INTERPRETING FOCUS

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Abstract

Although it is widely agreed, if often only tacitly, that there is a close connection between focus and presupposition, recent research has tended to shy away from the null hypothesis, which is that focus is systematically associated with presupposition along the following lines:

> *The Background-Presupposition Rule* (BPR)
> Whenever focusing gives rise to a background $\lambda x.\varphi(x)$, there is a presupposition to the effect that $\lambda x.\varphi(x)$ holds of some individual.

This paper aims to show, first, that the evidence in favour of the BPR is in fact rather good, and attempts to clarify its role in the interpretation of focus particles like 'only' and 'too', arguing that unlike the former the latter is focus-sensitive in an idiosyncratic way, adding its own interpretative constraints to those of the BPR. The last part of the paper discusses various objections that have been raised against the BPR, taking a closer look at the peculiarities of 'nobody' and 'somebody', and comparing the interpretative effects of focusing with those of *it*-clefts.

1 Introduction

The phenomenon generally known as focusing raises two questions. First: what is it? Second: how does it affect interpretation? This paper discusses the second question, and proposes a partial answer to it. The first question will not be addressed here. Of course, we will we have to adopt certain assumptions about how it is to be answered, but none of our premisses are particularly controversial. To begin with, we assume that focusing divides the content of an expression, as uttered on a given occasion, into two parts: focus and background. For example:

(1) $[\text{Fred}]_{\text{F}}$ robbed the bank.

Here the focus is the semantic correlate of 'Fred'; the background is the semantic correlate of '... robbed the bank', which may be viewed as an open proposition, a property, or whatever. At any rate, taken on its own the background of (1) does not entail that someone robbed the bank. One further assumption regarding the phenomenology of focusing is that, typically, focused information is intonationally prominent whilst backgrounded information is not. We will not assume that a focus is always signaled by intonational prominence, nor will we assume the contrary. In other words, we prefer not to commit ourselves as to whether the division between focus and background is a phonological feature or resides on a more abstract level of analysis. For the purposes of this paper we will simply adopt the standard view that focus is represented in syntax by a special feature.

We just noted that the backgrounded information in (1) does not entail that someone robbed the bank. This is not to say, however, that backgrounding 'robbed the bank' allows the speaker to remain neutral as to whether or not the bank was robbed. Rather, this background gives rise to the presupposition that someone robbed the bank—or at least that is one of our central claims in this paper, and it will be convenient to have a name for it:

> *The Background-Presupposition Rule* (BPR)
> Whenever focusing gives rise to a background $\lambda x.\varphi(x)$, there is a presupposition to the effect that $\lambda x.\varphi(x)$ holds of some individual.

In order to give substance to this claim, we need a theory of presupposition, and we will be using a theory we developed in earlier work, which is motivated entirely by considerations extraneous to the topic of the present discussion; the main outlines of our treatment of presupposition are recapitulated in Section 3 below. Given that framework, we will argue that the BPR goes a long way to explaining the interpretative effects of focusing. However, the BPR alone will not suffice for the simple reason that certain lexemes impose additional constraints on the interpretation of focus. For example, as will be discussed at length in Section 5, exclusive focus particles like 'only' interact with focus in a way that is rather different from additive particles like 'too'. If this much is right, a theory of focus interpretation cannot consist only of general principles, such as the BPR, but will also have to attend to the idiosyncracies of individual words that associate with focus.

The idea that focus and presupposition are related phenomena is not new. However, most of the authors who have considered the relationship have concluded that the simple

and systematic connection suggested by the BPR cannot be maintained, and the currently prevailing opinion is that focus and presupposition should be treated by separate modules. Against this general trend we argue, on the one hand, that none of the arguments against a close connection between presupposition and focus is sound (Section 6), and on the other hand, that when the link is severed the systematic correspondence between the interpretation of focus and presupposition will be left unaccounted for (Section 4).

Before we proceed, we would like to make one preliminary remark concerning the status of the BPR. The intuitive motivation for the BPR will be evident. Assuming that the principal function of focusing is to evoke a set of alternatives, it seems plausible to assume that there is a general presumption to the effect that one of these alternatives applies. For example, in (1) the effect of backgrounding 'robbed the bank' is to draw the hearer's attention to issue who may have robbed the bank (while the sentence is used to assert that Fred is the one). The BPR takes this to mean that it is presupposed that one of the individuals who may have robbed the bank actually did. There are two ways of interpreting this claim. On a strong construal of the BPR, backgrounds are invariably associated with presuppositions, whereas on a weak construal backgrounding engenders presuppositions by default: backgrounded material is presupposed only in the absence of indicators to the contrary. In our view, the weak version of BPR is at least as plausible as the strong version, but for methodological reasons we are going to defend the strong version. From a methodological point of view, the main difference between the weak and strong versions of the BPR is that the former leaves more room for accommodating problem cases than the latter does, so by adopting the strong version we restrict our maneuvering space.

2 The state of the art

Current approaches to the interpretation of focus range from localist, on one end of the spectrum, to centralist, on the other. Localist theories explain the interpretative effects of focusing on the level of particular expressions or constructions that appear to be focus-sensitive. For example, Krifka (1999) proposes to account for the focus sensitivity of statements by postulating an covert assertion operator whose definition makes reference to focus-induced alternatives:

(2) ASSERT(M, A, c) (a sentence with meaning M and alternatives A in a context c is asserted): the speaker claims M (in c), and for every alternative $M' \in A$, $M' \neq M$, the speaker explicitly does not claim M' (in c).

Another specimen of the localist approach is Kratzer's (1989) analysis of negation, which starts out from the observation that the following pair of sentences have different construals, and that the difference may be characterised in presuppositional terms:

(3) a. Paula isn't registered in $[\text{Paris}]_{\text{F}}$.
    b. $[\text{Paula}]_{\text{F}}$ isn't registered in Paris.

According to Kratzer, while (3a) presupposes that Paula is registered at some place which is not Paris, the presupposition of (3b) is that some person who is not Paula is registered in Paris. Although in our opinion this is not quite right,[1] we are interested here mainly in the sort of analysis Kratzer envisages. Without going into the technical details of Kratzer's proposal, she takes the contrast in (3) to show that negation must be treated not in terms of a unary operator but rather as a form of quantification: 'Every negation operator has a restrictive clause which results from the original clause by replacing the focused phrase by an appropriate variable.' (1989: 646) Hence, on Kratzer's analysis, the lexical meaning of 'not' makes reference to the the focus/background division of the material in its scope.

The obvious problem with localist analyses such as these is that they fail to capture general trends in the interpretation of focus. For example, we will argue below that Kratzer's observations about negation are merely special instances of a pervasive pattern, and if this is right, the contrast between (3a) and (3b) should not be put down to the lexical meaning of 'not'. Indeed, we don't see any reason for assuming that the semantics of 'not' makes reference to focus or background at all. Analogous remarks apply to Krifka's treatment of assertion.

Centralist approaches to focus attempt to capture what is common to all uses of focusing. The best-known theory of this kind is Rooth's (1992), which we will illustrate, again without going into details, by way of his analysis of 'only':

(4) a. Mary only $[\text{danced}]_{\text{F}}$.
    b. $\forall P[P \in C \wedge P(m) \rightarrow P = \text{dance}']$
    c. Focus-determined constraint: $C \subseteq \|VP\|^{f}$

Rooth analyses (4a) as (4b), where the capital C represents a set of possibilities to be filled in by the context. Focusing is viewed by Rooth as constraining such indeterminacies. He presents a single principle underlying the interpretation of focus, which in this particular case yields the constraint in (4c), where $\|VP\|^{f}$ is the focus-semantic value of VP, i.e. the set of alternatives to the interpretation of 'dance', which is reduced to the set of contextually relevant alternatives by requiring that C is a subset of it. So if $\|VP\|^{f} = \{\text{dance}', \text{sing}', \text{drink}', \text{cheer}'\}$, C might be $\{\text{dance}', \text{sing}'\}$, say, in which case (4b) entails that Mary didn't sing.

One problem with Rooth's analysis is that its predictions tend to be too weak. For example, it fails to predict that (3a) will normally be heard as implying that Paula is registered somewhere. Another problem, which is typical of centralist theories generally, is that the interpretative effects of focusing are not always the same. As we will try to show in the following, focusing affects the interpretation expressions like 'always', 'only', and 'too' in subtly different ways, and that being so, no collection of general principles will adequately account for the semantics and pragmatics of focusing.

The upshot of the foregoing observations is that we need a theory which lies somewhere between the radically localist and centralist approaches we have just outlined; a theory, that

[1] The standard diagnostics for presuppositionhood show that (3a) presupposes that Paula is registered somewhere (cf. Section 4 below). What Kratzer takes to the presupposition of (3a) is in fact entailed by the sentence's assertion and presupposition taken together. The same, *mutatis mutandis*, for (3b).

is, which holds that there are certain general principles constraining the interpretation of focus, while accepting at the same time that certain expressions or constructions may add constraints of their own. Such a theory will outlined in the following.

One recurring issue in recent discussions of focus is what has been called the problem of 'requantification' (Rooth 1987, 1995, von Fintel 1994, Krifka 2001). The problem arises when backgrounded material contains an indefinite expression, as in the following example:

(5) A dog is usually [intelligent]$_{\mathrm{F}}$.

On its most likely reading, (5) implies that most dogs are intelligent. However, on some accounts this reading is not forthcoming. Assuming that the adverbial quantifier 'usually' ranges over event-like entities (e.g. situations, cases, or time intervals), and that the backgrounded material in (5) helps to restrict the domain of 'usually', some theories of focus interpretation will produce an analysis along the following lines:

(6) Most situations that contain a dog contain a dog that is intelligent.

The problem with this is that the indefinite NP 'a dog' is used twice, as a result of which certain states of affairs that should falsify (5) make its purported analysis (6) come out true. For example, in a world in which dogs always come in pairs, one of which is intelligent while the other is not, (5) is false but (6) is true. Similarly, on this type of analysis the following comes out true, which is clearly wrong:

(7) An arm is almost always attached to the [left]$_{\mathrm{F}}$ shoulder.

Various proposals for dealing with this problem have been made, some of which are quite drastic. For example, it has been suggested by Krifka (2001) that an adequate treatment of cases like (5) and (7) requires that the novelty condition on indefinites be annulled, while von Fintel uses these cases to motivate rather drastic innovations in the treatment of adverbial quantification. However, these various proposals all run into the same objection, which is that they merely address a special case of much bigger problem. What seems to have escaped notice thus far is that the requantification problem is not restricted to the interpretation of focus, and is just another instance of what in the presupposition literature has come to be known as the 'binding problem'.

Like the requantification problem, the binding problem of presupposition arises because, according to some accounts, an indefinite must sometimes be evaluated more than once. The trouble this causes is illustrated by Karttunen and Peters' (1979) example:

(8) ?Someone managed to succeed George V on the throne of England.

