

Chapter 7
Information Structure and Presupposition

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Abstract

This article surveys and discusses the core points of contact between notions of information structure and notions of presupposition. Section 1 is devoted to the ‘weak’ presuppositional semantics for focus developed by Mats Rooth, describing its properties with regard to verification and accommodation and showing that it can successfully account for a wide range of phenomena. Section 2 examines the stronger thesis that focus-background structures give rise to existential presuppositions, and finds the counterarguments that have been raised to carry considerable weight. Section 3 looks into the relationship between Givenness and run-of-the-mill presuppositions, finding that this relationship is looser than might be expected, mainly because a presupposition may be in need of focus marking instead of givenness marking.

Keywords Presupposition · Focus · Background · Givenness

7.1 Introduction

Presupposition is, like information structure itself, a many-faceted notion. Therefore, before addressing the areas where the two notions interconnect, it is useful to briefly survey some ways in which presupposition is conceived.¹

Presupposition is (Beaver and Geurts 2011)

the phenomenon whereby speakers mark linguistically the information that is presupposed or taken for granted, rather than being part of the main propositional content of a speech act.

This linguistic marking is done with presupposition *triggers*, forming a large and varied class; the ones of special concern in the present article are, first, prosodic *focus marking* (sections 7.2 and 7.3), second, *additive markers* like *too* (sections 7.2, 7.3, and 7.4), and third, *clefts* and *factives* (section 7.4).

Classically, presuppositions have been considered as conditions that the point of evaluation must meet for the sentences that carry them to be true or false. For the phenomena at issue in this article, however, they are more appropriately, in accordance with the dominant picture today, regarded as conditions that the context, or the Common Ground, must meet in order to be updated with the sentence. More specifically, the view where the context is not only to entail the presupposition but also to provide antecedents for referents in it, as most clearly expressed in Discourse Representation Theory ('presupposition as anaphora', van der Sandt 1992), is particularly relevant. In a looser sense of the term ('pragmatic presuppositions', Stalnaker 1974), a presupposition associated with a sentence is something a speaker of the sentence will usually presuppose, i.e., assume to be in the Common Ground; this notion has some relevance for the issues discussed in section 7.3.

Three main areas can be identified where notions of presupposition and notions of information structure interlock:

1. Arguably the most influential theory of *focus* interpretation, Rooth's Alternative semantics, is a theory which ascribes a presupposition to a focus operator.
2. The *background* has traditionally been viewed as a presupposition, and this view has had a recent revival.
3. As both information structure and lexically or syntactically triggered presuppositions are sensitive to *discourse structure*, certain correlations can be expected to exist between these two types of phenomena.

¹See, e.g., Beaver and Geurts (2012) for a much more thorough description of the field.

These three areas are interwoven; in particular, there is a tension between the focus presupposition in the sense of 1 and the background presupposition in the sense of 2. A section will be devoted to each area: 7.2, 7.3, and 7.4.

7.2 The presupposition in Alternative semantics

The most successful understanding of focus, according to Krifka (2008: 247), is captured by the central claim of Alternative semantics (Rooth 1992): focus indicates the presence of alternatives that are relevant for the interpretation. In the theory, this takes the form that focus introduces a *presupposition* about the presence of alternatives. – The presuppositionality of focus under this theory is rarely focused on; this section surveys the distinctive features of the focus presupposition and its ability to account for various phenomena, such as question-answer congruence, anaphoricity, and bridging inferences.

7.2.1 Focus semantic values and the \sim operator

Alternative semantics has two central components (cf. Rooth 1992: 95):

1. a two-dimensional semantics defining *focus semantic values* with reference to the focus feature F and ordinary semantic values,
2. the semantics of the covert *focus interpretation operator* \sim , introduced in Logical Form.

Semantic composition proceeds at two levels: ordinary level and focus level. The ordinary semantic value of an expression α is conventionally notated as $\llbracket \alpha \rrbracket^o$, while its focus semantic value is conventionally notated as $\llbracket \alpha \rrbracket^f$. Informally, the focus semantic value comes from the ordinary semantic value by forming the set of semantic values where some alternative is substituted for the value of the focused phrase.² For example, if the ordinary semantic value of (1a) is (1b), its focus semantic value is (1c), a set of propositions.

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|-----|----|---|---------------------------------------|
| (1) | a. | she ₁ takes it ₂ with [MILK] _F | |
| | b. | $\lambda w \text{ take}_w(g(2), \text{milk}, g(1))$ | (= $\llbracket (1a) \rrbracket^o g$) |
| | c. | $\lambda p \exists Q p = \lambda w \text{ take}_w(g(2), Q, g(1))$ | (= $\llbracket (1a) \rrbracket^f g$) |

1 and 2 are referential indices and g is the contextual variable assignment. Assume that the indexed focus interpretation operator \sim adjoins to (1a):

- (1) d. $\llbracket \text{she}_1 \text{ takes it}_2 \text{ with [MILK]}_F \rrbracket \sim_3$

²For a more detailed description, see Rooth (this volume).

