

Givenness and Locality

Michael Wagner
Cornell University

1. The Problem

Constituents that encode information that was made salient by prior context often remain unaccented. This paper presents evidence that in order for a constituent to be marked as given by deaccenting, it is not sufficient that it is given, it must be given *relative to something else*. In particular, I will argue that constituents have to be given *relative to their sister*. This first section outlines the problem that earlier approaches to givenness face: sometimes, but not always, it appears that the sister of a constituent is relevant in deciding whether it can be marked as given.

1.1. Marking Givenness

Consider a context in which the direct object is deaccented:

- (1) Mary sat at her desk. John walked in. What happened next?
 - a. # She kissed JOHN.
 - b. She KISSED John.

Context induces a deviation from the otherwise expected stress pattern. The last accent in (1b) falls on the verb, not on the direct object, as would be expected had there been no mention of John in the context. This paper focuses on cases of deaccentuation that change the ‘nuclear stress’, i.e. where the last pitch accent falls, and consequently I will only mark the last accent of a sentence by capitalization.¹

In recent years this phenomenon was often framed in terms of the notion ‘givenness’ or ‘anaphoric destressing’ (cf. Williams (1997), Schwarzschild (1999), Sauerland (2004)), Reinhart (2006)). In contrast to earlier approaches (e.g. Chomsky (1971), Jackendoff (1972) and Rooth (1992b)), which used the notion ‘focus’ to tackle contextual effects on prosody, in these approaches it is not the *focused* but the *given* constituent that introduces a special requirement on the context.²

This work benefited greatly from discussions with Karlos Arregi, Molly Diesing, Kai von Fintel, Jon Gajewski, Irene Heim, Ad Neeleman, Mats Rooth, Uli Sauerland, Lisa Selkirk, and comments by anonymous reviewers and the audiences at SALT and NELS, by audiences at the universities of Leipzig, Potsdam, Syracuse, and at MIT and UCL London in 2005, and by the participants of the seminar on prosody in Spring 2006 at Cornell University.

¹The reason for this limitation is that the data and judgements are more clear cut than in pre-nuclear environments, a discussion of which would require more space than is available here.

²Recent development of the so called ‘focus projection’ approach have incorporated conditions relating givenness and deaccentuation (Selkirk 1995, Büring to appear).

Sauerland (2004) proposes a presuppositional account to givenness marking. G-marking ‘John’ introduces the presupposition that the individual is part of a salient assignment function.³ E.g. marking ‘John’ as given in (1b) introduces the presupposition that ‘John’ is salient in the discourse:

$$(2) \quad \llbracket G \rrbracket = \lambda x^e. \exists i. g(i) = x : x$$

Sauerland’s G-operator is a special case of the presuppositional ‘ \sim ’-operator of Rooth (1992b). In the case where there is not F-marker in the scope of ‘ \sim ’, the presupposition introduced is similar that of Sauerland (2004). In the following example, since there is nothing marked as focus, the overt argument of \sim , ‘semantics’, must be entirely redundant with respect to the anaphoric element ‘8’, its second argument:

- (3) Rooth (1992a):
 We are supposed to take statistics and [semantics]₈ this term, but I don’t like [[semantics] \sim 8].

Presuppositions are requirements that certain elements impose on the context. I will assume that if these requirements are not met, then a sentence containing the element remains without truth value. The presuppositional approach offers an explanation why givenness marking is obligatory when possible. This is ensured by the principle ‘maximize presupposition’ (Heim 1991). The same applies equally to other presuppositional approaches, e.g. Rooth (1992b).⁴

Sauerland (2004) extends G to the deaccentuation of predicates. Consider a key example from the recent literature is (4) (cf. Schwarzschild 1999: 146):

- (4) John drove Mary’s red convertible. What did he drive before that?
 a. He drove her BLUE convertible.
 b. # He drove her blue CONVERTIBLE.

The constituent ‘convertible’ is marked as given in (4a), the last accent falls on ‘blue’. According to Sauerland (2004), ‘convertible’ carries a G-marker.

- (5) He drove a BLUE convertible_G.

G introduces the presupposition that the predicate ‘convertible’ be given, and requires a salient proposition of the form ‘x is a convertible’ in the context:⁵

³This proposal shares many properties with Schwarzschild (1999), but is much simpler and therefore I will base the discussion mostly on Sauerland’s proposal.

