-conditions are very much a function of the meaning of the presupposition trigger *stop*. Secondly, as we already discussed, the presuppositions that these particles trigger cannot be accommodated. Third, these particles are obligatory whenever they can be used, as illustrated in (20):

- (20) A: Bill will come tonight.
B: John will come #(too).

Finally, Zeevat points out that some of these particles, such as *indeed*, can have antecedents that are not normally accessible to presupposition triggers (see (21)), where accessibility of antecedents is defined as in (22). It seems that Zeevat wants to contrast examples such as his (21) with examples like (23), where the presupposition triggered by *regrets* cannot be satisfied by the complement of *dreamed*.

- (21) Mary dreamt that she failed the exam and indeed she did.
- (22) “A subordinate context is inaccessible at a position x iff the information that it contains is not entailed at x. A subordinate antecedent for a pronoun occurring at x is inaccessible if the existence of the antecedent is not entailed at x.” ([Zeevat 2003b](#))
- (23) ?Mary dreamed that she failed the exam and she regrets that she did.

Zeevat argues that because these properties do not follow from theories of presuppositions and their triggers, we might be better off not analyzing discourse particles such as *too* and *indeed* as presupposition triggers:

- (24) “It is clear that if we want to analyze particles as presupposition triggers, we must be able to modify our presupposition theories to make it possible that the particles come out as a special case with special properties: no semantic content of their own, no accommodation, the possibility of inaccessible antecedents and the obligatory character of their use.” (Zeevat 2003)

Zeevat proposes that these particles belong to an altogether different category of expressions, that of discourse markers:

- (25) “they are markers of a relation of the content of the current sentence to the context (or to another parameter of the utterance context) and can be there because of either a functional necessity (if the relation in question is unmarked, wrong interpretations) or of a universal principle that requires the marking of the relationship.” (Zeevat 2003)

Let us see what this proposal consists in, taking the analysis of *too* as an example. Discourse markers are particles that signal relations between the utterance they mark, and the context of the utterance. *Too* is an additive discourse marker. Zeevat defines these markers informally as follows:

- (26) “Additive marking finds an old topic and the way it was addressed before. Without the additive marking, a different topic may be assumed. Without additive marking, the two occasions of addressing the same topic remain unintegrated and can lead to wrong information due to exhaustivity effects.”(Zeevat 2003)

What Zeevat calls a topic corresponds to what Roberts (1996) would call a question under discussion. In the following example, *too* signals that the sentence *John will come* is an answer to the topic *Who will come tonight?*, previously addressed by A’s assertion that *Bill will come tonight*.

- (27) A: Bill will come tonight.
B: JOHN will come, too.

Zeevat spells out these intuitions by defining additive marking as a relation between a common ground *CG* and a proposition ψ . The relation holds if and only if (i) there is a topic *T*

such that ψ addresses T , (ii) there is a proposition φ that is the strongest proposition entailed by CG that addresses T and (iii) the conjunction $\varphi \wedge \psi$ addresses T and is stronger than each of φ and ψ . Consider (27) again. Principles of question-answer congruence (see Groenendijk & Stokhof 1984, Roberts 1996) tell us that focus marking signals that B's utterance addresses the topic *Who will come tonight?*. At this point, CG entails the proposition that *Bill will come tonight*, which addresses the same topic. The conjunction of the two propositions, that *Bill and John will come tonight*, is stronger than each of them. Therefore, additive marking is respected. (27) should be compared to (28) and (29):

(28) A: Bill and John will come tonight.

B: #JOHN will come, too.

(29) A: Who will come tonight?

B: #JOHN will come, too.

(28) is infelicitous because the conjunction of the propositions expressed by A's and B's assertions is not stronger than each of them. (29) is infelicitous because CG does not entail a proposition that addresses the topic *Who will come tonight?* when B answers A's question. In each case, a constraint on the use of additive discourse markers is violated.