It is possible to give a direct definition of the meaning of \sim if the meaning of an expression α , $\llbracket \alpha \rrbracket$ *simpliciter*, is conceived as the pair $\langle \llbracket \alpha \rrbracket^o, \llbracket \alpha \rrbracket^f \rangle$.

$$(2) \quad \llbracket \sim_i \rrbracket^g = \lambda\phi : g(i) \in \pi_2(\phi) . \langle \pi_1(\phi), \{\pi_1(\phi)\} \rangle$$

This means: the meaning of the \sim operator, indexed by the variable i , at g takes a complex semantic value ϕ , consisting of an ordinary semantic value and a focus semantic value, and returns that complex semantic value where the latter is replaced by the singleton set containing the former, – provided that the value assigned to i by g is a member of the focus semantic value. This proviso is a presupposition, here modelled as a definedness condition, in the notation of Heim and Kratzer (1998): $\lambda\phi : \text{PRESUPP. CONTENT.}$ ³

The meaning of (1d) results from applying the definiens of (2) for $i = 3$ to the pair consisting of (1b) and (1c) and abstracting over g , yielding a partial function from variable assignments to complex semantic values:

$$(3) \quad \begin{aligned} & \llbracket [\text{she}_1 \text{ takes it}_2 \text{ with } [\text{MILK}]_F] \sim_3 \rrbracket = \\ & \lambda g \llbracket \sim_3 \rrbracket^g (\langle \llbracket (1a) \rrbracket^o, \llbracket (1a) \rrbracket^f \rangle) = \\ & \lambda g : g(3) \in \lambda p \exists Q p = \lambda w \text{ take}_w(g(2), Q, g(1)) . \\ & \langle \lambda w \text{ take}_w(g(2), \text{milk}, g(1)), \{\lambda w \text{ take}_w(g(2), \text{milk}, g(1))\} \rangle \end{aligned}$$

The presupposition in (2) is in fact often represented in two versions, as a disjunction: $g(i)$ is a member \in or a subset \subseteq of the focus semantic value. This disjunction reflects an ambivalence in the theory; on the one hand, sometimes the contextually determined value of the free variable i appears to be a set of propositions, on the other hand, sometimes it appears to be simply a proposition. Thus in the context sketched in (4), a case of question-answer congruence, the value that can be assumed to be determined for i is a set of propositions: { that Mary takes her tea with milk, that she takes it with sugar, that she takes it with milk and sugar, that she takes it with nothing at all }, while in the context sketched in (5), it would rather seem that $g(i)$ is a proposition: that Mary takes her coffee with nothing in it.

$$(4) \quad \begin{aligned} & (- \text{ Does Mary take her tea with milk or sugar or both, or nothing?}) \\ & - \text{ She}_1 \text{ takes it}_2 \text{ with } [\text{MILK}]_F . \end{aligned}$$

$$(5) \quad (\text{ At home, Mary takes her coffee with nothing in it, but whenever she has coffee here in France,}) \text{ she}_1 \text{ takes it}_2 \text{ with } [\text{MILK}]_F .$$

³ $\llbracket \alpha \rrbracket^o$ can in principle be of any (intensional) type; \sim will mostly adjoin to a sentence, but it may also adjoin at a lower level, applying, e.g., to a ϕ where $\pi_1(\phi)$ is a property.

Alongside its core function of accounting for focus as an information structural phenomenon, Alternative semantics has been taken to provide a key to predicting the partition of a sentence into restrictor and scope of a quantificational adverb or the like. It has been assumed that (the union over) (some subset of) the focus semantic value restricts the domain of quantification by being accommodated into the restrictor. This application of the theory has met with criticism (see Cohen 2009 and references there). But the ‘quantificational’ role of focus is not an integral part of the theory; indeed, Rooth (1992: 108f.) takes care to point out that ‘focus effects’ must be seen as optional. Alternative semantics is primarily a theory of the *informational* role of focus, and it is primarily as such that it is a presuppositional theory.

7.2.2 Anaphoricity

(2) is a formulation of the meaning of focus in a static semantic framework. However, it is more adequate, and more in the spirit of Rooth (1992: 91f.), to give a formulation in a dynamic framework, e.g., that of Roberts (2003), where meanings are functions from contexts to contexts, conceived as pairs of sets of discourse referents and sets of pairs of worlds and assignments. This can better reflect the typically anaphoric nature of the presupposition: the subset or element of the focus semantic value is a *discourse antecedent*. (This also makes it possible to dispense with the index on the tilde operator.)

$$(6) \quad \llbracket \sim \rrbracket = \lambda\phi \\ < \lambda C : (\exists i \in \text{Dom}^C)(\forall \langle w, g \rangle \in \text{Sat}^C) g(i) \in \pi_2(\phi) . \pi_1(\phi)(C), \\ \{\pi_1(\phi)\} >$$

In words: the meaning of the focus interpretation operator maps a meaning ϕ containing an ordinary semantic value $\pi_1(\phi)$, now a function from contexts to contexts, and a focus semantic value $\pi_2(\phi)$, now a set of such functions, onto the meaning where the first member is the operation on contexts which is only defined if there is a discourse referent i in Dom^C that all assignments g ‘in’ Sat^C (the set of pairs of worlds and assignments that satisfy C) map to a member of $\pi_2(\phi)$ and which if defined returns what $\pi_1(\phi)$ maps C to, and where the second member is the singleton containing $\pi_1(\phi)$.⁴

⁴Note that – when, as usual, the \sim operator applies at a sentence level – $g(i)$ is strictly speaking no longer a proposition (or a set of propositions) but an operation on contexts (or a set of operations on contexts), since the focus semantic value is now a set of operations on contexts. For practical reasons, however, it will still be viewed and referred to as a (set of) proposition(s).

