

Presuppositions and backgrounds

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Focusing divides the content of a sentence, as uttered on a given occasion, into two parts: focus and background. E.g.,

- (1) [Fred]_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 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. We believe that this is presupposed, and that this presupposition is induced by the focus/background division. More generally, we want to consider the hypothesis that the following principle holds:

- (2) *The Background/Presupposition Rule (BPR)*

Whenever φ is backgrounded, the presupposition is triggered that φ^* holds, where φ^* is the existential instantiation of φ .

Although this particular formulation is our own, the BPR is not exactly new; it is very much in the spirit of Jackendoff (1972), for example. In more recent times, very few authors have endorsed anything like the BPR, and we concede that, prima facie at least, the principle has its problems. However, in this paper we want to focus on the merits of the BPR, because it seems to us that its explanatory potential is often underestimated.

The main point that we want to argue for in this paper is the following. There is a whole range of focusing phenomena that either have been neglected in the literature or have been explained with the help of ad hoc principles. The BPR allows us to explain all of these phenomena in terms of presupposition projection.

The presupposition theory we adopt is the one proposed by van der Sandt (1992); it is an extension of DRT. The main tenet of the ‘binding theory’ of presupposition projection, as we call it, is that presuppositions are the kind of entities that want to be bound, just as anaphors want to be bound. As a matter of fact, according to the binding theory anaphors *are* presuppositional expressions. The only difference between anaphors and most (other) varieties of presupposition is that the former must be bound to a given antecedent whereas the latter often can be interpreted by way of accommodation. In general, if a presupposition cannot be bound, a suitable antecedent will be accommodated, i.e. an antecedent will be set up in some position which is accessible from the DRS in which the presupposition was triggered. Accommodation is subject to a number of constraints: accommodation must yield a coherent interpretation and by default a presupposition will be accommodated as closely to the main DRS as is possible while maintaining coherence, i.e. global accommodation is preferred to local accommodation.

Projection

If the BPR is correct, then focusing should give rise to the projection behaviour that is the hallmark of presuppositions. This turns out to be the case, as the following observations illustrate:

- (3)
- a. If [Fred]_f robbed the bank, then Barney helped him.
 - b. If Barney wasn't in town, then [Fred]_f robbed the bank.
 - c. If anybody robbed the bank, then [Fred]_f robbed the bank.

While (3a) and (3b) would normally imply that someone robbed the bank, (3c) would not imply this. Hence this implication behaves exactly as the presupposition triggered by, e.g., a factive verb would behave. Cf.:

- (4)
- a. If Fred knows that someone robbed the bank, then he will assume that Barney did it.
 - b. If he has seen the newspapers, then Fred knows that someone robbed the bank.
 - c. If someone robbed the bank, then Fred knows that someone robbed the bank.

While (4a) and (4b) would normally imply that someone robbed the bank, (4c) would not imply this. The pattern is exactly the same as in (3), and since it is widely accepted that in this case an analysis in presuppositional terms is called for, the same should hold for (3).

In conjunction with the binding theory, the BPR accounts for the data in (3) as follows. First, consider (3c). We assume that the grammar associates the following DRS with this sentence (ignoring all irrelevant details):

- (5) [: [u: u robbed the bank] \Rightarrow [: Fred robbed the bank]]

In view of the focus/background division of the consequent of (3c), the BPR entails that in (5) the presupposition is triggered that someone stole the bank, which we represent as follows:

- (6) [: [u: u robbed the bank] \Rightarrow [v: v robbed the bank, Fred robbed the bank]]

The binding theory predicts that this presupposition prefers to be bound, and as it can be bound in the antecedent of the conditional, we obtain the following reading for this sentence:

- (7) [: [u, v: u robbed the bank, v robbed the bank, v = u] \Rightarrow [: Fred robbed the bank]]

Thus the presupposition that someone robbed the bank is 'absorbed' in the antecedent of the conditional. In (3a) and (3b), on the other hand, this presupposition cannot be bound, and therefore it must be accommodated. The binding theory predicts that, in such cases, global accommodation is preferred to local accommodation, and we obtain the following readings for (3a) and (3b), respectively:

- (7)
- a. [v: v robbed the bank, [: Fred robbed the bank] \Rightarrow [: Barney helped Fred]]
 - b. [v: v robbed the bank, [: Barney wasn't in town] \Rightarrow [: Fred robbed the bank]]

To sum up: the existential inferences licensed by focusing exhibit the projection behaviour that is typical of presuppositions, and the BPR explains this.