So far we have discussed the discourse relations that are marked by the additive discourse marker *too*. Zeevat (2003) argues that discourse markers are additionally governed by the two optimality-theoretic constraints **max(R)** and ***PARTICLE**. **max(R)** requires that a particle that marks a relation R be added to an utterance ψ if R obtains between ψ and the common ground. **max(R)** overrules the constraint ***PARTICLE**, which is violated whenever a particle is used. Together, these two constraints ensure that particles are obligatory whenever the relation that they mark obtains, and ungrammatical otherwise.

4 Discussion of Zeevat's proposal

4.1 Is the problem well defined?

First, let us evaluate the motivations for Zeevat's analysis of particles like *too* as discourse markers. There are four properties that set these particles aside from regular presupposition

triggers, properties that are supposedly problematic for a presuppositional analysis. The first one is their failure to accommodate. This is indeed unexpected under a CI-view of presuppositions, since presuppositions are implicatures that are not required to be entailed by the common ground prior to the utterance. Under the AC-view, what is unexpected is the possibility of presupposition accommodation rather than its failure. Remember that in this view presuppositions are propositions that must be entailed by the common ground for an utterance to be felicitous. Hence it is expected that an utterance that carries a presupposition p will be infelicitous if the common ground does not entail p . Therefore, presupposition accommodation is problematic under both views of presuppositions identified by Heim, although for opposite reasons.

The second problematic property is the lack of assertive content of these particles. It is not clear to me why this should be a problem for a presuppositional analysis of discourse particles. In particular, in the AC-view (Stalnaker 1972) presuppositions are constraints on the common ground, and their content does not have to be asserted. While it is true that some presuppositions, like that of *stop*, are both asserted and presupposed, the AC-view also accounts for presuppositions that are not asserted. The third property is their obligatory character: discourse particles must be used whenever the presuppositions they trigger are met in the context. It seems to me that this property is not specific to putative markers of discourse relations. Various presupposition triggers that allow for accommodation (e.g. *the* or *both*) are known to be obligatory, in the sense that the use of alternative expressions (e.g. *a* or *all*, respectively) are blocked when their presupposition is satisfied. (Heim 1991b) analyzed this phenomenon using a principle of ‘maximize presuppositions’:

(30) Make your contributions presuppose as much as possible. (Heim 1991a)

There have been several attempts to analyze the obligatory use of *too* in these terms (see Singh (2008): and references therein), and therefore there are theoretically grounded reasons to reject the claim that obligatory use is a characterizing property of discourse particles. The fourth and last property is that some discourse particles have antecedents that are inaccessible to other presupposition triggers. Two remarks are in order. Firstly, not all discourse particles have inaccessible antecedents, hence it is dubious that this should be a characterizing property of the whole class. Secondly, it appears that the facts concerning the accessibility of antecedents

are more complex than what Zeevat makes them to be. Some ‘regular’ presupposition triggers sometimes allow exceptional antecedents as well. Consider for instance the discourse particle *indeed* and the ‘regular’ presupposition trigger *regret*. The following pair of examples shows that *indeed* is more liberal than *regrets* in the selection of its ‘antecedents’: the proposition that Mary failed the exam cannot be used to resolve the presupposition triggered by *regrets*, because it is embedded under the attitude verb *dreamed*, and is therefore not entailed by the common ground at the time of utterance of the second conjunct.

(31) Mary dreamed that she failed the exam, and indeed she did.

(32) ?Mary dreamed that she failed the exam, and she regrets that she did.

However, the contrast in acceptability disappears in the following pair of sentences:

(33) Mary believes that she failed the exam, and indeed she did.

(34) Mary believes that she failed the exam, and she regrets that she did.

This suggests that whether the presupposition triggered by *regrets* can be resolved by a proposition that is embedded under an attitude verb in a previous utterance, depends on the nature of the alternatives over which that verb quantifies. In (32), *dreamed* quantifies over dream-worlds, which are distinct from the doxastic alternatives over which *regrets* quantifies (during the waking hours, one does not normally believe what one dreamed). In (34), both *believes* and *regrets* quantify over doxastic alternatives. It appears that the presupposition triggered by *regrets* can be resolved by a proposition embedded under an attitude verb in a previous utterance if that attitude verb and *regrets* quantify over the same kind of alternatives. The point is that in these cases, *regrets* can have an antecedent that is ‘inaccessible’ according to Zeevat’s definition. Therefore, it seems that presupposition resolution with inaccessible antecedents is not a characterizing property of discourse particles.