The focus presupposition is now an anaphoric presupposition, parallel to the presuppositions of, e.g., definite descriptions as described by van der Sandt (1992) and in later work in this tradition. There must be an accessible discourse referent which ‘is’ a member (or a subset) of the focus semantic value (under any assignment in the context). For a definite, by comparison, there must be an accessible discourse referent which ‘is’ a member of the meaning of the NP under any assignment and at any world in the context.

This feature of the Roothian theory of focus as a presupposition trigger is important because it predicts that focus is typically (or paradigmatically) sensitive to discourse structure in the concrete sense of previous utterances, such as the utterances of the bracketed material in (4) and (5). It has other welcome consequences, too, which will be discussed below.

Two properties set the presupposition introduced by focus apart from other anaphoric presuppositions, e.g., that introduced by a definite article. First, a proposition (set) type discourse referent is assignment-independent, and thus so is the presupposition: any such referent k in Dom^C ‘is’ a member (or a subset) of $\pi_2(\phi)$ under all g (and for all w) in Sat^C or under none. This constancy is spelt out in SDRT (Segmented Discourse Representation Theory, Asher 1993 and later work in this tradition), where proposition type discourse referents are *equated* with representations of clauses as substructures in a multi-layered, or segmented Discourse Representation Structure.

Second, accessibility is not a real issue at this level. As shown by Asher (1993: 225ff.), for general reasons of anaphora resolution, it must generally be possible to declare a global-level discourse referent for a proposition, no matter how deeply embedded it is; proposition-type discourse referents will thus always be accessible. The same goes for other abstract entities such as sets of propositions and properties.⁵ In (7a), the antecedent for the pronoun *it* in the second clause is arguably the proposition that you are a lawyer, and to enable this resolution, there must be a discourse referent for that proposition accessible. In (7b), this same discourse referent can serve as a target for the focus presupposition: the proposition that is its constant value is a member of the focus semantic value.

- (7) a. I noticed you are interested in becoming a lawyer.
 It would make your mother proud of you.
- b. I noticed you are interested in becoming a lawyer.
 [My best FRIEND]_F is a lawyer.

⁵In the same vein, Rooth (1992: 88) takes note: ‘The semantic value of any phrase β is a discourse object, available as an antecedent for free variables.’

Note, however, that this proposition is three times embedded, in particular, under the non-veridical predicate *interested*. It is not, therefore, entailed by the context. As in Dryer’s (1996) theory of ‘activated propositions’, it suffices that some certain proposition (set) is *present* in the context.

Not anything goes, though. We have seen some examples of how the focus presupposition can be verified; here is a case where it fails:

- (7) c. I noticed you are interested in becoming a lawyer.
 ??I am a [LAWyer]_F.

Some would say, with Kratzer (2004) (who raises the issue in connection with the stronger focus presupposition hypothesis discussed in section 7.3, but the point applies here as well), that this infelicity is not typical of presupposition failure, it is too mild and it certainly does not entail a truth value gap. But it is not untypical of the incoherence effects one gets when presuppositions like those triggered by *even* or *too* fail; cf. Glanzberg (2005), who argues that not ‘all presupposition failures are expression failures’.

The dynamic formulation (6) is weaker than the static formulation (2) in one key respect: what corresponds to the contextually determined value for the free variable in (2) is *some* previously introduced discourse referent. There are indications that the target for the focus presupposition must be salient and recent, in fact, even more than usual for an anaphoric presupposition. In the examples given so far, the antecedent was indeed quite local. One such indication will be considered more closely below (7.2.4).

7.2.3 Accommodation Effects

A hallmark of anaphoric presuppositions are so-called bridging inferences, or accommodation effects, observed and discussed by, inter alia, Clark 1975, Kripke 1991, and Kamp 1991 in connection with presupposition triggers like *the*, *again*, and *too*. If a presupposition is not quite verified in the context, we tend to build on what is there and accommodate the rest, often yielding a stronger inference than if the presupposition were accommodated *in toto*. That this pattern extends to focus presuppositions under Rooth’s theory serves to strengthen the case for that theory.

Thus both (8a) and (8b) license the (false) inference that Kressmann is a German winery; while in the first case, this is due to the presupposition of the additive *too*, in the second case it is solely due to the focus presupposition.

- (8) a. Mary brought a bottle of Kressmann Monopole. As it happened,
 Sue, too, brought a bottle of German white wine.

- b. It was lucky that Mary brought a bottle of Kressmann Monopole.
 [MOST]_F German white wines are [SWEET]_F .

For a constituent of the first clause to not just partially but fully meet the condition of expressing a member of the focus semantic value of the second clause, Kressmann Monopole must classify as an alternative to the determiner *most* as applying to German white wines; hence the inference. Note that the inference does not arise for reasons of discourse coherence: the minimally different case (8c), focusing the modifier instead of the determiner, licenses the (true) inference that Kressmann is *not* a German winery.⁶

- (8) c. It was lucky that Mary brought a bottle of Kressmann Monopole.
 Most [GERMAN]_F white wines are [SWEET]_F .

Lakoff's (1971) famous example (9a-b) fits smoothly into this picture.