⁴In Schwarzschild (1999)’s approach, this obligatoriness of givenness marking is accounted for by a constraint ‘Avoid F’ which minimizes F-markers in syntax. The explanation in terms of ‘maximize presupposition’ seems more insightful, since it links the requirement to a more general phenomenon, e.g. the choice between definite and indefinite article discussed in Heim (1991). Schwarzschild (1997) proposes an ‘Attentiveness Maxim’, which is similar in spirit to ‘maximize presupposition’. I do not have the space to outline this approach in detail here.

⁵The presupposition in Sauerland (2004) requires that there must be a true proposition of the form f(x). This seems to me to be too strong, but I will not discuss this point here.

$$(6) \quad \llbracket G \rrbracket = \lambda f^{et} . \exists x \in D^e . f(x) = 1 : f$$

G seems to cover the basic cases of givenness marking. It turns out, however, that sometimes the presupposition introduced by G is not strong enough.

1.2. *The Sister Effect*

Closer inspection reveals that at least in the case of predicates, the presupposition introduced by G is too weak. Contrary to expectation, in (7b) deaccenting the predicate is infelicitous although it is given:

- (7) Mary's uncle, who produces high-end convertibles, is coming to her wedding. I wonder what he brought as a present.
- a. He brought a [CHEAP convertible].
 - b. # He brought [a RED convertible].
 - c. He brought [a red CONVERTIBLE]

Whether deaccenting 'convertible' is obligatory or even possible depends on the adjective that modifies it. It seems that what is wrong with (7b) is that 'high-end' is not a relevant alternative to 'red' and the two don't contrast. However, in order to even state this, we have to use a vocabulary that falls outside of the scope of the givenness presupposition in (6), namely we have talked about 'contrast' and 'alternative'.⁶ That indeed 'high-end' and 'blue' are usually not construed as alternatives can be motivated independently based on association with focus in exclusives:

- (8) Mary only likes RED convertibles.

Sentence (8) does not rule out that Mary might like high-end convertibles—unless the context made salient a partition of convertibles into red ones and high-end ones.

It seems deaccenting 'convertible' in (7) does not just require that the predicate 'convertible' is given; it requires that there must be an alternative x to its sister, such that [x convertible] is given. 'High-end' does not qualify as an alternative to 'red', so there is a presupposition failure. An even more striking illustration of the sister-effect is the contrast between (9) and (10):

- (9) John's aunt, who is incredibly rich and owns a bicycle factory came to his wedding. I wonder what she brought as a present.

⁶The same problem arises for the account of givenness in Schwarzschild (1999). Sentence (1a) is argued (p. 151) to require the antecedent in (1b):

- (1) a. eat a GREEN apple
b. eat an apple

Since apples have colors (b) is claimed to be a sufficient antecedent for (a). By analogy a 'high-end convertible' should be more than sufficient as an antecedent in (7) since entails that the givenness of 'convertible'.

- a. Guess what: She brought a used BICYCLE.
- b. Guess what: She brought a USED bicycle.

Both answers are possible, but (b) expresses a comment on the gift that (a) does not express: The answer (b) evokes an alternative to ‘used’—an obvious one being ‘new’. By using version (b) of the answer, the speaker insinuates that ‘new bicycle’ is somehow salient in this context. This is easy to accommodate by the hearer: maybe the speaker believes that being incredibly rich and being the owner of a bike-factory, there is an expectation that the aunt would be generous enough to bring a new bike. Compare now the following minimally different dialogue:

- (10) John’s aunt, who is incredibly rich and owns a bicycle factory came to his wedding. I wonder what she brought as a present.
- a. Guess what: She brought a brand new BICYCLE.
 - b. ?# Guess what: She brought a BRAND NEW bicycle.

The answer in (b) requires there to be an alternative for ‘brand new’ to be salient. An obvious alternative would be ‘used’. But ‘used bicycle’ does not seem to be pertinent here, given the aunt’s wealth, so the presupposition cannot be accommodated as easily as in (9b). A legitimate response to (b) would be: ‘Why do you bring up used bicycles?’. However, *there was no explicit mention of used bicycles*.

2. Relatively Given

The problem for earlier givenness approaches is two-fold: (i) Why is there a sister-effect in examples involving the deaccentuation of predicates?; (ii) why is there apparently no such effect detectable when deaccenting direct objects?