In conclusion, of the four properties that set discourse particles aside from ‘regular’ presupposition trigger, it seems that only the impossibility of accommodation is both real and problematic for theories of presuppositions. This means that we should probably evaluate the merits of Zeevat’s proposal by its success at explaining away the problem of presupposition accommodation: why is it that some presuppositions can be accommodated, while others cannot?

4.2 Is the problem well addressed?

Did Zeevat manage to explain away with this problem? Another way to put the question is this: is it possible to formulate the accommodation problem for particles like *too* once we have conceptualized them as discourse markers rather than as presupposition triggers? If it isn't, then Zeevat's analysis offers an explanation for the fact that discourse particles such as *too* resist accommodation (accommodation is just not definable for discourse markers). If it is, then we need to figure how Zeevat rules out the possibility of accommodation for discourse markers.

First, let us ask in what respect discourse markers differ from presuppositions. Discourse markers establish a relation between a proposition and the common ground. They are not themselves propositions that can enter the common ground as objects of belief of the interlocutors, but rather they are meta-linguistic devices that regulate the flow of discourse. In this respect, they differ from presuppositions both on the CI view and on the AC view, according to which presuppositions are propositions that can be added to the common ground upon the utterance of a sentence that contains the appropriate trigger, or that must be entailed by the common ground for such an utterance to be felicitous. Now, the notion of presupposition accommodation is necessary in the AC view in order to explain why some utterances are felicitous even when their presuppositions are not entailed by the common ground. But can we not ask the same question about discourse markers in Zeevat's theory? Consider (35):

(35) JOHN will have dinner in New York, too.

The discourse marker *too* in (35) signals that (i) the topic *Who will have dinner in NY?* was active in the CG before the utterance, (ii) there is a proposition *q* in the CG that addresses that topic and is the strongest such proposition and (iii) the conjunction of *q* and *John will have dinner in NY* is stronger than each of the conjuncts. The point I want to make is that in cases where an utterance contains *too* but there is no proposition *q* in the CG, we can in principle ask whether it is possible to accommodate it. Therefore, it is not obvious that analyzing particles like *too* as discourse markers in the sense of Zeevat explains why these particles resist accommodation.

Zeevat's answer would probably be that discourse markers are not susceptible to 'accommodation', because the constraint ***PARTICLE** bans their use when the relation that they mark

does not obtain. The direct effect of this constraint is to block vacuous uses of *too*. Yet, we could imagine that a process of accommodation could be used by speakers in order to rescue vacuous uses. And it seems that Zeevat just postulates that this process cannot take place with discourse markers. Moreover, note that discourse marker are conceptually quite similar to presuppositions defined as admittance conditions: a presupposition in the AC-view is also a requirement that a certain relation hold between a proposition and the common ground. For instance *knows* in *John knows that p* requires the common ground to entail *p*, and so it establishes a relation between the common ground and the proposition *John knows that p*. Therefore, if it makes sense to ask why the presupposition triggered by an expression *X* cannot be accommodated in the AC-view, reconceptualizing *X* as a discourse marker in the sense of Zeevat is likely not enough to make the question disappear.

In conclusion, it is not clear that Zeevat (2003) really explained away the problem of presupposition accommodation. What he did was split the set of presupposition triggers in two subsets. In the first subset we find the triggers of presuppositions that can be accommodated. In the second, we find those triggers of presuppositions that resist accommodation. The latter were then re-conceptualized as ‘discourse markers’, and conditions on the use of discourse markers were given (the constraints **max(R)** and ***PARTICLE**), which prevent the use of anything like accommodation with these particles. The resulting theory is one in which accommodation is not needed anymore: the presuppositions of an utterance can always in principle be added to the common ground, and those presuppositions that resisted accommodation are not defined as presuppositions anymore. It seems then that this theory leans toward a view of presuppositions as conventional implicatures, i.e. as inferences lexically attached to some expressions, that put no particular constraints on the common ground. The following remark in Zeevat (2003) suggests that this is indeed what Zeevat has in mind:

- (36) “As a definition of presupposition, one could perhaps use: an implicature of all environments of the trigger in all contexts, but an implicature that can be blocked by special factors, involving the context or the content of what is said in the utterance.” (Zeevat 2003)

However, and although this is an interesting program, it is not clear that Zeevat actually gave

an explanation for the fact that discourse markers cannot give rise to accommodation processes. In this respect, the anaphoric analysis of presupposition proposed by [Kripke \(2009\)](#) and [Heim \(1990\)](#) was more explanatory.

In the next sub-section, I will show that the theory proposed by Zeevat is also problematic when one tries to account for the association of the particle *too* with focus and contrastive topics.

4.3 An issue with contrastive topics

As the following pair of examples illustrates, *too* can associate either with focus (37) or with contrastive topics (38):

(37) A: What did Peter eat?

B: Peter ate PASTA_F. He ate HAM_F too.

(38) A: What did Peter and Pia eat?

B: PETER_{CT} ate PASTA_F. PIA_{CT} ate pasta TOO.

Let us ask how each case would be analyzed in Zeevat's theory. Following our discussion of [Zeevat \(2003\)](#) in 3.2, *He ate HAM too* signals that:

1. There is a topic T such that He ate HAM addresses T
2. There is a proposition ψ that is entailed by CG and that addresses T
3. The proposition $\psi \wedge$ He ate HAM is stronger than each of its conjuncts

In (37), ψ is identified as the proposition that *Peter ate pasta*. The topic T is identified as the question *What did Peter eat?* The identification of T is constrained by principles of question-answer congruence. We can define congruence using an alternative semantics for focus (cf. [Rooth 1985](#)). We define the set of focus-alternatives of an assertion α informally as the set of propositions that are obtained from α by substituting the focused expression in α by some expression of the same type. Likewise, we can define the question-alternatives of a question Q as the set of declarative propositions that are obtained by replacing the question word in Q by an expression of the same type. Following [Roberts \(1996\)](#), we can assume that an assertion α and a question Q are congruent if and only if the set of F-alternatives to α is identical to the set

of Q-alternatives to Q. Focus is therefore essential to the definition of congruence, and therefore to the application of Zeevat’s theory to the analysis of *too*. This works fine for (37). However, this theory of question-answer congruence is too simple to handle cases like (38). Here, the F-alternatives of the two assertions in B’s answer are different. The F-alternatives of the first assertion constitute (roughly) the set {Peter ate $x \mid x \in D_e$ } while the F-alternatives of the second constitute the set {Pia ate $x \mid x \in D_e$ } (where the semantically focused constituent *pasta* has been de-accented, cf. [Schwarzschild \(1999\)](#)). Both of these differ from the Q-alternatives of A’s question, which constitute the set {Peter and Pia ate $x \mid x \in D_e$ }. This is despite the fact that B’s two assertions in (38) is as much a two-parts answer to A’s question as it is in (37). The issue is that our current theory of congruence does not take into account that B’s answer in (38) makes use of contrastive topics to signal a multiple-parts answer to A’s question.

Various theories of contrastive topics have been proposed that deal with congruence in the appropriate way. Here, I will follow [Büring \(2003\)](#). The notion of strategy is essential to Büring’s analysis. Instead of answering a question under discussion Q directly, the participants in a discourse may choose to ask a series of sub-questions Q_1, \dots, Q_n of Q . The succession of Q and its sub-questions Q_1, \dots, Q_n together with their answers is called a strategy. This is illustrated in (39):

- (39) (Q) What did Peter and Pia eat?
 (Q₁) What did Peter eat? (A₁) Peter_{CT} ate PASTA_F.
 (Q₂) What did Pia eat? (A₂) PIA_{CT} ate RICE_{CT}.