This sentence is pragmatically infelicitous: it suggests that the person who succeeded George V found it difficult to do so, which can hardly be the case (at least not in the relevant sense; George V's successor may well have had problems adjusting to his position, but he obtained it without effort). Apparently, the presupposition triggered by the verb 'manage' fails in this case. The problem is that many theories of presupposition (including Karttunen and Peters' own) cannot account for this kind of infelicity, because they strictly separate

between asserted and presupposed material, as a consequence of which the interpretation of (8) is predicted to consist out of the following components:

(9) a. Assertion: Someone succeeded George V on the throne of England.
    b. Presupposition: It was difficult for someone to succeed George V on the throne of England.

Unfortunately, thus construed the presupposition triggered by 'manage' comes out true: nearly everybody would have had a hard time succeeding George V. This is a problem not only for Karttunen and Peters' own treatment of presupposition, but for many theories of a younger vintage, as well, including Heim's (1983). The problem arises because presupposed and asserted content are separated too strictly. We need to distinguish between presupposition and assertion, obviously, but the two should remain connected, as suggested by the following sketch of an analysis of (9):

(10) (Assertion:) Someone$_i$ succeeded George V on the throne of England, and (presupposition:) it was difficult for that person$_i$ to succeed George V on the throne of England.

We submit that the requantification problem and the binding problem are identical at root. In both cases, the trouble is caused by an overly strict compartmentalisation of different types of information. If this diagnosis is correct, the binding problem is a more general one, and should also arise in the analysis of implicature, for example—which it does, as van der Sandt (1992) has shown. Geurts and Maier (2003) discuss a range of examples showing that binding problems are prone to arise wherever different types of linguistic content interact, and they propose a general framework for solving such problems. The binding theory of presupposition, which we are about to outline, applies this general framework to model the interplay between presupposed and non-presupposed information, solving the binding problems of presupposition and focusing at the same time.

3 The binding theory of presupposition

What does it mean to say that (an utterance of) a sentence presupposes something? For example, what exactly does the following sentence presuppose?

(11) Everybody was gay.

There was a time when presupposition theorists would have said that (11) presupposes that there are, or were, people. This much can hardly be wrong—and that is precisely the problem. It is evident that (11) implies that there are people, but if that is all the sentence conveys by way of presupposition, then for practical purposes the sentence doesn't presuppose anything: it can always be taken for granted that there are people. And this problem is not solved by requiring that that the context entails that there are people; for there are people in every context.

Intuitively speaking, it is clear enough how the presupposition triggered by the quantifier in (11) is to be analysed. It is plain that this sentence will normally be uttered in a

situation in which a *particular* set of people is already given, and that is what the presuppositional requirement of the sentence boils down to. The function of the presupposition triggered by the quantifier is to retrieve from the context a set of individuals for the remainder of the sentence to make a statement about. Hence, presuppositions function not unlike pronouns. The requirements they impose on the context are of the same sort: they want to be bound. This is the key idea in our account of presupposition, which we therefore call the 'anaphoric binding theory' of presupposition, or 'binding theory' for short.[2]

The binding theory's central tenet is that pronominal anaphora is a species of presupposition, the distinctive trait of pronouns being that, by and large, they *must* be bound. Presuppositions in general, however, merely *prefer* to be bound. If on occasion a suitable antecedent is not available, a presupposition will generally be accommodated (Karttunen 1974, Stalnaker 1974, Lewis 1979). But accommodation is a repair strategy: *ceteris paribus*, if a suitable antecedent is available, the binding option is preferred.

The binding theory is implemented in the framework of Discourse Representation Theory Kamp 1981, Kamp and Reyle 1993), and *qua* theory of pronominal anaphora it more or less coincides with classical DRT. The following analysis illustrates what we mean when we say that presuppositions may be bound like anaphors:[3,4]

(12) a. If anybody cheered, then it was Wilma who cheered.
b. [x: Wilma(x), [y: cheered(y)] ⇒ [z: cheered(z), z = x]]
c. [x: Wilma(x), [y: cheered(y), z: z = y, cheered(z)] ⇒ [: z = x]]
d. [x: Wilma(x), [y: cheered(y)] ⇒ [: y = x]]

In the second part of (12a) the *it*-cleft triggers the presupposition that someone cheered, which is represented in (12b) by the underlined material (we ignore any other presuppositions (12a) may contain). This presupposition has access to a suitable antecedent in the first part of the conditional, and hence it is bound as shown in (12c), which represents the final interpretation of the sentence, and is equivalent to (12d). Note that it does not follow from (12c, d) that someone cheered, and thus the presupposition that this is the case is in a sense absorbed in the protasis.

[2] The binding theory was first proposed by van der Sandt (1989), and further developed by van der Sandt and Geurts (1991), van der Sandt (1992), and Geurts (1999). The theory has been taken up by Krahmer (1998), Krahmer and van Deemter (1998), Asher and Lascarides (1998), Bos (1999), Kamp (2001), and Spenader (2002). Zeevat's (1992) account is closely related.

[3] The following treatment of *it*-clefts simplifies matters somewhat; cf. Section 6. In the same vein, we officially regard names a definite (and therefore presuppositional) expressions; the name 'Wilma' is semantically equivalent with 'the person named 'Wilma' ' (see Geurts 1997, 1999 for discussion). However, for expository convenience we will always start from DRSs in which all names have been processed already. Note furthermore that in (13a) (and many similar examples) the referent for the proper name and the referent introduced by the cleft originate in the same sub-DRS which precludes binding the latter to the former.

[4] A note on notation: in earlier work we used a linear notation which depicted a DRS as being of the form $[u_1, \ldots, u_m\colon\ \varphi_1, \ldots, \varphi_n]$, where $u_1, \ldots, u_m$ are reference markers and $\varphi_1, \ldots, \varphi_n$ are DRS-conditions. Here we introduce a lightly emended notation, which aims to enhance readability by allowing any reference marker to immediately precede the condition(s) it 'belongs with'. The formal syntax of the DRS language remains the same.

A presupposition that cannot be bound will normally be accommodated,[5] which is to say that it is added to some DRS that is accessible to the DRS in which it was triggered (call this the presupposition's 'home DRS'). If a presupposition is triggered within an embedded DRS, there is in general more than one DRS in which it might be accommodated. The binding theory claims that in such an event the least embedded DRS is the preferred accommodation site.

(13) a. If it was Barney who cheered, we're in trouble.
b. [x: Barney(x), [z: cheered(z) z = x] ⇒ [: we're in trouble]]
c. [x: Barney(x), z: cheered(z), [: z = x] ⇒ [: we're in trouble]]

In (13a) the presupposition that someone cheered is triggered in an embedded position. Since this presupposition cannot be bound, it will have to be accommodated.[6] There are two DRSs accessible to its home DRS: the home DRS itself and the main DRS. But as accommodation in the least embedded DRS is taken to be the preferred option, the binding theory predicts that the default reading of this sentence is (13c), which seems correct.

A presupposition that cannot be bound is preferably accommodated in the main DRS. However, this default preference may be overwritten in various ways.

(14) a. Either nobody cheered or it was Barney who cheered (did so).
b. [x: Barney(x), [: ¬[y: cheered(y)]] ∨ [z: cheered(z), z = x]]
c. [x: Barney(x), z: cheered(z), [: ¬[y: cheered(y)]] ∨ [: z = x]]
d. [x: Barney(x), [: ¬[y: cheered(y)]] ∨ [z: cheered(z), z = x]]

In (14a) the presupposition that someone cheered is triggered in the second disjunct. Again, this presupposition cannot be bound to a suitable antecedent,[7] and will therefore have to be accommodated. As in the previous example, the presupposition may be accommodated either in its home DRS or in the main DRS, but in this case the latter option would result in an interpretation, represented by (14c), which renders it infelicitous, and therefore the former option is preferred. Hence, the predicted reading, given in (14d), is that either nobody cheered or Barney cheered. Adopting Heim's (1983) terminology, the presupposition is accommodated 'locally' in this case, although in general 'global' accommodation (i.e. accommodation in the main DRS) is the preferred option.

If a presupposition must be accommodated and cannot be accommodated in the main DRS, the binding theory predicts that there is a preference for accommodating it further down in the chain of DRSs linking the presupposition's home DRS with the main DRS. Thus it may happen that a presupposition is preferably accommodated in a DRS that is neither its home DRS nor the main DRS. We will refer to such cases as instances of inter-

[5] 'Normally', because accommodation is not always possible; see below.

[6] In fact, this is not a very realistic example, because the presuppositions triggered by *it*-clefts are typically, though not invariably, required to be contextually given, which is to say that normally speaking they have to be bound (cf. Section 6).

[7] In standard DRT, that is. See Krahmer and Muskens (1995) for a version of DRT in which antecedents in the first disjunct may, under certain circumstances, bind anaphors in the second. See Geurts (1999) and van der Sandt (to appear) for further discussion.

mediate (as opposed to local or global) accommodation.

A special variety of intermediate accommodation occurs when a presupposition contains a discourse referent that is bound between the main DRS and the presupposition's home DRS. The binding theory predicts that in such an event global accommodation is ruled out (because the resulting DRS would not be a proper one), and that intermediate accommodation is the preferred option. The following is a case in point:

(15) Everyone should leave their camera at the reception desk.

This will ordinarily be interpreted as conveying that everyone who has a camera is to leave it at the reception desk, which is to say that a presupposition triggered in the nuclear scope of the quantifier 'everyone' ends up restricting its scope. To show in some detail how the binding theory accounts for this reading, we will employ Kamp and Reyle's (1993) 'duplex conditions'.

(16) a. [: [x: person(x)]⟨∀x⟩[u, v: camera(v), u owns v, x leave v]]
b. [: [x: person(x), u: u = x]⟨∀x⟩[v: camera(v), u owns v, x leave v]]
c. [: [x: person(x)]⟨∀x⟩[v: camera(v), x owns v, x leave v]]
d. [: [x: person(x), v: camera(v), x owns v]⟨∀x⟩[: x leave v]]

(16a) is the semantic representation of (15) in which only the two presuppositions triggered by 'their camera' remain to be processed; 'x leave v' is short for 'x should leave v at the reception desk'. (16a) contains a duplex condition of the form '$\varphi\langle Qu\rangle\psi$', where φ and ψ are DRSs, Q is a quantifier, and u is a discourse referent. We take it that the intended interpretation of this structure is transparent enough, and will not discuss it in detail.[8] The definite NP 'their camera' triggers the two-part presupposition that (i) there is an individual u and that (ii) v is a camera owned by u. The first presupposition is bound to the discourse referent x in the domain of the quantifier, as shown in (16b), which is equivalent to (16c). The second presupposition cannot be bound and must therefore be accommodated. Accommodation in the principal DRS is not possible because this presupposition contains a discourse referent, i.e. x, which is introduced in the domain of the quantifier, and so the binding theory predicts that accommodation in the restrictor is the next-preferred option, and we obtain the DRS in (16d), which represents the intended reading of (15).[9]

It bears emphasising that accommodation is not a rule of interpretation that is applied in a robot-like fashion, but rather a repair strategy whose success is not guaranteed. Imagine, for example, that the following is uttered out of the blue:

(17) It's splendid.