- (9) a. Paul called Jim a Republican. Then he₁ [INSULTed]_F him₂.
 b. Paul called Jim a Republican. Then [HE₁]_F insulted [HIM₂]_F .

(9a) only requires us to accommodate that calling somebody a Republican is a (distinct) alternative to insulting that person.⁷ (9b), on the other hand, requires us to accommodate – and thus licenses the inference – that calling someone a Republican is (a way of) insulting that person, as this is the only way that the first sentence can count as expressing a member of the focus semantic value of the second; that HE₁ is now Jim and HIM₂ is now Paul is also necessary for the first clause to count as expressing a proposition of the form that some alternative to HE₁ insulted some alternative to HIM₂.

7.2.4 Locality of the Antecedent

Kamp and Bierwisch (2008) note an asymmetry between the presupposition introduced by focus and the one introduced by the adverb *again* regarding their domain of justification, understood as that portion of context that can or must display their targets. This asymmetry comes to light in a contrast like that between (10), specifically (10b), and (11).

- (10) (The first night, she cried for almost 30 minutes,
 [. . .] The next night, she slept through till about 5.30am!)

⁶These examples display two foci where the first can be called, and could alternatively be treated as, a *contrastive topic* (see Büring, this volume).

⁷The presupposed member of the focus semantic value [·]_F is required to be distinct from the ordinary semantic value [·]_° (Rooth 1992: 90; cf. also Zeevat 2004).

- a. The [NEXT]_F night, she slept through [aGAIN]_F,
waking up just after 6am.
 - b. #The [NEXT]_F night, she [slept THROUGH]_F again,
waking up just after 6am.
- (11) (Frankie was sleeping through but the other night he woke at 2am
– I tried everything else but he was hungry and wolfed down 8 oz.)
√The [NEXT]_F night he [slept THROUGH]_F again.

In (10a), both the focus presupposition and the presupposition of *again* are verified in the very last sentence, and the discourse is felicitous. But (10b), where the latter is again verified in the very last sentence but the former is only verified in the less immediate context, is infelicitous. This situation is reversed in (11), and this time, the discourse is again felicitous. Evidently, then, the focus presupposition is more in need of being justified locally, in the immediate context, than is a presupposition like that of *again*, though both are arguably anaphoric in nature.

Why this should be so is not evident. But an explanation may be at hand if the notion of an *antipresupposition* (Percus 2006) is taken into account.⁸ The basic idea is that any sentence with a presupposition competes with the corresponding sentence without that presupposition, which, if used instead, will impose the condition that the presupposition is not verified.

By this token, as far as focus presuppositions are concerned, (10b) will ‘antipresuppose’ what (10a) presupposes: that there is a proposition that some other night she slept through. So, while (10b) has its focus presupposition verified in the less immediate context, it has a focus antipresupposition, which should not be verified at all, verified in the immediate context. (11) has it the other way around: the presupposition is verified in the immediate context while an antipresupposition is verified in the less immediate context – which is evidently much to be preferred.

If now it can be assumed that the immediate context has a *prima facie* priority over the less immediate context, then verifying the presupposition in the former gives a double gain: not just that the presupposition is verified in the prime piece of context but also that no antipresupposition is verified there. This might explain why focus presuppositions are so narrowly focused on the immediate context.

What sets focus as a presupposition trigger apart from triggers like *again* in this regard is that for any focus structure, there is at least one alternative

⁸For a treatment of the antipresuppositions of focus in Alternative semantics, see Sæbø (2007).

focus structure introducing a different focus presupposition, thus any utterance will give rise to at least one focus antipresupposition; as for *again*, or any other lexical or syntactic presupposition trigger, only utterances without it give rise to a related antipresupposition, utterances with it do not. It can be assumed that this is what allows its domain of justification to be less local than that of focus, where any intervening sentence is a potential target for an antipresupposition.

7.3 The background presupposition hypothesis

‘Presupposition’ is often mentioned in the same breath as ‘background’. In the tradition dating back to Chomsky (1972) and Jackendoff (1972), the term presupposition is used as a label for the complement of focus. Mostly, it is used in a loose sense, without a claim that this presupposition behaves like *bona fide* presuppositions in regard to projection and justification. Once the label is taken seriously, to imply that the focus-background structure of an utterance gives rise to an existential presupposition (the ‘focus closure’) which should be entailed by the context, two opposite positions are found. On the one hand, the putative presupposition is argued to be too strong or too different from *bona fide* cases (e.g., Rochemont 1986: 41ff., Dryer 1996). On the other, in a relatively recent paper Geurts and van der Sandt (2004) explicitly defend the view, present in work by, *inter alia*, Atlas and Levinson (1981: 17), Levinson (1983: 183), and Gundel (1985: 97), that focus induces a presupposition in the form of the existential closure of the background.

7.3.1 The proposal by Geurts and van der Sandt

Geurts and van der Sandt (2004) defend what they call the null hypothesis, ‘which is that focus is systematically associated with presupposition along the following lines’:

(12) *The Background-Presupposition Rule* (BPR)

Whenever focusing gives rise to a background $\lambda x.\phi(x)$, there is a presupposition to the effect that $\lambda x.\phi(x)$ holds of some individual.