2.1. The Solution to Problem (i): Relative Givenness

The sister-restriction points to a stronger presupposition than the one in (6): In order to be marked as given, a constituent has to be *given relative to its sister*. Marking a constituent x as given introduces the presupposition that there is alternative y' to its sister y such that the constituent $[y'x]$ is given. I define a two-place operator G_R in analogy to other focus sensitive operators, such as ‘only’:

- (11) Relative Givenness

$$\llbracket G_R \rrbracket = \lambda x. \lambda y. \exists y' \in Alt(y), y' \neq y, s.t. \llbracket y'x \rrbracket \text{ is given} : \llbracket yx \rrbracket$$

Sometimes givenness marking is possible although apparently the presupposition of Relative Givenness is not fulfilled:

- (12) What kind of convertibles does she like?
She likes BLUE convertibles.

In this context, there is no salient alternative to ‘blue’ that is given. But the question under discussion is about kinds of convertibles, so the question is really: Give a partition of convertibles, and specify the subset that you like. The adjective ‘blue’ picks out a set in a partition. The presupposition of Relative Givenness can be accommodated, since ‘blue’ evokes colors as a way of partitioning convertibles.

Not just words but also complex nodes can be marked as given. Consider the case of prosodic subordination of entire VPs:

- (13) Mary praised John. What happened next?
 [ANNA [praised John.]_{GR}]

Within the VP, ‘John’ and its sister are not given relative to each other respectively. So the relative prominence between the two is as in the neutral case. But at the next higher node, the VP is given relative to ‘Anna’. Therefore the entire VP is marked as given, the nuclear stress falls on ‘Anna’.

The givenness-operator employed here is very similar to the focus operator ‘~’ in Rooth (1992b). ‘~’ takes an unpronounced anaphoric element and a syntactic constituent of any size as its arguments. In order to determine whether there is a matching antecedent in the context, the F-marked constituents in the overt argument are replaced by variables, and any constituent that meets the shape of this ‘template’—which is usually referred to as the ‘presuppositional skeleton’—qualifies as an antecedent. The presuppositional skeleton was originally proposed in Jackendoff (1972), and employed in the theories of focus interpretation in Rooth (1985), Kratzer (1991) and Rooth (1992b).⁷

The main point of this paper can be stated in Roothian terms as follows: There is a *lower bound* on the use of ‘~’, namely there must be at least one F-marked constituent in its scope. For the special case in which ‘~’ takes scope over exactly two sisters one of which is F-marked, the result is essentially the notion of Relative Givenness in (11) proposed here, where the F-marked constituent is the second argument of G_R .

- (14) $G_R(x)(y)$ expressed in Rooth (1992b) terms:



The formulation in terms of the two-place operator G_R is intended to explain why this lower bound should hold. It is a consequence of the selection of the second argument. But it also makes the stronger prediction that there is an upper bound, and only sister constituents matter.⁸

⁷The approach in Schwarzschild (1999) also operates with the presuppositional skeleton. One problem is that it does not impose a requirement on the sister of the given constituent, namely that the antecedent must involve a true alternative to the sister. Sauerland (1999) suggests a restatement of Schwarzschild’s account in Roothian terms, which would actually also impose a presupposition involving alternatives, but does not explore the consequences.

⁸This stronger approach was originally motivated based on considerations of the recursive assignment of prosody based on very local decisions discussed in Wagner (2005). I will not discuss

2.2. The Solution to Problem (ii): Givenness and Movement

The second problem is that direct objects seem to differ from predicates in not showing sister effects. Why should some constituents behave differently?

- (15) John was in the kitchen. Mary walked in. What happened next?
- # John kissed MARY.
 - John KISSED Mary.

'Mary' is marked as given. Based on G_R a presupposition ought to be triggered that there must be a salient alternative x for 'kissed', such that 'x-ed Mary' is given. This, however, does not appear to be the case, and thus (15b) should invoke a presupposition failure.

One possibility that comes to mind is that constituents of type e are deaccented whenever the individual they refer to is given in the context, following Sauerland (2004), and it is only predicates which invoke the stronger presupposition of Relative Givenness. But this approach fails in the following case:

- (16) What evidence do you have that Mary was involved in the burglary?
- They arrested John and MARY.
 - ?? They arrested JOHN AND Mary.
 - # They arrested JOHN and Mary.

Accenting 'Mary' is possible despite the fact the individual is discourse-salient. In fact it seems that marking 'Mary' as given as in (b) or (c) introduces a presupposition that is too strong given the context. Sentence (b) would be felicitous if there is an alternative x for 'and', such that 'x Mary' is given, as in the following context:

- (17) Did they arrest only Mary?
No, they arrested JOHN AND Mary. (Alternative: 'only'; Given Constituent: 'only Mary')

Sentence (16c) would require that there is an alternative x to 'John', such that 'x and Mary' is given, as in (18):

- (18) Did they arrest Bill and Mary?
No, they arrested JOHN and Mary.