‘Only’

Although ‘only’ is a controversial word, the controversy is not about the information that sentences with ‘only’ convey. Practically everybody would agree, e.g., that (9) conveys the information that Muriel voted for Hubert and that apart from Muriel nobody else voted for Hubert:

(9) Only Muriel voted for Hubert.

The main issue is what parts, if any, of the information conveyed by (9) are entailed, presupposed, implicated, and so on. If we adopt the BPR and the binding theory, however, we can make do with a minimal semantics for ‘only’ (in fact, it is just the semantics proposed by Geach 1962): it suffices to specify that ‘only $a \varphi$ ’ means that it is not so that someone else than a has the property φ . Thus the ‘conventional meaning’ of (9) is the following:

(10) [: $\neg[u: u \text{ voted for Hubert}, u \neq \text{Muriel}]$]

As the grammar of ‘only’ requires that ‘Muriel’ is the focus, the semantic correlate of ‘___ voted for Hubert’ is background information, and the BPR implies that the corresponding presupposition is triggered in the scope of the negation operator, as shown in (11a):

(11) a. [: $\neg[u, \underline{v: v \text{ voted for Hubert}}, u \text{ voted for Hubert}, u \neq \text{Muriel}]$]
 b. [$v: v \text{ voted for Hubert}, \neg[u: u \text{ voted for Hubert}, u \neq \text{Muriel}]$]

The binding theory predicts that, in the absence of a suitable antecedent, this presupposition is preferably accommodated in the main DRS. Hence the default interpretation of (9) should be (11b), which is correct.

If this analysis is on the right track, then ‘only $a \varphi$ ’ gives rise to the presupposition that there is an x such that $\varphi(x)$, but this presupposition is *not* triggered by the lexical content of ‘only’: its source is the focus/background division of the sentence (which in its turn is constrained by the grammar of ‘only’).

In (9) the presupposition 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. E.g.,

(12) a. Only Rumpelstiltskin may kiss me.
 b. [: $\neg[u, \underline{v: v \text{ may kiss the speaker}}, u \text{ may kiss the speaker}, u \neq \text{Rumpelstiltskin}]$]
 c. [$v: v \text{ may kiss the speaker}, \neg[u: u \text{ may kiss the speaker}, u \neq \text{Rumpelstiltskin}]$]

In a context in which it is taken for granted that there is no such person as Rumpelstiltskin, (12a) is a way of conveying that *nobody* is allowed to kiss the speaker. This reading comes about as follows. The semantic representation of (12a) is of course

analogous to that of (9), and after the BPR has applied we have (12b), which mirrors (11a). Suppose now that, as in the previous example, this presupposition is accommodated globally, as shown in (12c). Given that it is part of the common ground that there is no such person as Rumpelstiltskin, this reading would be inconsistent, and therefore the hearer decides to accommodate the presupposition locally. So (12b) represents the final interpretation of (12a).

Our analysis of the following example is along the same lines:

(13) Only Kim can pass the test, and it's possible even she can't. (Horn 1996)

Global accommodation of the presupposition that someone can pass the test would cause a conflict with the second half of this statement, and therefore the presupposition is accommodated locally.

Domain restriction

It is a well-established fact that the focus/background division within a quantifier's nuclear scope affects the interpretation of the quantificational domain. Roughly speaking: backgrounded material in the nuclear scope is interpreted as part of the quantifier's restrictor, while focused information remains part of the nuclear scope. Thus the most likely interpretation of (14a) is (14b):

- (14) a. Fred always drinks [milk]_f.
 b. Always, if Fred drinks something, he drinks milk.