This presupposition is stronger than the focus presupposition in the theory reviewed in the last section, which is that there is a member or subset of the focus semantic value (present in the context). In the terms of that theory, the BPR presupposition *equals the union of* the focus semantic value, to be entailed by the context. Indeed, Geurts and van der Sandt (2004: 5) contend

that the predictions arising from Rooth’s theory tend to be too weak. In their view, a sentence like (13) ‘will normally be heard as implying that’ Paul does live in Paris. In a case like (14), the background ‘gives rise to the presupposition that’ someone did the dishes.

(13) Paul doesn’t live in the [SIXTH]_F arrondissement.

(14) [I]_F did the dishes.

The paper by Geurts and van der Sandt (GvdS) was accompanied by a series of critical papers, several of which took issue with the BPR in (12) for making too strong predictions, at least if taken in conjunction with the claim that the focus presupposition acts like a *bona fide* presupposition, as implied by this quote: ‘The main prediction that the BPR gives rise to . . . is that focusing should cause the projection behaviour that is characteristic of definite noun phrases, factive verbs, and the like’ (Geurts and van der Sandt 2004: 14). Some of these criticisms are reviewed below; see also Reich (2012), section 2.4.

7.3.2 Counterarguments I: Negation

As pointed out by Büring (2004: 67f.), to derive that Paul does live in Paris as a presupposition of (13) it is necessary to assume that the focusing that gives rise to the relevant background has narrow scope, applying below the negation. A background including the negation will trigger a presupposition to the effect that Paul doesn’t live in some arrondissement, a presupposition which is entailed by the descriptive content of the sentence.

If, on the other hand, the background does not include the negation, its existential closure, that Paul lives in some arrondissement, is predicted to project across that same negation, like a run-of-the-mill presupposition.

Büring goes on to point out a problem with this assumption. To counter the argument against precursors of the BPR based on examples like (15a), which should not presuppose that somebody did the dishes, GvdS suggest that this is really a case of so-called *verum focus* where just the negation is in focus, corresponding to (15b), where what is presupposed is that there is a polarity (position or negation) *p* such that *p*(someone did the dishes). Since this amounts to presupposing that someone or noone did the dishes, it is an innocuous, if (or exactly because) uninformative, presupposition.

(15) a. [Nobody]_F did the dishes.

b. [NO]_Fbody did the dishes.

But here, Büring notes, it is necessary to assume that the focusing that gives rise to the relevant background scopes *above* the negation.

It is not clear, though, that (13) shows the right focus structure for the intended reading of the sentence. von Stechow (1981: 113ff.) describes a parallel case as exhibiting two foci, corresponding to (16):⁹

(16) Paul does [NOT]_F live in the [SIXTH]_F arrondissement.

If this move is made, it may not be necessary to assume that the background presupposition is computed under the scope of the negation after all; the presupposition will be that there is a polarity *p* and a number *n* such that *p*(Paul lives in the *n*'th arrondissement). Although this is again a tautology as long as negation is among the possible values for *p*, it gives the intended reading once (as assumed by von Stechow) alternatives to polarities are required to be *distinct* (the notion of distinctness in connection with focus alternatives is discussed by Zeevat 2004).

This will again create problems for the treatment of sole polarity focus as in (15b), where it is essential that negation is among its own alternatives. So, it would seem that any way the desired inference is derived from (13)/(16) on the BPR, (15b) needs special treatment, whether in terms of the scope of focusing or of the domain of existential closure.

7.3.3 Counterarguments II: Rooth's examples

Rooth (1999: 241f.) argued that a presupposition like the one that was eventually proposed by GvdS is too strong in certain cases where focus has a discourse-contrastive function. He considers two examples, (17) and (18).

- (17) A: Did someone borrow my badminton racket?
B: I don't know. If [JOHN]_F borrowed it, you can forget about getting it back in one piece.
- (18) A: Did anyone win the football pool this week?
B: Probably not, because it's unlikely that [MARY]_F won it, and she's the only person who ever wins.

Rooth notes that if focus is supplemented by an *it*-cleft in (18), the response becomes infelicitous:

⁹von Stechow is careful not to call the inference that, here, Paul does live in Paris a presupposition; for him, the conjunction of the descriptive content of the sentence and its 'topic information' (= its focus closure) is an implicature.

- (18) C: #Probably not, because it's unlikely that it's [MARY]_F who won it, and she's the only person who ever wins.

This shows that the putative existential presupposition arising from focus is at any rate different in nature from the existential presupposition of clefts (the contrast cannot be due to the exhaustivity implication of the cleft, as only one person could have won the football pool anyway).

Both examples show that an existential presupposition fails to project out of a context (the conditional clause, the operator *unlikely*) that a normal presupposition should, and the cleft presupposition does, project out of: it is incompatible with the larger context but this does no harm.

Geurts and van der Sandt might respond to this objection by appealing to so-called *local accommodation*: the presupposition that someone borrowed it, arising in the conditional clause of (17), is accommodated in the same clause, resulting in the reading spelt out in (17C):

- (17) C: I don't know. If someone borrowed it and [JOHN]_F borrowed it, you can forget about getting it back in one piece.

But to this, Jäger (2004: 112) objects that 'a generalization has been missed here because [in (17)] intuitively the focus in B's answer is related to A's question, and this fact is not covered in a GvdS style explanation'. Indeed, an appeal to local accommodation would save an infelicitous discourse like (19) as well as a felicitous discourse like (17) or (18).