The judgements are more clear-cut in the case of 'or', maybe because it more difficult to accommodate the presuppositions compared to the case of coordination:

- (19) Why do you think Mary might have been involved in the burglary?
- They say they arrested John or MARY.
 - # They arrested JOHN OR Mary.

this approach here.

c. # They arrested JOHN or Mary.

We are faced with a situation where the weak presupposition proposed in Sauerland (2004) is appropriate for (15), and the strong presupposition of Relative Givenness is appropriate for (16) and (17).

The solution that I want to propose for this puzzle is the following: The direct object in (15) can move, and in particular it moves to adjoin to a higher constituent, in order to facilitate givenness marking. The idea is that ‘Mary’ is really adjoined to the entire proposition:

(20) [[λx . [He kissed x .]] Mary_{GR}]

Then ‘Mary’ is marked as given—but now of course sister is the entire proposition. This type of movement weakens the presupposition associated with givenness marking by changing sister relations. A set of the shape [x Mary] is salient in this context, where x stands in for propositions with an open argument slot. It is made salient by having introduced the referent Mary into the conversation. The set includes every proposition that contains Mary as an argument.

The explanation why the proper name in (16) does not get marked as given is that movement out of coordinate structures is not possible. Givenness must therefore be evaluated locally. The same applies to predicates in NP structures as in (7).

That information structure can re-bracket a syntactic subject is also assumed in Steedman (2000). Note that after rebracketing, one might also mark as given the moved constituent. This would be a case of ‘focus-movement’, where the moved constituent is marked as given relative to the remnant.

(21) Who did he kiss? [λx . He kissed]_G Mary]

The motivation for movement is the rebracketing itself facilitating the marking of the right givenness presupposition, and movement does not need to be assumed to target specific functional projections as postulated in many recent approaches to syntax, following Rizzi (1997).

The Movement account explains the puzzle of why DPs referring to contextually given individuals sometimes deaccent and sometimes do not. They can only deaccent if they are ‘relatively given’ to their sister constituent—and what the sister constituent can be adjusted by movement. An example discussed by Ladd (1980: 81) further illustrates the point:

(22) Has John read Slaughterhouse-Five?
He doesn’t READ books.

There is no salient alternative for ‘read’, so givenness marking is not possible in-situ. However, there was talk about books in the context, so once ‘books’ moves and attaches to the proposition, Relative Givenness marking is possible.

The present approach *motivates* the rebracketing: movement facilitates givenness marking by weakening the presupposition that results from marking a con-

stituent as given.⁹ Relative Givenness thus rationalizes the pervasive cross-linguistic tendency that given constituents undergo movement¹⁰ (e.g. object shift, pronoun-movement to propositional nodes, ...). These operations are related to the facilitation of givenness-marking.

An issue that I will have to leave open is what type of movement givenness movement is. I assume that it is the same movement that can be observed as scrambling in Germanic OV languages and Yiddish, and that the fact that there is no apparent overt movement in English is somehow related to its VO status, and the generalization of whether or not givenness movement is overt is related to Holmberg's Generalization (for arguments that Holmberg's Generalization applies also in German see Wagner (2002)).

2.3. *Alternative Sets as Partitions*

What are alternative sets? One first observation (see also Rooth (1992b)) is that alternatives have to be distinct. Consider:

- (23) Mary has a blue convertible. What kind of car does John have?
- a. Guess what: It's a blue CONVERTIBLE.
 - b. # Guess what: It's a BLUE convertible.

'Blue' is not an alternative to 'blue', and an antecedent of the shape [blue convertible] consequently does not satisfy the presupposition induced by saying [BLUE convertible]. Although every constituent in 'a blue convertible' is given, no constituent is marked as given, since no constituent is relative to some other constituent.