This utterance will be defective if it isn't clear what the pronoun is supposed to refer to. That is to say, the presupposition triggered by the pronoun *must* be bound. The reason for this is that descriptively attenuate presuppositions cannot be interpreted by way of accommodation, simply because they are not semantically too impoverished (cf. van der Sandt

[8] See Kamp and Reyle (1993: Chapter 4) and Geurts and van der Sandt (1999) for further discussion.

[9] See Beaver (2001) for a different view.

1992). Which is not to imply that a sufficiently specific presupposition can always be accommodated. Suppose someone says, again out of the blue:

(18) When I came home last night, I noticed immediately that the guillotine had been fiddled with.

The problem with this is not so much that 'the guillotine' is not specific enough, but rather that it is *remarkable* that in our day and age a private person should own one—and presupposed information is expected to be unremarkable (cf. Heim 1992 and the extensive literature on bridging). In sum, presuppositions that are insufficiently specific and bland will not be accommodated without further ado.

The binding theory solves the so-called 'binding problem' by adopting an integrated representation of presupposed and non-presupposed content. Karttunen and Peters' example, repeated below as (19a), is analysed as in (19b):

(19) a. ?Someone managed to succeed George V on the throne of England.
b. [x: x succeeded GV, <u>it was difficult for x to succeed GV</u>]

The underlined material in this DRS is presupposed whilst the remainder is not, but the two types of information are not segregated entirely. In particular, the presupposition contains a discourse referent that is not itself presupposed, so the indefinite 'someone' does not have to be evaluated twice, as it would have to on other accounts of presupposition. As is shown by Geurts and Maier (2003) this treatment of the binding problem is quite general, and applies to all sorts of non-asserted content.

One last note before we leave this section. In this paper we adopt the common practice of speaking of local, intermediate, and global accommodation, and this usage is liable to suggest that there are three very different forms of accommodation, and perhaps even that there are three different interpretative mechanisms at work. In other theories this may be so. Accommodation is a well-known problem for non-representational theories of presupposition, which are forced to do so by making a principled distinction between local, intermediate, and global accommodation. By contrast, the binding theory does not require special-purpose devices for dealing with any particular variety of accommodation. There is just a single principle stating that presuppositional material will *ceteris paribus* settle as high as possible in the DRS. There are no dedicated procedures for handling accommodation, and the terms 'global', 'intermediate', and 'global' merely serve to characterise the output of the theory; they don't play a role *in* the theory.

4 Focus interpretation as projection

We maintain that backgrounded information gives rise to presuppositions; more concretely, our claim is the following:[10]

[10] It is usually said that presuppositions are 'triggered' (or 'induced') by certain lexemes or syntactic constructions. A factive verb, for example, triggers the presupposition that its complement is true. In our formulation of the BPR we deliberately avoid this terminology, because we are not convinced that the relation

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The main prediction that the BPR gives rise to can be stated quite independently of the theory of presupposition we happen to favour. It is that focusing should cause the projection behaviour that is characteristic of definite noun phrases, factive verbs, and the like. This prediction is borne out by the data, as the following observations illustrate. To begin with, (20a, b) illustrate the familiar fact that presuppositions triggered by definite noun phrases tend to 'escape' from embedded positions: both sentences imply, in default of information to the contrary, that Fred has a wife. According to the BPR, the same should hold for the backgrounded information that someone stole the tarts, and this seems to be right: both sentences suggest rather strongly that someone stole the tarts. These inferences are defeasible, to be sure, but if they are presuppositions it is only to be expected that they should be.

(20) a. If [Fred's wife]$_{\mathrm{F}}$ stole the tarts, then Fred is innocent.
b. If Fred is innocent, then [his wife]$_{\mathrm{F}}$ stole the tarts.

In general, presuppositions tend to float up from syntactically embedded positions, but in certain special cases their passage is blocked. For example, in (21a) the presupposition that Fred has a wife, which is triggered by the definite in the consequent of the conditional, is absorbed by the information in the antecedent. The BPR entails that the same should hold for backgrounded information, and (21b) shows that it does, for unlike e.g. (20a) this sentence does not suggest in any way that someone stole the tarts:

(21) a. If Fred has a wife, then Fred's wife stole the tarts.
b. If someone stole the tarts, then [Fred's wife]$_{\mathrm{F}}$ stole the tarts.

These examples illustrate that in conditionals backgrounded information displays the projection behaviour that is characteristic of presupposition.

Similar patterns are found with other operators, for example modals:

(22) a. Maybe [Fred's wife]$_{\mathrm{F}}$ stole the tarts.
b. Maybe Fred has a wife and maybe [his wife]$_{\mathrm{F}}$ stole the tarts.
c. Maybe the tarts were stolen and maybe [Fred's wife]$_{\mathrm{F}}$ stole the tarts.

In the absence of indicators to the contrary, a speaker conveys with (22a) that Fred is married, so in this sense at least the presupposition triggered by 'Fred's wife' is interpreted outside the scope of the modal expression 'maybe'. That this presupposition can be neutralised is shown by (22b), which does not imply that Fred has a wife. Another suggestion conveyed by (22a) is that someone stole the tarts, which makes sense if the backgrounded material under the scope of the modal gives rise to a presupposition, and as expected this inference, too, can be blocked, as shown by (22c).

between focus and presupposition is in all respects the same as that between conventional presupposition triggers and their presuppositions.

For good measure, let us look at one more example:

(23) a. [Fred's wife]$_{\mathrm{F}}$ didn't steal the tarts.
b. I'm still not convinced that the tarts were stolen, but surely [Fred's wife]$_{\mathrm{F}}$ didn't steal them.

As illustrated by (23a), an ordinary presupposition typically behaves as if it was interpreted outside the scope of any negation operators: normally speaking an utterance of this sentence would be taken to imply that Fred has a wife. Analogously, an utterance of this sentence would normally imply that somebody stole the tarts, which is what the BPR predicts. And as (23b) shows, this inference is suspended in certain special cases, which is characteristic of presuppositional inferences, too. Thus, the way negation interacts with focus is just an instance of a larger pattern; *pace* Kratzer (1989), we conclude that there is nothing special about negation in this regard (cf. Section 2).

These observations should suffice to show that backgrounded information generally gives rise to presuppositions. This is strong evidence in favour of the BPR, and by the same token these data present a formidable challenge to any account which rejects the notion that there is an intimate connection between focusing and presupposition. It is hardly surprising, then, that none of the theories that try to get by without the BPR (or something like it) can account for the pervasive parallels illustrated in the foregoing.

Thus far we have presented our case for the BPR in purely observational terms. Our theory of presupposition hasn't entered the fray yet. It will be fairly obvious, at least in outline, how the binding theory accounts for the facts we have mustered, so let us restrict our attention to one example, viz. the contrast between (20b) and (21b).[11]

(24) a. [: [x: x stole the tarts]
⇒ [u: u is Fred's wife, v: v stole the tarts, u stole the tarts]]
b. [u: u is Fred's wife, [x: x stole the tarts]
⇒ [v: v stole the tarts, u stole the tarts]]
c. [u: u is Fred's wife, [x: x stole the tarts] ⇒ [: u stole the tarts]]

In (24a), which is the initial representation of (21b), there are two presuppositions (any other presuppositions the sentence may contain are ignored). One presupposition is triggered by the definite noun phrase 'Fred's wife'. It does not have a suitable antecedent, and therefore it is accommodated in the main DRS, as shown in (24b). The other presupposition arises from the BPR: in the consequent of (21b), the semantic correlate of 'stole the tarts' is backgrounded, and therefore a presupposition is triggered to the effect that someone stole the tarts. Treating this like any other presupposition, the binding theory predicts that it will be bound to the material introduced in the antecedent of the conditional, and the resulting interpretation is represented by (24c).

[11] The choice is not entirely arbitrary, because for examples like (20b) logic-based theories of presupposition like the satisfaction theory yield predictions that are too weak. If we incorporated the BPR in such a framework, the predicted presupposition would be: 'If Fred is innocent, then someone stole the tarts'—which is weaker than what is intuitively observed. See Geurts (1996, 1999) for discussion of this issue.

In (20b), the presupposition that Fred has a wife is interpreted as it is in (21b), but in this case the presupposition induced through the BPR does not have a suitable antecedent, so we predict that it will be accommodated in the main DRS, which yields the following interpretation:

(25) [u: u is Fred's wife, v: v stole the tarts,
[: Fred is innocent] ⇒ [: u stole the tarts]]

This prediction is correct, too. The remaining examples discussed above are analysed along the same lines.

One of the more intriguing problems of interpretation posed by focusing is how backgrounded material in the nuclear scope of a quantifier can end up constraining the quantifier's domain. The following is a case in point:

(26) Beryl always drinks [sherry]$_{\mathrm{F}}$.

The most likely interpretation of this sentence is that, whenever Beryl drinks something, what she drinks is sherry. [12] On this construal, the quantifier 'always' ranges over situations in which Beryl is drinking, but strangely enough the only mention of drinking in (26) occurs in what what would seem to be the quantifier's nuclear scope. The problem is reminiscent of one discussed earlier, when we explained how a presupposition triggered in the nuclear scope of a quantifier may serve to restrict its domain (see example (15) and the ensuing discussion). On the account we propose the expanation of the two cases is not merely similar, but identical.

(27) a. [x: Beryl(x), [e:]⟨∀e⟩[$\underline{u}$: x drinks u in e, x drinks u in e, sherry(u)]]
b. [x: Beryl(x), u: x drinks u in e, [e:]⟨∀e⟩[x drinks u in e, sherry(u)]]
c. [x: Beryl(x), [e,u: x drinks u in e]⟨∀e⟩[: x drinks u in e, sherry(u)]]

(27a) is the semantic representation of (26) as it comes out of the grammar, except that the presupposition triggered by the proper name 'Beryl' has already been dealt with. In this DRS the domain of the adverbial quantifier is practically empty; only a fresh discourse referent is introduced. We would assume that, as a matter fact, the lexical semantics of 'always' imposes certain rather general restrictions on the possible values this discourse referent can take, but these restrictions are left out of account here. In the nuclear scope of 'always', 'Beryl drinks ...' is backgrounded, and therefore the BPR induces the underlined presupposition in (27a). This presupposition cannot be bound, so the binding theory predicts that it will be accommodated—more precisely, that it will be accommodated in the least embedded position that is compatible with general requirements of semantic and pragmatic felicity. By default, this means that the presupposition is accommodated in the main DRS, but in this particular case that is not an option, because global accommodation would result in an improper DRS, in which the discourse referent e occurs free, as shown in (27b). The second option is to accommodate the presupposition one level down, in the

[12] The phenomenon has been discussed, among others, by Krifka (1991) and Rooth (1995). A recent discussion is found in Beaver & Clark (to appear).

restrictor of 'always', and as there is nothing to prevent this, we predict that (27c) is the preferred reading of (26), which is correct.