The BPR accounts for this as follows. Let us assume that adverbial quantifiers range over events (other accounts of adverbial quantification could be accommodated, too). Then (14a) is represented as follows:

(15) [: [e:]⟨all e⟩[: Fred drinks milk in e]]

Since in (14a) 'milk' is focused, and the remaining material in the scope of 'always' is backgrounded, the BPR predicts that the following presupposition is triggered:

(16) [: [e:]⟨all e⟩[u: Fred drinks u in e, Fred drinks milk in e]]

Since this presupposition cannot be bound, it must be accommodated, but in this case global accommodation is not an option, because the presupposition contains a reference marker that is introduced in the restrictor of the universal quantifier. Since the general constraint is that accommodation in the least embedded DRS is preferred, it follows that the presupposition must be accommodated in the restrictor of the quantifier, and thus we obtain the following reading for (14a):

(17) [: [e, u: Fred drinks u in e]⟨all e⟩[: Fred drinks milk in e]]

Note, again, that this result is obtained without the help of any special rules of principles: it follows directly from the BPR and the binding theory. (For further discussion of this analysis, as well as a more refined treatment of quantificational phenomena, see Geurts and van der Sandt, to appear; see Beaver (1995) for an analysis which relates domain restriction in quantificational constructions to the notion of discourse topic).

Negation

Whenever focusing appears to affect the interpretation of a given expression or construction, there is a tendency in the more recent literature to infer that some form of quantification must be involved. For instance, in an attempt to explain the fact that the interpretation of negation is sensitive to focus, Kratzer (1989) proposes to analyse negation as quantification. The following pair of examples is Kratzer's:

- (18) a. Paula isn't registered in [Paris]_f.
b. [Paula]_f isn't registered in Paris.

(18a) and (18b) have different interpretations: (18a) implies that Paula is registered somewhere, and (18b) implies that someone is registered in Paris. Kratzer (1989) observes that such inferences 'are typical for certain quantifier constructions', and argues on this basis that negation is a form of quantification, too, which is to say that negation has a quantificational domain and a nuclear scope, just as 'all' or 'most', for example. This conclusion is easily avoided once it is realised that the inferences observed in (18) are *not* peculiar to quantifier constructions but conform to the much more general principles of presupposition projection: if we adopt the BPR, these observations are predicted by the binding theory without further ado (indeed, they should be predicted by any projection theory worth its salt).

In (18a, b) the presuppositions triggered via the BPR are accommodated globally. The following example illustrate that such presuppositions may be accommodated locally, too:

- (19) a. [Fred]_f didn't rob the bank.
b. I'm not at all convinced that the bank has been robbed, but (I am certain that) [Fred]_f didn't rob the bank.

In the absence of contrary evidence, the default interpretation of (19a) is analogous to that of (18b). But in the context of (19b), there is evidence that the speaker does not assume that someone robbed the bank, and therefore this presupposition will remain within the scope of the negation operator. (For further discussion of the interaction between presuppositional expressions and negation, see Geurts, to appear).

Counterfactuals

As Dretske (1972) was the first to point out, the interpretation of counterfactuals (and certain related constructions) is focus sensitive. (20a, b) are Dretske's examples:

- (20) a. If Clyde hadn't married [Bertha]_f, he would not have been eligible for the inheritance.
b. If Clyde hadn't [married]_f Bertha, he would not have been eligible for the inheritance.

Dretske maintains that these sentences have different truth conditions. We are not so sure about this, but agree that there are contexts in which one of these sentences would be true

and the other grossly inappropriate, or vice versa. In any event, this difference is explained by the BPR. Modulo focusing, (20a, b) can both be represented as in (21), where '>' is, say, Lewis's (1973) conditional necessity operator transposed into DRT:

(21) [: [: ¬[: Clyde married Bertha]] > [: Clyde is ineligible for the inheritance]]

When focusing is taken into account, the interpretations of (20a) and (20b) will diverge, because different presuppositions are triggered according to the BPR. In both cases, the binding theory predicts that the presupposition in question is accommodated in the main DRS, and thus the resulting interpretations are (22a) and (22b), respectively:

- (22) a. [u: Clyde married u, [: ¬[: Clyde married Bertha]] > [: Clyde is ineligible for the inheritance]]
 b. [v: Clyde v'd Bertha, [: ¬[: Clyde married Bertha]] > [: Clyde is ineligible for the inheritance]]

It is evident that these DRSs have different truth conditions, and Dretske's observation that (20a) and (20b) have different interpretations (in a sufficiently loose sense of 'interpretation') is accounted for. In Dretske's scenario, Clyde is a dedicated bachelor, who wouldn't consider marrying anyone but Bertha, because she lives abroad eleven months a year. In this situation, the reading represented by (22b) is appropriate, but the one represented by (22a) is not, because it presupposes, in effect, that Clyde would have married no matter what.

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