- (19) A: Did someone borrow my badminton racket?
B: #I don't know. If [JOHN]_F borrowed mine, I wouldn't expect getting it back in one piece.

7.3.4 Counterarguments III: Antecedent inaccessibility

Another way to interpret the data in (17) and (18) in GvdS's perspective is that the BPR presupposition has access to antecedent information that is inaccessible to other presuppositions, like those of clefts. In fact, GvdS argue that as long as presupposition and assertion do not share a discourse referent, there is no reason that the antecedent has to be accessible, and moreover, that their presupposition is not the only one that can access 'inaccessible' antecedents; Zeevat (2002) noted that under certain circumstances, that of *too* has this capacity (too):

- (20) (Harry may well stay in New York for dinner. /

Bill believes that Mary will eat in New York.)
√John is having dinner in New York too.

Now while this piece of discourse may not be judged incoherent, there are many cases where the putative background presupposition and that of *too* show different behaviors. (7b) (from section 7.2.2, repeated here as (21a), as compared to (21b)) is a case in point, as is (22a) as compared to (22b):

- (21) a. I noticed you are interested in becoming a lawyer.
[My best FRIEND]_F is a lawyer.
b. I noticed you are interested in becoming a lawyer.
[My best FRIEND]_F is a lawyer [TOO]_F.
- (22) a. Why would I want to go to the University of Texas?
[My FATHER-in-law]_F went there and wouldn't ...
b. Why would I want to go to the University of Texas?
[My FATHER-in-law]_F went there [TOO]_F and wouldn't ...

GvdS might counter this evidence by saying that the presupposition that somebody is a lawyer or went to the University of Texas does not target a part of the local context but the Common Ground, where this information is uncontroversial; by contrast, the *too* presupposition is more anaphoric. But this contradicts the fact that the second sentence of (21a) or (22a) is infelicitous 'out of the blue', with a Common Ground but without a local context. In sum, it seems that the ability of the *too* presupposition to access embedded antecedents is quite limited, and that the presupposition argued for by GvdS is rather special in so freely being able to do so.

7.3.5 The BPR as a default?

GvdS actually distinguish two versions, or construals, of their BPR:

On a strong construal . . . , backgrounds are invariably associated with presuppositions, while on a weak construal backgrounding generates presuppositions by default: . . . 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 . . . (2004: 3)

[W]e 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 . . . triggered only *ceteris paribus* . . . (2004: 37)

In the light of the foregoing discussion, it would seem that the weak version is the sensible one. This ties in with the Stalnakerian notion of presupposition

(Stalnaker 1974), which leaves it to the conversational participants whether the presupposition is actually presupposed. The background presupposition would be ‘contextually defeasible’ (Simons 2001), or ‘soft’ (Abusch 2002).

But if so, that is, if problematic cases like (17B), (18B), (21a), and (22a) are responded to by suspending the background presupposition, there being here ‘indicators to the contrary’, the question remains what can explain the fact that even in these cases there is something presupposed. In fact, something is presupposed which fits with the Roothian focus presupposition (cf. section 7.2). Conversely, from the perspective of that theory, the question arises what can explain the observed tendency for focus to be understood as if it were to convey the background presupposition.

Gawron (2004: 93) seeks to explain this tendency by asking how ‘propositional identity [= Roothian] presuppositions’ are typically bound.

And it seems a very reasonable answer is that they can be bound by asserted propositions, and that this always should be the first choice. [...] How should they be accommodated? And a reasonable answer is, they should be accommodated as asserted propositions whenever possible. (Gawron 2004: 95)

Thus if we hear (23), our first expectation is that a proposition that x took the letter for some alternative x to the butler is not just present in but entailed by the context, and if we hear it out of context, we accommodate that, so in effect we accommodate that someone took the letter.

(23) Maybe [the BUTler]_F took the letter.

This account of the lure of the BPR is rooted in the theory of Rooth, where the presupposition is that there is a (set of) proposition(s) with (a) focus alternative(s) present in the context, and it rests on the idea that being entailed by the context is the typical way of being present in the context.

A more general account is proposed by Abusch (2010), also on the basis of Alternative semantics: the meaning of focus may not directly involve an existential presupposition, but through the set of alternatives, it does create the potential for a general process to generate a defeasible presupposition. The ‘Default Constraint L’ is to apply to other ‘soft’ triggers as well, in particular, to *wh*- questions, as long as they induce sets of alternatives.

(24) *Default Constraint L*

If a sentence γ is uttered in a context with common ground c ,
and γ embeds a clause ψ which contributes an alternative set Q ,

then c is such that the corresponding local context d for ψ entails the disjunction of Q . (Abusch 2010: 66)

7.4 Presuppositions and IS: Correlations

Even if the ‘background inference of focus’ (the term used by Abrusán 2013 for the presupposition argued for by Geurts and van der Sandt 2004) is not a proper presupposition, we might expect there to be an indirect connection between the focus-background structure of a sentence and any proper presupposition the sentence does carry. Perhaps more accurately, there are likely to be correlations between Givenness (Rochemont, this volume) and presupposition. The reason is that both are sensitive to discourse structure: what is marked as given must be present in the immediate Common Ground (Krifka 2008: 262) and – in a certain sense – vice versa (Schwarzschild 1999: 155ff.), and a presupposition should be entailed by the Common Ground; some should even find discourse antecedents. Indeed, Simons, Tonhauser, Beaver, and Roberts (2011) subsume presupposition triggers, intonational backgrounding, and yet more under a single category of ‘not-at-issueness’. One would expect, then, a tendency for presuppositional parts of a sentence to be givenness marked (deaccented, say), and in particular, one would perhaps be surprised to see or hear a presupposition form a focus on its own.