In Section 2 above we saw that various proposals for the interpretation of focus run into the so-called 'requantification problem', which we illustrated with the following example:

(28) An arm is almost always attached to the $[\text{left}]_{\text{F}}$ shoulder. (= (7))

The problem with this sentence, it will be recalled, is that we want to avoid construing it as, 'Almost always when an arm is attached to a shoulder, an arm is attached to the left shoulder', on which reading (28) would come out true. Rather, the reading one would like to have is, 'Almost always when an arm is attached to a shoulder$_i$, it$_i$ is the left shoulder', which makes the sentence false. To show how this reading is obtained, we start out from (29a) as the initial representation of (28):

(29) a. [: [e, u: arm(u)]$\langle\pm\forall$e$\rangle$[v: shoulder(v), u is attached to v in e, u is attached to v in e, left(v)]]

b. [: [e, u: arm(u), v: shoulder(v), u is attached to v in e]$\langle\pm\forall$e$\rangle$[: u is attached to v in e, left(v)]]

The underlined material in (29a) is the presupposition induced by the BPR, which ends up being accommodated in the restrictor of the quantifier, as in the previous example (accommodation at toplevel would leave e free in a condition). The resulting DRS, (29b), says that in almost every situation in which an arm is attached to a shoulder, the shoulder in question is the left one, which is the reading we wanted to account for.

5 Focus particles

In the foregoing we discussed how focusing affects the interpretation of conditionals, modals, negation, and quantification, and argued that such focus effects as are observable in these environments can be accounted for by a single general principle, the BPR. If we are right about this, none of these expressions require a special treatment; they all interact with focus in the same way. Not all focus-sensitive expressions are like this however. In particular, so-called 'focus particles' are focus-sensitive in idiosyncratic ways, which is to say that this category of expression calls for a more localist approach.[13] However, a purely localist treatment of focus particles is not advisable, because even if each focus particle has its own peculiarities, the BPR restricts the interpretation of focus particles just as it restricts the interpretations of other expressions.

In this section we present analyses of two focus particles: 'only' and 'too'. Presupposition enters our analyses in two different ways: in both cases through the BPR, and in the case of 'too' we argue that this particle imposes additional presuppositional requirements of its own.

[13] The diversity of focus-sensitive expressions is the central theme of Beaver and Clark (to appear).

Only

Although 'only' is a controversial word, the controversy is not about what information it conveys. Practically everybody would agree that e.g. (30) carries the information that Wilma guessed the secret word and that apart from Wilma nobody else guessed it:

(30) Only $[\text{Wilma}]_{\text{F}}$ guessed the secret word.

The main issue is what parts, if any, of the informational content of (30) are entailed, presupposed, implicated, or what have you. In particular, it appears that (30) implies that:

(31) Wilma guessed the secret word.

But how exactly does (31) relate to (30)? Is it an entailment (Atlas 1993), a presupposition (Horn 1969), a conversational implicature (McCawley 1993), or just an illusion (Geach 1962)? There is some *prima facie* evidence that (31) is a presupposition of (30). It is that the negation of (30) also seems to imply the truth of (31):

(32) Not only $[\text{Wilma}]_{\text{F}}$ guessed the secret word.

It is for this reason, presumably, that Horn's (1969) presuppositional analysis has won so many converts.

However, if (30) really presupposed (31), we should expect this inference to exhibit projection behaviour in other environments, too—which it doesn't:

(33) a. It is possible that only $[\text{Wilma}]_{\text{F}}$ guessed the secret word.
b. If only $[\text{Wilma}]_{\text{F}}$ guessed the secret word, she has won €100 .
c. Did only $[\text{Wilma}]_{\text{F}}$ guess the secret word?
d. ?If Wilma guessed the secret word, then only $[\text{Wilma}]_{\text{F}}$ guessed the secret word.

According to our intuitions, none of (33a-c) suggest very strongly that Wilma guessed the secret word, as we should expect if this proposition had presuppositional status. And if we try to set up an environment in which presuppositions usually don't go through, as in (33d), the result is that the focus particle itself must be focused in order for the sentence to be felicitous at all; as it stands, (33d) is simply incoherent. Moreover, as observed by Horn (1996), if (30) did presuppose (31), exchanges like the following should be quite peculiar, because right after A has indicated that he doesn't know who guessed the secret word, B would presuppose (i.e. take it to be common knowledge) that Wilma guessed the secret word:

(34) A: Who guessed the secret word?
B: Only $[\text{Wilma}]_{\text{F}}$ guessed the secret word.

But of course this is a perfectly normal question-answer sequence. So all in all there is little to recommend the idea (30) presupposes (31), though it remains to be seen where this leaves the fact that the negation of (30) seems to imply (31) just as (30) does.

Recanting his earlier proposal, Horn (1996) has proposed an alternative analysis of 'only', which is based on the idea that it functions semantically as the inverse of 'all' (cf. also Löbner 1986). According to this analysis 'Only A B' is taken to be semantically equivalent to 'All B A'. Thus the following are truth-conditionally equivalent, though they may achieve different pragmatic effects:

(35) a. Only [crooks]$_{\mathrm{F}}$ are lawyers.
b. All lawyers are crooks.

Similarly, in Horn's quantifier analysis (30) becomes equivalent with the somewhat cumbersome: 'Everyone who guessed the secret word is identical to Wilma.' On this account, (30) no longer presupposes (31) but as strong quantifiers generally have existential import, it implies that someone guessed the secret word, for the same reason its universal paraphrase does. (30) asserts (i) that everyone who guessed the secret word is identical to Wilma; it implies (ii), by way of existential import of the universal quantifier, that someone guessed the secret word; and between them (i) and (ii) entail (31). Hence, (31) is part of the communicative content of (30), but it is neither a presupposition nor an implicature.

A key piece in Horn's analysis is that universal quantifiers have existential import. Horn chooses to remain agnostic as to the etiology of existential import, but following Strawson (1950, 1952) and Hart (1951), and in line with the prevailing opinion in the literature on presupposition and quantification, we will assume here that existential import is a matter of presupposition: a strong quantifier induces the presupposition that it ranges over a non-empty domain.[14] In conjunction with Horn's analysis of 'only' this yields the prediction that (30) presupposes that someone guessed the secret word, and this prediction is confirmed by the standard tests for presuppositionhood, as witness the following observations:

(36) a. It's possible that only [Wilma]$_{\mathrm{F}}$ guessed the secret word.
b. Nobody guessed the secret word, so it's not possible that only [Wilma]$_{\mathrm{F}}$ guessed it.

(37) a. If Betty didn't get it right, only [Wilma]$_{\mathrm{F}}$ guessed the secret word.
b. If anybody guessed the secret word, only [Wilma]$_{\mathrm{F}}$ did.

Intuititively, the (a) sentences imply that someone guessed the secret word, while the same inference is blocked in the (b) sentences. This is what we should expect if (30) triggered the presupposition that someone guessed the secret word.

The main evidence Horn adduces in favour of his proposal concerns the monotonicity properties of 'only' and the way it interacts with negative polarity items (NPIs). If we assume that 'Only B A' is semantically equivalent to 'All A B', then the first argument position of 'only' should be upward entailing, while its second argument should be downward entailing. That is, we should get the following entailment patterns, for $\mathrm{A}' \subseteq \mathrm{A}$ and $\mathrm{B} \subseteq \mathrm{B}'$:

[14] See e.g. de Jong and Verkuyl (1985), Lappin and Reinhart (1988), McCawley (1993), Geurts (2003).

$$\begin{array}{ccc} \text{all A B}' & & \text{only B}' \text{ A} \\ \Uparrow & & \Uparrow \\ \text{all A B} & \Leftrightarrow & \text{only B A} \\ \Downarrow & & \Downarrow \\ \text{all A}' \text{ B} & & \text{only B A}' \end{array}$$

Hence, 'Only lawyers wear ties' entails 'Only people wear ties' as well as 'Only lawyers wear loud ties'—which seems reasonable enough, though perhaps neither inference is pragmatically felicitous. Furthermore, as on this analysis expressions of the form 'only X' create downward entailing contexts, we should expect them to pattern with other negative-like expressions:

(38) a. {Never / rarely / only once} did Fred give us the pleasure of singing 'O sole mio'.
b. {Nobody / Few people / Only Wilma} had any cigars left.

(38a) shows that 'only' triggers inversion, and (38b) illustrates that its second argument accommodates NPIs. In both respects, 'only X' behaves like a downward entailing quantifier expression, thus confirming Horn's analysis.

Although in several respects we agree with Horn's proposal, we don't subscribe to his central claim, that 'only' is a strong quantifier. If 'only' is to be analysed as a quantifier at all, it resembles 'some' or 'no' more than it does 'all' or 'most'. To begin with, 'only' phrases are admitted in 'there-insertion' contexts, as witness:

(39) There are {some / no / only / *all / *most} firemen available.

This is *prima facie* evidence for regarding 'only firemen' as weak, and this initial impression is strengthened by the following observations:

(40) a. Only two days did Barney stay in Berlin.
b. Only two days ago Barney was staying in Berlin.

In (40a) 'only' takes scope over the remainder of the sentence, thus triggering inversion. In the non-inverted (40b), by contrast, the scope of 'only' is restricted to the adverbial modifier, and in this environment it alternates with weak quantifiers only:

(41) {A couple of / some (*of the) / *all / *most} days ago Barney was staying in Berlin.

Another problem with the idea that 'only' is a reversed universal quantifier is discussed by Horn himself. It is that the first argument of 'only', which is upward entailing, occasionally admits NPIs:

(42) a. Only the students who had ever read anything about polarity passed.
b. *All students who passed had ever read anything about polarity.

(43) a. Only the guests who had seen any of the suspects were questioned.
b. *All the guests who were questioned had seen any of the suspects.

The (b) sentences show that NPIs are not licensed in the scope of a universal quantifier. Horn's analysis predicts, accordingly, that the first argument of 'only' should impose the same restriction. This prediction does not square with the facts, as the (a) sentences demonstrate.

To sum up: analysing 'only' as a universal quantifier is plausible enough in view of the intuitive truth conditions of 'only'-sentences and the monotonicity inferences they give rise to. Furthermore, this analysis explains why NPIs are licensed in the scope of 'only', and why 'only' triggers inversion. And last but not least, by appealing to the existential import of strong quantifiers, it gives a principled account of the presuppositions associated with 'only'-sentences. On the down side, it is precisely the assumption that 'only' is strong that flies in the face of various observations suggesting that 'only X' is a weak quantifier, and Horn's proposal fails to explain why at least some NPIs may occur in the (upward entailing) focus argument of 'only'.