Büring uses D-trees to represent the structure of discourses. A D-tree represents the linear order of questions and answer in the discourse, as well as the hierarchical relations between question and sub-question and between question and answer. The reader is referred to [Büring \(2003\)](#) for the formal details of this proposal. The D-tree for example (39) would be:



Congruence for contrastive topics is defined relative to a strategy. Buring defines the CT-value of an assertion α as a set of set of propositions obtained in the following way. First, form the set S of F-alternatives of α ⁶. Second, form the set of all sets that are obtained from S by replacing the contrastive topics with some alternative to it. The CT-values of A_1 and A_2 in (39) are:

$$(41) \quad \llbracket A_1 \rrbracket^{CT} = \{\{x \text{ ate } y \mid y \in \text{Alt}(\llbracket \text{pasta} \rrbracket^{g,c})\} \mid x \in \text{Alt}(\llbracket \text{Peter} \rrbracket^{g,c})\}$$

$$(42) \quad \llbracket A_2 \rrbracket^{CT} = \{\{x \text{ ate } y \mid y \in \text{Alt}(\llbracket \text{rice} \rrbracket^{g,c})\} \mid x \in \text{Alt}(\llbracket \text{Pia} \rrbracket^{g,c})\}$$

Having defined CT-values, Buring goes on to define congruence for contrastive topics:

(43) CT-Congruence:

An utterance U containing a contrastive topic can map onto a move M_U within a d-tree D only if U indicates a strategy around M_U in D. (Büring 2003)

(44) U indicates a strategy around M_U in D iff there is a non singleton set Q' of questions such that for each $Q \in Q'$, (i) Q is identical to or a sister of the question that immediately dominates M_U , and (ii) $\llbracket Q \rrbracket^o \in \llbracket U \rrbracket^{CT}$. (Büring 2003)

Therefore an utterance that contains a contrastive topic is ‘congruent’ only if there is a strategy originating in a question under discussion Q , with subquestions Q_1, \dots, Q_n , such that one of Q_n is the immediate question under discussion at the time of utterance of α , the other questions in the series Q_1, \dots, Q_n are past or future question under discussion in the discourse, and all these questions are members of the CT-value of α .

This is the case for A_1 and A_2 in (39). The CT-value of both assertions is given in (41) and (42). Assuming that the sets of alternatives of *rice* and that of *pasta* are identical, as are the sets of alternatives of *Peter* and that of *Pia*, the two utterances have the same CT-value. The ordinary meaning of Q_1 and Q_2 is as follows:

$$(45) \quad \llbracket Q_1 \rrbracket^o = \{\text{Peter ate } y \mid y \in \text{Alt}(\llbracket \text{pasta} \rrbracket^{g,c})\}$$

$$\llbracket Q_2 \rrbracket^o = \{\text{Pia ate } y \mid y \in \text{Alt}(\llbracket \text{rice} \rrbracket^{g,c})\}$$

⁶Remember that this set is obtained by replacing the focused expression in α by one of its alternatives, for each relevant alternative.

That condition (i) in (44) is satisfied is confirmed by a quick inspection of the D-tree in (40). Condition (ii) is also satisfied since the CT-values of A_1 and A_2 are identical, and both $\llbracket Q_1 \rrbracket^o$ and $\llbracket Q_2 \rrbracket^o$ are members of their CT-values.

We are now equipped to deal with (38). We can identify the topic T that is addressed by *PIA ate pasta TOO* as the question *What did Peter and Pia ate?*. This pair of question and answer is congruent in the sense of Büring, if we extend the notion of congruence to apply to pairs of a question Q and an answer A, where A is part of an answering strategy that originates in the question Q. At the time of utterance of *PIA ate pasta too*, the common ground entails a proposition ψ that is a partial answer to T, namely the proposition that Peter ate pasta. The conjunction $\psi \wedge \textit{PIA ate pasta}$ is stronger than each of its conjuncts. Hence, (38) satisfies Zeevat's constraints on additive marking.

Therefore, Zeevat's theory correctly predicts that *too* can associate with focus, as in (37), or with contrastive topics, as in (38). The issue is that as it stands it also predicts patterns of mixed association with focus and contrastive topic, contrary to fact. Consider (46):

(46) A: What did Peter and Pia eat?

B: PETER_{CT} ate PASTA_F. PIA_{CT} ate RICE_F (#too).