Yet this is not uncommon, for two different reasons. One is the relative ease with which some presuppositions can introduce new information through accommodation (section 7.4.1).¹⁰ The other is that even when a presupposition is in fact entailed by the Common Ground, it is not necessarily present in the immediate Common Ground, at least not without alternatives along with it, in which case focus marking may override givenness marking (section 7.4.2). On the other hand, one does find that presuppositions are often givenness marked in the extreme form of being elided (section 7.4.3).

7.4.1 Negative evidence I: Accommodation

We would only expect presuppositions to correlate with givenness when they are actually *pre-supposed*, i.e., when they are verified in the sense of being entailed by the context. As several studies have shown, however, this is far from always the case for the presuppositions that (should) arise from, say, factive verbs or *it*-cleft constructions. For the latter, consider (25):

¹⁰Abbott (2000), for one, warns against identifying the dichotomy presupposed/asserted information with the dichotomy given/new information.

(25) It was Harry who taught me how to tango.

Steedman (1991: 276), referring to Delin (1989), comments:

If we compare the function of such a sentence used as an answer to the question *I know that Mary taught you the lambada, but who taught you how to tango?* with its use as an answer to *Why are you so fond of Harry?*, then it is clear . . . that such a presupposition may either be assumed or used to supply novel information In the latter case, the presupposition that somebody taught the speaker how to tango will typically be ‘accommodated’ Under these circumstances, the presupposition will typically be uttered with an H*LL% intonation, marking novel information.

Prince (1978) identified such cases as ‘informative presupposition’.

Spenader (2002), studying naturally occurring factive verbs in corpora, shows that factives are commonly used when the factive complement is not previously established to be true. Most of the time factive presuppositions have to be accommodated (whether ‘globally’ or ‘locally’). Beaver (2010) goes a step further and establishes a link between the projection of factive presuppositions and information structure, concluding that ‘the crucial factor determining projection behavior is . . . the choice between an accented or deaccented propositional complement.’ Spenader’s results, he writes, seem

much in accord with two observations I have made in this paper, both of which suggest a weakening of the generalization that factive complements are normally presupposed. First, even third person uses of factives do not imply that the speaker is taking the factive complement for granted. Second, for spoken utterances the presupposition only seems to fully kick in when the factive complement is deaccented. (Beaver 2010: 96)

The following pair of examples may serve to illustrate:

- (26) a. If they [disCOVER]_F she was doping, her records will be erased.
b. If they discover she [was DOPing]_F, her records will be erased.

In (26a) the presupposition projects but in (26b) it does not.¹¹

There is a moderate and a radical reading of Beaver’s conclusions about the interaction between presupposition and information structure. On the

¹¹As Beaver appears to concede, this may be an overgeneralization: a presuppositional reading may be available for (26b), at least if the factive verb is also stressed (2010: 94).

former, if the complement is not deaccented, that is a sign that the factive presupposition is not verified but must be accommodated (in (26b) locally); on the latter, the presupposition does not even ask to be verified or accommodated when the complement is not deaccented; it does not, as it were, get off the ground in the first place but forms part of the at-issue content. Whether and how this radical conclusion can be sustained is a question which will not be pursued here, but note that it would restore a parallel between givenness and presupposition which is otherwise broken: factive presuppositions are not solely triggered by the factive lexical items but also to some extent by the givenness structure of the utterances they appear in.

7.4.2 Negative evidence II: Focus marking instead

A presupposition can be verified in the sense of being entailed by the context and yet carry an accent (more exactly: that part of the utterance from which a part of the presupposition can be read off can carry an accent). The reason is that there may be reason to place (a part of) the presupposition in focus, and ‘focus accentuation overrides deaccentuation of given constituents, in the sense that focus has to be expressed by accent’ (Krifka 2008: 264).

While there can be different reasons for focusing a presupposition, one is to express a *contrast*.¹² Consider first a case of a factive verb, *regret*:

- (27) (A friend of mine had an abortion when she learned that her baby had no chance of living outside the womb. From what she’s said,) she [REGRETS]_F that [it HAPPENED]_F, but [NOT]_F that [she had the ABORTION]_F.

A version where either or both of the factive complements are deaccented would be deviant. This is due to the juxtaposition of the two complements, along with the juxtaposition of the positive with the negative attitude. Note how this contrast focus accentuation overrides a givenness deaccentuation: both the fact that it happened and the fact that she had the abortion are present in the immediate context, but that does not warrant deaccentuation. Givenness marking and presupposition clearly part ways at this point.

The presuppositions of so-called additive particles like *too* are generally taken to require discourse antecedents and to resist accommodation (see, e.g., Winterstein 2011), so here a parallel to givenness marking might seem particularly likely. And to be sure, in many cases, that part of the sentence that expresses a part of the presupposition is indeed deaccented, as in (28):

¹²See Repp, this volume.