Our proposal is to retain Horn's truth conditions while altering the logical form of 'only', adopting Geach's (1962) suggestion that 'Only A B' should be rendered as $\neg\exists x[\neg Ax \wedge Bx]$. So in the DRT framework (30) comes out as follows:

(44) [x: Wilma(x), ¬[u: u ≠ x, u guessed the secret word]]

This is truth-conditionally equivalent to Horn's analysis, and therefore shares some of its signal virtues. In particular, it accounts for the monotonicity properties of 'only' in essentially the same way Horn's proposal does. However, in our analysis 'only' is not a (strong) universal quantifier but rather a negated existential expression, not unlike 'no', and therefore weak. On the one hand, this is a change for the better, because we have argued that there is reason to believe that 'only' is weak, but on the other hand we also lose Horn's explanation for the presupposition induced by 'only', which hinges on the assumption that 'only' is strong. Here the BPR comes to the rescue. For the same inferences that Horn puts down to existential import can be explained by assuming, as we do, that backgrounded material is presupposed. For example, given that 'Wilma' is the focus of (30), the BPR gives rise to the following presuppositional expansion of (44):

(45) [x: Wilma(x), ¬[v: v guessed the secret word,
u: u ≠ x, u guessed the secret word]]

In default of a suitable antecedent, we predict that the presupposition will be accommodated in the main DRS, which yields:

(46) [x: Wilma(x), v: v guessed the secret word,
¬[u: u ≠ x, u guessed the secret word]]

As in Horn's account, this entails that Wilma guessed the secret word.

In (44)-(46) the presupposition induced by the BPR is accommodated globally, and as long as a binding interpretation is not available, this option is strongly preferred. There are however related cases in which the option of local accommodation is exercised; for example:

(47) a. Only Superman can help us now.
b. [: ¬[v: v can help, u: u ≠ Superman, u can help]]
c. [v: v can help, ¬[u: u ≠ Superman, u can help]]
d. [: ¬[v: v can help, u: ≠ Superman, u can help]]

In a context in which it is taken for granted that Superman doesn't exist, (47a) is a way of conveying that the interlocutors' situation is hopeless. This reading comes about as follows. The semantic representation of (47a) is of course analogous to that of (30), and after the BPR has applied we have (47b), which mirrors (45). Suppose now that, as in the previous example, this presupposition is accommodated globally, as shown in (47c). Given that it is part of the common ground that Superman doesn't exist, this reading would be inconsistent, and therefore the hearer decides to accommodate the presupposition locally. So (47d) represents the final interpretation of (47a) and provided Superman doesn't exist this DRS entails that nobody can help us. Our analysis of one of the examples discussed by Horn (1996) is along the same lines:

(48) Only Kim can pass the test, and it's possible even she can't.

Global accommodation of the presupposition that someone can pass the test would render the discourse infelicitous, and therefore the presupposition is accommodated locally.

We saw above how analysing 'only' as a universal quantifier helps to explain why NPIs are licensed in the scope of 'only', and as our analysis gives the same truth conditions as Horn's, it yields the same predictions. However, we also saw that Horn's theory doesn't explain how NPIs may enter the focus argument of 'only', which is upward entailing. Here our account suggests an straightforward solution: the semantic representation of 'only' contains a wide-scope negation operator, and this is what explains why 'only' admits NPIs into a position that ought to repel them. More generally, this explains the intuition that, notwithstanding the fact that its truth conditions can be rendered by means of a universal quantifier, 'only' is somehow 'more negative' than 'every' and 'all'.

So what underlies the contrast between the (a) and (b) sentences in (42) and (43) is simply the fact that the semantic representation of 'only' contains a negation operator, whereas the representations of 'all' and 'everyone' don't. It is in line with this explanation that NPIs should also occur in certain other environments that ought to be allergic to NPI, as in the following examples given by Horn (1996):

(49) a. Not all the guests who ate any of the contaminated squid became ill.
b. Not everyone who has ever been to Groningen works on polarity.

Here the NPIs 'any' and 'ever' occur in an upward-entailing environment, too, the reason being, we suggest, that they are in the scope of a negation operator.

Our story of 'only' explains how (50a) comes to imply that Muriel voted for Hubert: this proposition is entailed by the conjunction of what the sentence says and what it presupposes. Hence it is also explained why (50b) does not imply that Muriel voted for Hubert: between them, the sentence's literal meaning and the presupposition that someone voted for Hubert do not entail that Muriel voted for Hubert. But then how is it that (50c) manages

to convey that Muriel voted for Hubert?

(50) a. Only $[\text{Muriel}]_{\text{F}}$ voted for Hubert.
b. Maybe only $[\text{Muriel}]_{\text{F}}$ voted for Hubert.
c. Not only $[\text{Muriel}]_{\text{F}}$ voted for Hubert.

One suggestion is that (50c) conversationally implicates that Muriel voted for Hubert. Someone who utters (50c) commits himself to the claim that someone who is not identical to Muriel voted for Hubert, which is less than what he would have conveyed by way of stating:

(51) $[\text{Muriel}]_{\text{F}}$ didn't vote for Hubert.

By uttering (51) instead of (50c) the speaker would have asserted that Muriel didn't vote for Hubert, and presupposed that someone did. So (51) is more informative than (50c), and it is, if anything, simpler, to boot. So why didn't the speaker utter it instead of (50c)? Presumably because he takes (51) to be false. Hence, the negation of (51) is a conversational implicature of (50c).

Unfortunately, however, this cannot be the whole story, because it doesn't account for the surprising fact that that the inference in question appears to exhibit projection behaviour:

(52) It is possible that not only $[\text{Muriel}]_{\text{F}}$ voted for Hubert.

Intuitively, this sentence, too, implies that Muriel voted for Hubert—which is not the kind of behaviour one would expect from a conversational implicature. More generally, it seems that if a sentence of the form 'Not only A B' is embedded in a non-entailing position, there will be a strong suggestion to the effect that 'A B' is true. This behaviour is puzzling because it is not shared by the positive form, 'Only A B', as we have argued as some length. Regrettably, we don't see how this discrepancy might be accounted for.

To conclude, 'Only A B' gives rise to the presupposition that B is non-vacuous, but this presupposition is not triggered by the lexical content of 'only': its source is the focus/background division of the sentence, and therefore it is not a lexical presupposition. To be sure, 'only' imposes syntactic and semantic requirements on the focus/background division. Most importantly, for the (semantic) purposes of this paper, it specifies that the backgrounded information is satisfied, if at all, by the focused entity; in this respect ours is a localist analysis. But it is the BPR that accounts for the presuppositions arising from 'only'-sentences; and in this respect our analysis is unabashedly centralist.

Too

According to the standard view 'too' contributes to the interpretation of (53a) by inducing the presupposition that there is someone other than Mary who lives in London.[15] (53a) is

[15] An alternative view is defended by Asher and Lascarides (1998: 248) who claim that 'the presupposition of *too* is rather that it requires that there be some proposition in the context that bears the rhetorical relation

therefore said to presuppose (53b):

(53) a. [Mary]$_{\mathrm{F}}$ lives in London too.
b. $\exists$x[x $\neq$ Mary $\wedge$ x lives in London]

However, as first noted by Kripke (ms.), this alleged presupposition is much too weak. In the overwhelming majority of contexts in which London is part of the common ground, it may be taken for granted that London has more than one inhabitant, hence (53b) is trivially true. So if it presupposed no more than (53b), (53a) should be felicitous in practically any context, which is clearly not the case: when uttered out of the blue this sentence will typically sound odd. Or, to put it differently, whatever the presupposition of 'too' may be, it is certainly more specific than the existential one standardly assumed.

Another observation in the same vein, also due to Kripke, is the following:

(54) a. If Herb comes to the party, [the boss]$_{\mathrm{F}}$ comes, too.
b. Herb is not the boss.

Intuitively, a speaker who uttered (54a) would thereby commit himself to the truth of (54b). However, if the focus particle 'too' merely induces the existential presupposition that someone other than the boss comes to the party, it is not clear how this commitment could come about. For that presupposition would simply be absorbed in the antecedent of the conditional, and not give rise to any additional inferences.

In view of these facts Kripke concludes that the standard view is wrong, and that the presupposition of 'too' contains an anaphoric element. Furthermore, according to Kripke, the consequent of (54a) does not presuppose that someone other than Herb is coming to the party, but instead gives rise to the more substantial presupposition that Herb is not the boss. We will argue below that this last claim is not correct, but we concur with Kripke's that the presupposition associated with 'too' contains an anaphoric element.

The behaviour of 'too' is special in other ways, as well. Zeevat (1992, 2002) observes that the presupposition induced by 'too' sometimes appears to have access to antecedent information that is inaccessible to other presuppositions:

(55) a. ?It may be raining on my birthday, and I think it's not fair that it's going to rain on my birthday
b. ?I suspect that Betty was considering taking karate lessons, and she has stopped taking karate lessons.
c. Fred may be staying at the Ritz, and [Barney]$_{\mathrm{F}}$ is at the Ritz, too.
d. I suspect that Fred is staying at the Ritz, and [Barney]$_{\mathrm{F}}$ is at the Ritz, too.

Parallel to the content of the sentence in which *too* occurs.' Asher and Lascarides also maintain that 'the presupposition triggered by *too* must be introduced explicitly into the discourse context' (*ibid.*); van Rooy (1997) attributes the same claim to Kripke. This observation is not correct though, as Caesar's purported last words, 'Tu quoque, Brute?', illustrate. See Geurts (1999) for further discussion of this point. (Incidentally, as a matter of historical fact, Caesar's last words weren't Latin: he addressed Brutus in Greek, the correct quote being: *κα*ὶ *σ*ὺ, *τέκνον*; i.e. 'You too, my child?' See Suetonius, *De Vita Caesarum* 1.82.)

(55a, b) illustrate that, in general, the antecedent of a presupposition needs to be accessible (in DRT's sense of accessibility). Antecedent material introduced within the scope of a modal, as in (55a), or an attitude verb, as in (55b), is inacessible, and any attempts at taking it up result in incoherence. Surprisingly, however, the presupposition induced by 'too' somehow manages to bypass this general accessibility constraint, as (55c, d) show.

Yet another peculiarity of 'too', which we believe is related to Zeevat's observation, was first pointed out by Fauconnier (1985; cf. also Heim 1992). It is that an occurrence of 'too' may have a fully transparent reading, as witness the following example:

(56) The professor of computational theology is a freemason, and Wilma believes that [the dean]$_{\mathrm{F}}$ is a freemason, too.