Here we identify T as A's question, *What did Peter and Pia eat?* At the time of utterance of *PIA_{CT} ate RICE_F too*, the common ground entails a proposition ψ that is a partial answer to T, namely that Peter ate Pasta. The conjoined proposition $\psi \wedge \textit{PIA ate RICE}$ is stronger than each of its conjuncts. Hence, *too* should be licensed according to Zeevat's analysis. Yet, using *too* in (46) makes B's answer infelicitous.

A possible way out of this problem is to analyze *too* as an operator that combines with a proposition and a set of alternatives, and to define F-alternatives and CT-alternatives as different sets. Consider the analysis of *too* in Singh (2008):

(47) Let $\varphi \textit{too}_i$ be an LF, with *too* co-indexed with ψ_i . Then $c + \varphi \textit{too}_i$ is defined iff: (a) $\llbracket \varphi \rrbracket \neq \llbracket \psi \rrbracket$, (b) $\psi \in \llbracket \varphi \rrbracket^F$, (c) $c + \psi = c$ (i.e. ψ is true in c). (Singh 2008)

These definedness conditions state that $\varphi \textit{too}_i$ is defined only if *too* is co-indexed with a proposition that is distinct from φ , entailed by the common ground, and a member of the focus-

alternatives of φ . In order to account for association of *too* with contrastive topics, it suffices to modify the second clause in this definition, requiring that ψ be a member either of the set of F-alternatives to φ or of the set of CT-alternatives to φ . The set of CT-alternatives of a sentence S needs to be redefined as the set of propositions that are obtained by substituting the CT-marked expression in S by an expression of the same type. This means that we will have to work out a new definition of question-answer congruence with contrastive topics.

- (48) Let φ *too*_{*i*} be an LF, with *too* co-indexed with ψ_i . Then $c + \varphi$ *too*_{*i*} is defined iff: (a) $\llbracket \varphi \rrbracket \neq \llbracket \psi \rrbracket$, (b) $\psi \in \llbracket \varphi \rrbracket^F$ or $\psi \in \llbracket \varphi \rrbracket^{CT}$, (c) $c + \psi = c$ (i.e. ψ is true in c).

Granted, this is a very inelegant brute force analysis. My point however is that no such solution is available in Zeevat's analysis. The impossibility of mixed association with focus and contrastive topic reveals a serious conceptual problem in the 'discourse relation marking' analysis of *too*. The analysis only relies on discourse structure to derive the conditions on the use of particles like *too*. The conditions in which one can and must use *too* are defined exclusively in terms of which questions have been raised in the discourse, and which propositions inside the CG address these questions. There is not reference to focus or contrastive topics, because these notions describe phenomena that belong not only to the abstract level of discourse structure (which questions have been asked, which propositions have been proposed as answers, and what is the structure of this exchange of information), but also to the more 'concrete' level of the grammatical structure of sentences. However, I think that (46) shows that one must make direct reference to focus and contrastive topics in the definition of *too*.

5 Conclusion

I have reviewed Kripke and Heim's argument in favor of an anaphoric analysis of *too*. Zeevat argued that this analysis is flawed, mostly because it predicts the possibility of partial accommodation of these presuppositions, which according to Zeevat is not correct. I discussed Zeevat's alternative analysis of *too* (and similar particles) as a discourse markers, i.e. a marker of relations between an utterance and the common ground. It was argued that this analysis faces a number of conceptual and empirical issues. Conceptually, it is not clear that it provides a

satisfying explanation of the resistance that *too* and other particles show to accommodation processes. Empirically, it is not well equipped to distinguish association with focus from association with contrastive topics. Zeevat's analysis of *too* as a discourse marker is part of a wider effort to explain the difference between hard presupposition triggers and soft presupposition triggers. Zeevat's hope is that we may be able to use accommodation as a characteristic property of presupposition triggers, and that hard presupposition triggers may be reanalyzed as discourse markers. The shortcomings of his analysis of *too* as an additive discourse marker suggests that one should look elsewhere for an explanation of the difference between hard and soft triggers.

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