- (28) (I've decided to spend some energy focusing on my love of baking by taking a cake decorating course. My sister-in-law Becca suggested that we take it together,) as [SHE]_F [TOO]_F loves baking.

Informally, *too* adds the presupposition that for some alternative α to the particle's 'associate' a , the sentence that comes from the 'host' sentence by replacing a by α is true. For a case like (28), this coincides with the presupposition that some member of the focus semantic value of the host sentence, distinct from its ordinary semantic value, is true: the associate *she* is the only constituent in focus in the host sentence, so the focus semantic value of this sentence is the set of propositions where some alternative is substituted for the value of this pronoun (the speaker's sister-in-law Becca).

But for various reasons – apart from accommodation – this is not always so. One reason has to do with locality: the presupposition may be verified in the context but not in the immediate context; not so recently as to even license deaccentuation. The following text fragment is an example of that.

- (29) (The Black Hills fill with 600.000 to 800.000 bikers. [...] Most were riding ... Harleys. [...] We also saw an interesting electric car. [...] Interesting and unusual rock formations The Badlands are just an hour from Sturgis, and) [HERE]_F [TOO]_F, we saw [plenty of BIKERS]_F.

The presupposition of *too* – that we saw plenty of bikers somewhere else – is verified, but the verifying piece of text is so far removed that the focus marking of the object is appropriate, as the ensuing focus presupposition is also verified – in between we saw something other than plenty of bikers.

7.4.3 Positive Evidence: Ellipsis and zero anaphora

Ellipsis and deletion can be seen as extreme forms of deaccentuation and thus as further means of marking constituents as given (Krifka 2008: 263): what is not expressed but still supposed to be understood must be retrievable from the immediate Common Ground content. Do presuppositions correlate with ellipsis and deletion in significant ways? They do.

For one thing, the presuppositions of additive particles can often not be determined from the utterances where the particles occur but must be recovered from the context – in fact, the very piece of context that serves to verify the presupposition. The 'host' sentence may consist in just the 'associate' – we have a case of 'stripping' then, or 'bare argument ellipsis' – or the associate plus a pro-verb (usually *do* in English) – VP ellipsis.

- (30) Met up with the girls yesterday; Mary too.
 (31) I love your tree. Mary does, too.

These two examples are indicative of a broader pattern whereby ellipsis is supported or even enabled by presuppositional particles.¹³

Secondly, presuppositions have been argued to be at the source of so-called zero argument anaphora (Sæbø 1996). The generalization is here that a zero argument has an anaphoric interpretation just in case it is involved in a presupposition triggered by the verb; and the explanation, set in DRT, rests on two assumptions: a discourse referent occurring in a presupposition is introduced in the presupposition, and a discourse referent introduced in a presupposition must (in the sense of van der Sandt 1992) be bound by a discourse antecedent. This gives the givenness effects observable in (32)–(34) and generally a species of ellipsis that can be called presupposition-driven.

- (32) George sometimes invited John and Paul to come over and play together, and his parents approved (*of it*).
 (33) The Abbey doesn't belong to Lady Severinge, and I don't fancy she will ever return (*to it*).
 (34) When George III died in 1820, Caroline became Queen Consort and returned to England, despite efforts to dissuade her (*from it*).

The verbs *approve*, *return*, and *dissuade* all trigger presuppositions that involve their optional – and here parenthesised – arguments. Specifically, *dissuade* triggers the presupposition that the direct object has been planning to do *P* (what the subject dissuades her from doing). The variable *P*, as part of the presupposition, is introduced in the presupposition if it is not syntactically bound, and that means that it must be discourse bound.

Thus the presuppositions of the verbs permit the arguments to remain covert but retain the anaphoricity of overt pronouns. Again, what we see is a pattern whereby lexical presuppositions correlate with, and indeed enable, givenness marking in its extreme form.

7.5 Conclusions

This article has surveyed and discussed the core points of contact between notions of information structure and notions of presupposition. Section 7.1 was devoted to the ‘weak’ presuppositional semantics for focus developed

¹³See, e.g., Winterstein (2011) on the role of additives.

by Rooth (1992), describing its properties with respect to verification and accommodation and showing that it can successfully account for a wide range of facts. Section 7.2 examined the stronger thesis, recently revived by Geurts and van der Sandt (2004), that focus-background structures give rise to existential presuppositions, and found the counterarguments that have been raised to carry considerable weight. Section 7.3, finally, looked into the relationship between Givenness and run-of-the-mill presuppositions, finding that this relationship is looser than might be expected, mainly because a presupposition may need focus marking instead of givenness marking.

Both lexical presupposition triggers and information structural markings impose conditions on the Common Ground. One property that distinguishes information structural conditions – be they presuppositions associated with focus, discussed in section 7.2, or (in a sense their mirror images) conditions associated with givenness marking, discussed in section 7.4 – from (other) presuppositions, however, is their sensitivity to the *immediate* Common Ground. As seen in 7.2.4, a focus presupposition should not be separated from its target by a piece of context that would be a target for an alternative focus presupposition; as seen in 7.4.2, presuppositions can have targets so far away that givenness marking is no longer licensed. So *locality* emerges as a prominent property of conditions on the Common Ground imposed by information structural markings *vis-à-vis* (other) presuppositions; this is an issue that future research may fruitfully seek to further examine and explain.

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