Consider first the definite noun phrase 'the dean'. It is a familiar observation that this type of expression may be read 'de re', which is to say that Wilma need not be aware that the person whom she takes to be a freemason is the dean (she may know him only in his capacity of chairman of her badminton club, say). Following Quine's (1960) usage, this reading is sometimes called a transparent one, but it is not fully transparent, because the expression 'the dean' still contributes something to what Wilma is said to believe. The puzzling thing about the presupposition induced by 'too' is that it does seem to admit of such a fully transparent construal: Wilma may felicitously be said to believe that 'the dean is a freemason, too', without implying that she has any other persons in mind whom she considers to be freemasons. Put otherwise, although 'too' occurs within the syntactic scope of 'believes' it need not be construed as contributing anything whatsoever to what Wilma is said to believe.

In order to introduce our own view on 'too', let us first consider an analysis that does not work. We have seen that, according to Kripke, the presupposition triggered by 'too' contains an anaphoric element, and it might be thought that, within the framework of the binding theory, this insight may be captured simply by treating the standard existential presupposition as presuppositions are generally treated by our theory. This will not do however. Suppose we try to deal with (54a) along these lines. Then, prior to the resolution of the presupposition in question, we would have the DRS in (57a):

(57) a. [u: Herb(u), v: boss(v),
[: comes(u)] ⇒ [x: x ≠ v, comes(x), comes(v)]]
b. [u: Herb(u), v: boss(v), [: comes(u), u ≠ v] ⇒ [: comes(v)]]

The presupposition in (57a) contains the same material as the existential one traditionally attributed to 'only', though within the current framework its status is rather different. Processing this presupposition as we would any other, we observe that there is a suitable antecedent for it in the first part of the conditional, so we predict that there is a preference for binding the presupposition there, which yields the representation in (57b); and this is not quite what we should like to have, because it says that if Herb comes to the party and if Herb is not the boss, then the boss will come, too.

The core of the analysis of 'too' we advocate was first endorse by Corblin (1991) and Heim (1992); it retains Kripke's insight that the presupposition of 'too' contains an

anaphoric element but implements it in a way that deviates from Kripke's. The fundamental idea is that 'too' has two presuppositions, one of which is contained in the other. For example, someone who utters '[The vicar]$_{\mathrm{F}}$ is depressed, too' apparently has some other person in mind whom he believes to be depressed. This information is usually rolled together into one presupposition, but we contend that there are actually two, to wit: that (i) there is some person x other than the vicar such that (ii) x is depressed. The first part resembles a pronoun in the sense that it has no descriptive content to speak of, and therefore should be hard to accommodate. The second part is richer in descriptive content. In order to distinguish these two presuppositions, we shall call them 'primary' and 'secondary', respectively. These two presuppositions stem from different sources. The primary presupposition is triggered by the lexical content of 'too'. The secondary presupposition, on the other hand, is induced by the BPR, so strictly speaking it is not part of the contribution of 'too'. So, as with 'only', the current proposal combines localist and centralist elements. In the remainder of this section we will show how this analysis accounts for the observations made above.

Assuming that the presuppositions of the proper name and the definite description have been taken care of, we start out from the following the semantic representation for Kripke's example (54a):[16]

(58) [u: Herb(u), v: boss(v), [: comes(u)] ⇒ [$\underline{\underline{\mathrm{x}}}$: $\underline{\underline{\mathrm{x}}} \neq \underline{\underline{\mathrm{v}}}$, $\underline{\mathrm{comes}}(\underline{\mathrm{x}})$, comes(v)]]

Here the secondary and primary presuppositions are underlined once and twice, respectively. Given this initial representation the projection mechanism takes it usual course, starting with the primary presupposition. This presupposition is bound to the discourse referent representing Herb, resulting, after substitution, in the following DRS:

(59) [u: Herb(u), v: boss(v), u ≠ v, [: comes(u)] ⇒ [: $\underline{\mathrm{comes}}(\underline{\mathrm{u}})$, comes(v)]]

Now only the secondary presupposition of 'too' remains to be processed, and as this matches the material in the antecedent of the conditional, it is bound there, yielding:

(60) [u: Herb(u), v: boss(v), u ≠ v, [: comes(u)] ⇒ [: comes(v)]]

This is precisely the reading we wanted to have. In particular, this DRS entails that Herb is not the boss, which is a side effect of binding the primary presupposition to Herb. Note that it is an essential prerequisite for obtaining this construal that the presupposition of 'too' comes in two parts, which can be resolved separately, so that the one part can link to the main DRS while the other projects to a subordinate DRS.

We have seen in the foregoing that the presupposition of 'too' is hard if not impossible to interpret by way of accommodation, and following Kripke's lead it has been suggested by several authors that 'too' exhibits the characteristic behaviour of pronominals in this regard.[17] However, this peculiarity has proved difficult to explain. In general, we be-

[16] An alternative, discussed by Beaver (2001: 94), is leave out the non-identity condition and to treat the implication of distinctness at the level of Gricean pragmatics.

[17] E.g. Heim (1992), Zeevat (1992, 2002), Beaver (1997), van Rooy (1997), Asher and Lascarides (1998).

lieve, semantically attenuate presuppositions tend to resist accommodation, but then the presupposition associated with 'too' is anything but semantically attenuate. An alternative explanation has been proposed by Zeevat (2002), who claims that 'too' is semantically redundant though pragmatically obligatory in contexts that provide a suitable antecedent. Appealing to a result in Blutner's (2000) bi-directional optimality theory, Zeevat argues that if a presuppositional expression has a simple non-presuppositional alternative with the same truth conditions, it will resist accommodation. There are several problems with this proposal. For example, there are good reasons to doubt the conventional wisdom that 'too' is semantically inane, as e.g. the foregoing discussion of Kripke's example (54a) has shown (and further evidence will be presented below). And if that supposition has to be given up, the very notion of expression alternative becomes tenuous (Spenader 2002).

However, if we adopt the analysis of 'too' outlined in the foregoing, the problem resolves in a natural way. 'Too' resembles an anaphoric pronoun because one of its presuppositions is descriptively attenuate. It is this presupposition that resists accommodation.

Whereas the primary presupposition of 'too' demands an antecedent, there are cases in which the secondary presupposition is interpreted by way of accommodation:

(61) a. Either the boss will stay away from the party, or $[\text{Barney}]_{\text{F}}$ is coming, too.
b. [u: boss(u), v: Barney(v),
[: not-comes(u)] $\vee$ [$\underline{\text{x}}$: $\underline{\text{x}} \neq \underline{\text{v}}$, $\underline{\text{comes}}(\underline{\text{x}})$, comes(v)]]
c. [u: boss(u), v: Barney(v), u $\neq$ v,
[: not-comes(u)] $\vee$ [: comes(u), comes(v)]]

Here the primary presupposition is bound in the main DRS. However, the secondary presupposition cannot project to the global level, because the resulting reading would be infelicitous; for it would say that the boss is coming to the party and that either the boss will not come to the party or that Barney will come too. Hence, the secondary presupposition is accommodated locally, yielding the interpretation in (61c).

Focus particles like 'too' and 'again' have been called additive on the grounds that they don't constrain a sentence's truth conditions (as 'only' does) but rather furnish additional information. Although this is not quite correct, as some of the preceding examples demonstrate, there is a sense in which additive particles are properly so-called: the presuppositional profile of additive focus particles is different from that of most other presupposition inducers, and this difference explains some of their idiosyncracies, like the ones observed by Zeevat and Fauconnier, for example. To explain this, let us first briefly recapitulate how mainstream presupposition triggers interact with DRT's accessibility constraint.

(62) a. *It is possible that Switzerland has a navy. The Swiss navy is stationed on Lake Geneva.
b. [: $\Diamond$[x: Swiss-navy(x)]]
c. [$\underline{\text{u}}$: $\underline{\text{Swiss-navy}}(\underline{\text{u}})$, u is stationed on Lake Geneva]
d. [: $\Diamond$[x: Swiss-navy(x)], x is stationed on Lake Geneva]

The discourse in (62a) is odd, and in DRT the oddity is accounted for by appeal to the fact that the antecedent of 'the Swiss navy' occurs in an inaccessible position. But what

does that mean? Consider the DRSs corresponding to the two sentences in (62a), which are given in (62b) and (62c). In order to process (62c) it would be merged with (62b), and then we would try to resolve the underlined presupposition. Suppose now that we were to link this presupposition to its antecedent within the scope of the modal operator. Then the resulting representation would be (62d), and this DRS is defective, because it contains a free occurrence of the discourse referent x. This is what underwrites the notion of accessibility.

So, '*x* is inaccessible to *y*' is best seen as an abbreviation for 'if *y* were bound to *x*, we would have a defective DRS on our hands.' However, this abbreviation is contingent upon the condition that presupposed and non-presupposed material share at least one discourse referent. For example, if the non-presupposed part of (62c) did not use the discourse referent u, binding the presupposition to an inaccessible antecedent would not result in defective DRS. DRT's accessibility constraint tacitly assumes that this type of situation will not occur. We submit that this assumption, though valid for most presuppositions, does not hold for all, and that the secondary presupposition of 'too' (or any other additive focus particle, for that matter) is an exception. In our view, this is why 'too' can link up to 'inaccessible' antecedents.

To illustrate this idea, consider how we propose to handle (55c), repeated here as (63a):

(63) a. Fred may be staying at the Ritz, and [Barney]$_{\mathrm{F}}$ is at the Ritz, too.
b. [x: Fred(x), $\Diamond$[: stay-at-R(x)],
u: Barney(u), stay-at-R(u), v: v $\neq$ u, stay-at-R(v)]
c. [x: Fred(x), $\Diamond$[: stay-at-R(x)],
u: Barney(u), x $\neq$ u, stay-at-R(u), stay-at-R(v)]
d. [x: Fred(x), $\Diamond$[: stay-at-R(x)],
u: Barney(u), x $\neq$ u, stay-at-R(u)]

(63b) is the initial semantic representation of (63a), in which in only the presuppositions associated with 'too' remain to be resolved. The primary presupposition is straightforward: v is bound to x, which is accessible to it, because both discourse referents are in the main DRS; the resulting representation is (63c). Now the secondary presupposition can be bound to its antecedent, which is contained in an embedded DRS and is therefore formally inaccessible to it. However, binding the presupposition to its intended antecedent yields a perfectly well-formed DRS, and therefore this procedure is unobjectionable, and even preferred, because the presupposition would have to be accommodated otherwise. So the reading we predict is (63d), which appears to be correct.

A related line of explanation applies to (56), repeated below as (64a), which we used to illustrate that an occurrence of 'too' within the scope of an attitude verb may have a fully transparent reading.

(64) a. The professor of computational theology is a freemason, and Wilma believes that [the dean]$_{\mathrm{F}}$ is a freemason, too.
b. [x: CT-prof(x), freemason(x), u: dean(u),
Wilma believes: [v: v $\neq$ u, freemason(v), freemason(u)]]
c. [x: CT-prof(x), freemason(x), u: dean(u), x $\neq$ u,

Wilma believes: [: freemason(u)]]

In (64b), which is the initial representation of (64a), the presuppositions associated with 'too' are triggered within an attitude context. Both the primary and the secondary presupposition are bound in the main DRS, and the resulting interpretation is (64c). Note that in the subordinate DRS characterising Wilma's belief, no trace is left of the presupposition that was triggered there. In this way we account for the fact that 'too' in (64a) can have a fully transparent construal.

To sum up, we have proposed that the presupposition which is commonly associated with 'too' actually falls into two parts. One part is peculiar to 'too', and must therefore be encoded in its lexical content. The other falls under the BPR, hence does not count as a lexical presupposition. Our analysis of 'too' resembles that of 'only' in that both contain localist as well as centralist elements. The main differences are that 'too' triggers a presupposition of its own, and that the secondary presupposition of 'too' is additive in the sense that it can be divorced from the environment in which it is triggered, which is why 'too' allows for fully transparent construals, and is able to link up to antecedents in formally inaccessible positions.

6 Anything wrong with the BPR?

Thus far our argument for the BPR has been constructive: we have tried to show that adopting this principle allows us to explain a broad range of phenomena, some of which cannot be handled, as far as we can see, without it. In the remainder of this paper we adopt a defensive stance, and attempt to refute some of the objections that have been raised against the BPR.

As we noted in the introduction, the BPR has had a curious history. Although the notion that backgrounded material is presupposed is more than three decades old, its foes seem to have taken it more seriously than its friends have: while ours appears to be the first more or less sustained attempt at arguing in favour of the BPR, there have been some extended critiques of the BPR, two of which are of a recent vintage (Dryer 1996, Rooth 1999). In the following we investigate what we take to be their main complaints.

Nobody and somebody

Jackendoff (1972) was the first to observe that, *prima facie* at least, data like the following are problematic for the BPR (cf. also Rochemont 1986, Dryer 1996):

(65) NObody shot the sheriff.

With emphasis on 'nobody', so the argument goes, the backgrounded material in this sentence must be 'x shot the sheriff', and therefore the BPR induces the presupposition that somebody shot the sheriff, which is obviously false. Thus formulated, the argument only goes through if it is assumed that presuppositions, once triggered, cannot be cancelled anymore, for if that were a possibility it might be held that this is precisely what happens in

cases like the above. However, there is a broad consensus nowadays that presuppositions are not cancelable.

Something that seems not to have been noted before is that the problem exemplified by (65) is not confined to negative quantifiers such as 'nobody':

(66) SOMEbody shot the sheriff.

If this sentence presupposed that somebody shot the sheriff, we would predict that the sentence presupposes what it asserts—which flies in the face of the well-nigh universal opinion that presupposition and assertion are in complementary distribution. This may not seem as bad predicting that presupposition and assertion contradict each other, but it is bad enough.

One possible way of dealing with the problems presented by (65) and (66) is to fall back on the view that the BPR applies by default only. As explained in the introduction, we are not at all convinced that the BPR must be viewed as a law that allows of no exceptions, and we would be just as happy arguing that it is a default rule, which is triggered only *ceteris paribus*; and perhaps *ceteris* aren't *paribus* in cases like (65) and (66). However, we prefer not adopt this course because we believe that there is a much better line of defense.

The arguments presented above hinge on an assumption that we reject, namely that in sentences like (65) and (66) the subject NP has narrow focus, and therefore the VP is backgrounded. Instead, we will argue, these phenomena are better viewed as instances of polarity focus, and if this much is right the problem posed by Jackendoff and his followers doesn't even arise.

The notion of polarity focus was introduced by Gussenhoven (1984) in his discussion of examples such as the following:

(67) a. The house ISn't on fire.
b. The house is NOT on fire.
c. (Stop squirting WATer all over the house. I TOLD you:) The house isn't ON fire.

(68) A: Why didn't you take the garbage out?
B: I TOOK the garbage out.

(69) A: I wish we were in FRANCE.
B: We ARE in France.
B′: We're IN France.

While these examples diverge in various ways, which Gussenhoven (1984) and Bolinger (1989) discuss in some detail, they have one thing in common: the sentence focuses not on this or that constituent but on the status of the entire proposition expressed. In all of these cases, that proposition is treated as given material, and the sentence's point is just to affirm or deny it. Common ways of signaling polarity focus are accentuation of the sentence's positive or negative nexus, such as the finite verb, as in (67a), (68B), and (69B), the main negation, as in (67b), or an affirmative focus particle like Dutch 'wel':

(70) Fred is WEL ziek.
Fred is [affirmative particle] sick

which translates into English as 'Fred IS sick.' In some languages, polarity accents may occupy somewhat unexpected positions, as witness examples (67c) and (69B′). It is not entirely clear why languages should allow polarity focus to be marked this way, and we will not try to solve that puzzle, but these observations are still to the point, because they highlight the fact that polarity accents are relatively free. For example, in (67) the accents occur in positions that are quite different from a grammatical point of view, but in each case they signal polarity focus.

We maintain that (65) and (66), too, are instances of polarity focus and that in neither example there is narrow focus on the subject. Thus, (65) is not to be understood as: 'x shot the sheriff' is true for x = 'nobody', as opposed to, say, x is John or x is Mary; rather, the alternatives under consideration are 'Somebody shot the sheriff' and 'Nobody shot the sheriff', and the only thing the sentence does is select the latter. The same holds, *mutatis mutandis*, for (66). In both cases the presupposition induced by the BPR is that one of the alternatives constituting the background is true. In the present case its effect will thus be to induce the trivial presupposition that the sheriff was either shot or wasn't. Semantically this boils down to inducing no presupposition whatsoever.

It is fairly obvious why (65) and (66) shouldn't allow for a construal which has narrow focus on the subject term. The non-logical part of the semantic content of words like 'somebody' and 'nobody' is so general that it is unlikely to attract the focus of a statement; 'somebody' cannot be used to mean 'some person, as opposed to some vehicle' (say). What remains to be focused is the negative part of 'nobody' and the corresponding positive component of 'somebody', which is what determines the polarity of the sentence.

(65) and (66) are marked forms, which call for special circumstances. A situation in which (65) would be appropriate would be one in which someone had just claimed or implied that someone shot the sheriff, and (66) would be suitable when someone had claimed or implied the opposite (cf. the exchanges in (68) and (69)). In either case, the issue *whether* someone shot the sheriff is already 'in the air', and only which alternative is true is at issue. In a word, rather than arguing against the BPR, (65) and (66) provide additional evidence in its favour.

It-clefts vs focus

In the presupposition literature it is standardly assumed that the cleft sentence in (71a) presupposes that someone is playing the trombone:

(71) a. It is $[\text{Barney}]_{\text{F}}$ who is playing the trombone.
b. $[\text{Barney}]_{\text{F}}$ is playing the trombone.

Our theory of focusing implies that (71b), too, presupposes that someone is playing the trombone. It seems to follow that on our account the pragmatic effects of clefting and focusing should be the same, but as Dryer (1996) and Rooth (1999) have argued, this prediction is not not borne out by the facts. There are differences between cleft sentences and corresponding focus constructions which suggest that the presuppositions triggered by clefts behave differently from the ones induced by focusing. In the following we try to

make out why that should be the case.

To explain in what way (71a) diverges from (71b), let us begin by comparing the following exchanges:

(72) A: What's that noise? Is anybody playing the trombone?
B: I don't know, but I'm sure [Barney]$_{\mathrm{F}}$ isn't playing the trombone.
B′: I don't know, but I'm sure it isn't [Barney]$_{\mathrm{F}}$ who is playing the trombone.

Although we hesitate to accept Dryer's (1996) judgment that (72B′) is downright infelicitous, we concede that it is less natural than (72B). A related contrast can be observed in the following example.

(73) a. If [Beryl]$_{\mathrm{F}}$ proposed to Fred, he will be pleased.
b. If it is [Beryl]$_{\mathrm{F}}$ who proposed to Fred, he will be pleased.

(73b) presupposes that someone proposed to Fred, and it is hard if not impossible to read the sentence without that presupposition. In this respect the cleft sentence contrasts with the focus construction in (73a), whose presupposition seems less resilient: though initially the sentence implies that someone proposed to Fred, it seems possible to suppress that inference.

The foregoing observations suggest that the presuppositions triggered by clefts are more robust than the corresponding inferences induced by focusing in that the requirement that a suitable antecedent be available is stronger for clefts than it is for focus constructions. Intuitively speaking, clefts seem to be 'more anaphoric'. This intuitive diagnosis is in line with various corpus studies showing that, by and large, *it*-clefts are used only when an explicit antecedent is available (Prince 1978, Delin 1992, Spenader 2002). There are systematic exceptions to this general rule, but they tend to follow conventional patterns, as in the following attested examples borrowed from Prince (1978):

(74) a. It was in this year that Yekuno Amlak, a local chieftain in the Amba-Sel area, acceded to the so-called Solomonic throne.
b. It is with great honor and pleasure that I announce Hilary Putnam.

The key to understanding why *it*-clefts behave as they do, we believe, lies in the pronoun 'it'. Although cleft pronouns are often classified as expletives with no semantic or pragmatic force of their own, it has been argued by several authors that this is not right.[18] To see why, consider the following examples:

(75) a. {It / *This / *That} seems to me that you're out of line.
b. {It / *This / *That} is raining.
c. {It / This / That} was Fred we just saw.
d. {It / This / That} is completely beside the point.

The 'it' in (75a) is an expletive form by any light, whereas the 'it' in (75d) is obviously referential, and while the latter alternates with the demonstratives 'this' and 'that', the

[18] See e.g. Bolinger (1972), Gundel (1977), Borkin (1984), Hedberg (2000).

former does not, presumably because demonstrative pronouns are always referential. The key observation is that, while ambient 'it' behaves like an expletive, the cleft pronoun patterns not with expletive but rather with referential 'it'. Similar observations have been made in other languages (Gundel 1977, Hedberg 2000).

It turns out, therefore, that the presuppositions generally attributed to *it*-clefts have an internal structure similar to the one we have ascribed to the focus particle 'too'. There are two differences though. First, whereas the descriptively attenuate element in the presupposition of 'too' is covert, the corresponding element in the presupposition of a cleft sentence surfaces as a personal pronoun. Secondly, the presupposition triggered by a cleft pronoun is not quite like the presuppositions that come with 'normal' uses of pronominals:

(76) a. {It / *He} was Wilbur who pressed the button.
b. Guess who I saw at the swimming pool? {It / *He} was Alfred Tarski!

As shown by (76a) cleft pronouns have to be neuter, and the same holds for pronominal subjects of copula sentences like (76b). The reason for this, apparently, is that both types of sentences have an identifying function (cf. Bosch 1983).

Regardless what a full-fledged analysis of *it*-clefts is going to look like, the foregoing observations suffice to conclude that there is a difference after all between the cleft sentence in (71a) and the corresponding focus construction in (71b): the former contains an anaphoric pronoun whereas the latter does not, and it is for this reason, presumably, that the cleft presupposition is so difficult to accommodate. The situation is thus analogous to the one we observed with 'too'. Such differences as there are between *it*-clefts and the corresponding focus constructions do not undercut but rather confirm the central tenet of this paper.

References

Asher, N. and A. Lascarides, 1998: The semantics and pragmatics of presupposition. *Journal of Semantics* 15: 239-300.

Atlas, J. 1993: The importance of being 'only': testing the neo-Gricean versus neo-entailment paradigms. *Journal of Semantics* 10: 301-318.

Beaver, D. 1997: Presupposition. In: J. van Benthem and A. ter Meulen (eds.), *Handbook of Logic and Language*. Elsevier, Amsterdam. Pp. 939-1008.

Beaver, D. 2001: *Presupposition and Assertion in Dynamic Semantics*. CSLI Publications, Stanford.

Beaver, D.I. and B. Clark, to appear: 'Always' and 'only': why not all focus sensitive operators are alike. Forthcoming in *Natural Language Semantics*.

Blutner, R. 2000: Some aspects of optimality in natural language interpretation. *Journal of Semantics* 17: 189-216.

Bolinger, D. 1977: A look at equations and cleft sentences. In: E. Firchow (ed.), *Studies for Einar Haugen*. Mouton, The Hague. Pp. 96-114.

Bolinger, D. 1989: *Intonation and its Uses*. Edward Arnold, London.

Borkin, A. 1984: *Problems in Form and Function*. Ablex, Norwood, New Jersey.

Bos, J. 1999: The treatment of focusing particles in underspecified discourse representations. In: P. Bosch and R. van der Sandt (eds.), *Focus: Linguistic, Cognitive, and Computational Perspectives*. Cambridge University Press. Pp. 121-141.

Bosch, P. 1983: *Agreement and Anaphora*. Academic Press, London.

Corblin, F. 1991: Presupposition and discourse context. Ms., CNRS, Paris.

de Jong, F. and H. Verkuyl, 1984: Generalized quantifiers: the properness of their strength. In: J. van Benthem and A. ter Meulen (eds.), *Generalized Quantifiers in Natural Language*. Foris, Dordrecht. Pp. 21-43.

Delin, J. 1992: Properties of *it*-cleft presuppositions. *Journal of Semantics* 9: 289-306.

Dryer, M. 1996: Focus, pragmatic presupposition, and activated propositions. *Journal of Pragmatics* 26: 475-523.

Fauconnier, G. 1985: *Mental Spaces*. MIT Press, Cambridge, Mass.

Geach, P. 1962: *Reference and Generality*. Cornell University Press, Ithaca.

Geurts B. 1996: Local satisfaction guaranteed: a presupposition theory and its problems. *Linguistics and Philosophy* 19: 259-294.

Geurts, B. 1997: Good news about the description theory of names. *Journal of Semantics* 14: 319-348.

Geurts, B. 1999: *Presuppositions and Pronouns*. Elsevier, Oxford.

Geurts, B. 2003: Existential import. Ms., University of Nijmegen.

Geurts, B. and R. van der Sandt 1997: Presuppositions and backgrounds. *Proceedings of the 11th Amsterdam Colloquium*. University of Amsterdam. Pp. 37-42.

Geurts, B. and R. van der Sandt, 1999: Domain restriction. In: P. Bosch and R. van der Sandt (eds.), *Focus: Linguistic, Cognitive, and Computational Perspectives*. Cambridge University Press. Pp. 268-292.

Geurts, B. and E. Maier 2003: Layered DRT. Ms., University of Nijmegen.

Gundel, J.K. 1977: Where do cleft sentences come from? *Language* 53: 543-559.

Gussenhoven, C. 1984: *On the Grammar and Semantics of Sentence Accents*. Foris, Dordrecht.

Hedberg, N. 2000: The referential status of clefts. *Language* 76: 891-920.

Hart, H.L.A. 1951: A logician's fairy tale. *The Philosophical Review* 60: 198-212.

Heim, I. 1983: On the projection problem for presuppositions. *WCCFL* 2: 114-126.

Heim, I. 1992: Presupposition and the semantics of attitude verbs. *Journal of Semantics* 9: 183-221.

Horn, L.R. 1969: A presuppositional analysis of of 'only' and 'even'. *Papers from the Fifth Regional Meeting of the Chicago Linguistics Society*: 98-107.

Horn, L.R. 1996: Exclusive company: 'only' and the dynamics of vertical inference. *Journal of Semantics* 13: 1-40.

Jackendoff, R. 1972: *Semantic Interpretation in Generative Grammar*. MIT Press, Cambridge, Mass.

Kamp. H. 2001: Computation and justification of presuppositions. In: M. Bras and L. Vieu (eds.), *Semantics and Pragmatics of Discourse and Dialogue: Experimenting with Current Theories*. Elsevier, Amsterdam.

Kamp, H. and U. Reyle 1993: *From Discourse to Logic*. Kluwer, Dordrecht.

Karttunen, L. 1974: Presupposition and linguistic context. *Theoretical Linguistics* 1: 181-194.

Karttunen, L. and S. Peters, 1979: Conventional implicature. In: C.-K. Oh and D. Dinneen (eds.): *Syntax and Semantics 11: Presupposition*. Academic Press, New York. Pp. 1-56.

Krahmer, E. 1998: *Presupposition and Anaphora*. CSLI Publications, Stanford.

Krahmer, E. and R. Muskens 1995: Negation and disjunction in discourse representation theory. *Journal of Semantics* 12: 357-376.

Krahmer, E. and K. van Deemter 1998: On the interpretation of anaphoric noun phrases: Towards a full understanding of partial matches. *Journal of Semantics* 15: 355-392.

Kratzer, A. 1989: An investigation of the lumps of thought. *Linguistics and Philosophy* 12: 607-653.

Krifka, M. 1991: A framework for focus-sensitive quantification. *SALT* 2: 215-236.

Krifka, M. 1999: At least some determiners aren't determiners. In K. Turner (ed.), *The Semantics/Pragmatics Interface from Different Points of View*. Elsevier, Oxford. Pp. 257-291.

Krifka, M. 2001: Non-novel indefinites in adverbial quantification. In C. Condoravdi and G. Renardel de Lavalette, *Logical Perspectives on Language and Information*. CSLI Publications, Stanford. Pp. 1-40.

Kripke, S. ms.: Remarks on the formulation of the projection problem. Manuscript, Princeton University.

Lappin, S. and T. Reinhart 1988: Presuppositional effects of strong determiners: a processing account. *Linguistics* 26: 1021-1037.

Lewis, D. 1979: Scorekeeping in a language game. *Journal of Philosophical Logic* 8: 339-59.

Löbner, S. 1986: Quantification as a major module of natural language semantics. In: J. Groenendijk, D. de Jongh, and M. Stokhof (eds.), *Studies in Discourse Representation Theory and the Theory of Generalized Quantifiers*. Foris, Dordrecht.

McCawley, J. 1993: *Everything that Linguists have Always Wanted to Know about Logic but were Ashamed to Ask* (2nd edition). University of Chicago Press.

Prince, E.F. 1978: A comparison of *wh*-clefts and *it*-clefts in discourse. *Language* 54: 883-906.

Quine, W.V.O. 1960: *Word and Object*. MIT Press, Cambridge., Mass.

Rochemont, M. 1986: *Focus in Generative Grammar*. John Benjamins, Amsterdam.

Rooth, M. 1987: Noun phrase interpretation in Montague grammar, file change semantics, and situation semantics. In: P. G¨rdenfors (ed.), *Generalized Quantifiers: Linguistic and Logical Approaches*. Reidel, Dordrecht. Pp. 237-268.

Rooth, M. 1992: A theory of focus interpretation. *Natural Language Semantics* 1: 75-116

Rooth, M. 1995: Indefinites, adverbs of quantification and focus semantics. In G. Carlson and J. Pelletier (eds.) *The Generic Book*. University of Chicago Press, Chicago.

Rooth, M. 1996: Focus. In: S. Lappin (ed.), *The Handbook of Contemporary Semantic Theory*. Blackwell, Oxford. Pp. 271-297

Rooth, M. 1999: Association with focus or association with presupposition? In: P. Bosch and R. van der Sandt (eds.), *Focus: Linguistic, Cognitive, and Computational Perspectives*. Cambridge University Press. Pp. 232-244.

Spenader, J. 2002: *Presuppositions in Spoken Discourse*. PhD Thesis, University of Stockholm.

Stalnaker 1974: Pragmatic presuppositions. In: M. Munitz and P. Unger (eds.) *Semantics and Philosophy*. New York University Press. Pp. 197-214.

Strawson, P.F. 1950: On referring. *Mind* 59: 320-344.

Strawson, P.F. 1952: *Introduction to Logical Theory*. Methuen, London.

Suetonius, 1918: *De Vita Caesarum*. In: J.C. Rolfe (ed.), *Suetonius*. Harvard University Press, Cambridge Mass.

van Deemter, K. 1994: What's new. A semantic perspective on sentence accent. *Journal of Semantics* 11: 1-31.

van der Sandt, R. 1989: Presupposition and discourse structure. In: R. Bartsch, J. van Benthem, and P. van Emde Boas (eds.), *Semantics and Contextual Expresssion*. Foris, Dordrecht. Pp. 267-294.

van der Sandt, R. 1992: Presupposition projection as anaphora resolution. *Journal of Semantics* 9: 333-377.

van der Sandt, R., to appear: Pragmatic strategies. In R. Bäuerle, U. Reyle, and T. Zimmerman (eds.), *Presuppositions and Discourse*. Elsevier, Oxford.

van der Sandt, R. and B. Geurts 1991: Presupposition, anaphora, and lexical content. In: O. Herzog and C.-R. Rollinger (eds.), *Text Understanding in LILOG*. Springer-Verlag, Berlin. Pp. 259-296.

van der Sandt, R. and B. Geurts 2001: Too. Proceedings of the 13th Amsterdam Colloquium. University of Amsterdam.

van Rooy, R. 1997: *Attitudes and changing contexts*. Doctoral dissertation, University of Stuttgart.

von Fintel, K. 1994: *Restrictions on Quantifier Domains*. PhD Thesis, University of Massachusets, Amherst.

Zeevat, H. 1992: Presupposition and accommodation in update semantics. *Journal of Semantics* 9: 379-412.

Zeevat, H. 2002: Explaining presupposition triggers. In: K. van Deemter and R. Kibble (eds.), Information Sharing: Reference and Presupposition in Language Generation and Interpretation. CSLI, Stanford. Pp. 61-87.