Another important point is that what counts as an alternative depends not just on the item in question itself but also *on the sister that is marked as given relative to it*. Consider the following two examples:

- (24) a. She has a new bicycle.
Natural Partitions of bicycles that 'new' is part of:
{new, old}, {new, former}, {new, used}
- b. She has a new boyfriend.
Natural Partitions defined over boyfriends that 'new' is part of:
{new, old}, {new, former}, #{new, used}

Talking about 'used boyfriends' is quite marked, since {new, used} is not a natural partition of boyfriends. The joke in talking about 'used boyfriends' lies in applying a partition that is natural for objects one can possess and sell. Similarly, 'high-end' and 'red' are not part of a natural partition of cars. Jackendoff (1972:

⁹The principle 'Maximize Presupposition' would then create the following expectation: when the stronger presupposition is satisfied, givenness movement should not occur. This seems to be incorrect. Given material (pronouns, given DPs) moves whenever possible. I will not discuss this problem here.

¹⁰Or the equivalent rebracketing in the grammatical theory of choice.

242ff) observed that determining alternatives (or the ‘presuppositional set’ in his terminology) requires conceptual structure and knowledge of the world.¹¹¹²

Another relevant observation is that it seems that givenness marking is possible even if an antecedent is not salient itself but is entailed (Rooth 1992a). Consider an example of this type due to Kirsten Syrett (p.c.):

- (25) The guests are here!
Yes, I already MET some of them.

There is a salient antecedent for a proposition about ‘the guests’, which entails a statement about the ‘some of them’, which however is not salient itself.

3. More Arguments for Relative Givenness

Relative Givenness makes two predictions: (i) Givenness marking is always relative: a constituent can be marked as given only if it is given *relative to something else*; and (ii), the presupposition that is introduced by a constituent that is marked as given can be determined *just by looking at its sister*. Givenness is evaluated very locally. This section presents further evidence for these predictions.

3.1. All-Given Constructions

A correct prediction of Relative Givenness is that in the absence of any other constituent, a given constituent is accented:

- (26) Who did John’s mother invite? JOHN!

¹¹For adjectives, one-replacement is also a test for alternative status. The following answer cannot be used to state that Mary’s uncle brought a any old blue convertible—it has to mean that he brought a blue high-end convertible:

- (1) Mary’s uncle, who produces high-end convertibles, is coming to her wedding. I wonder what he brought as a present.
He brought a BLUE one.

This seems to be due to the fact that ‘blue’ is not an alternative to ‘high-end’. Compare the following example:

- (2) She likes red convertibles, but he brought a BLUE one.

Here, the direct object in the second clause does not mean ‘red blue convertible’. One-replacement affects a maximal amount of the NP structure of the antecedent, but it does not include alternatives, probably because they are incompatible.

¹²It is less obvious whether the givenness marking of NPs also involves partitions.

- (1) What about John? She KISSED John.

If one follows Groenendijk and Stokhof (1997) in assuming that discourse is organized in terms of partitions, e.g. mediating question-answer congruence, then a general definition of alternatives in terms of partition may be possible.

Such all-given constructions can be more complex. The context in (27) does not license givenness marking of the VP since it does not provide an alternative subject such that [subject' VP] is given.

- (27) Last week the newspaper reported that after the game all that happened was that the coach praised John. I wonder what happened after this week's game.
- a. Again, The coach praised JOHN.
 - b. # Again, The COACH praised John.

That the 'neutral pattern' arises in all-given contexts was already noted in Schwarzschild (1999). However, it turns out that this is not always the case. Consider the following variant. Again every constituent including the entire 'the coach praised John' is made salient by the context.

- (28) Last week the newspaper reported that after the game all that happened was that the coach or the manager—I forget which—praised John. I wonder what happened after this week's game.
- a. # The coach praised JOHN.
 - b. The COACH praised John.

Relative Givenness can account for this straightforwardly, since in this case there is an alternative to the subject (the manager), such that 'The manager praised John' is salient. Schwarzschild (1999: 166) discusses a related example:

- (29) Did Karen get the money or did Marc get the money?
- a. KAREN got the money.
 - b. * Karen got the MONEY.

Schwarzschild (1999: 166) suggests that either the statement 'Karen got the money' or the entire question can in principle serve as the antecedent for deaccentuation, yielding (29a,b), but only (a) is grammatical. In order to explain that only (a) is grammatical, he introduces a notion of question-answer congruence, which requires to use the question as the antecedent.

Similarly, Sauerland (2004) evokes a notion of 'salience' to capture the choice in antecedence. Sentence (29a) presupposes for Sauerland (2004) that someone got money, while (b) presupposes that John is salient in the discourse. The former presupposition is more salient, according to the added convention that the presupposition introduced by the question under discussion is very salient. Reference to the questions of discussion is not sufficient however:

- (30) John's aunt owns a factory that produces extremely high-end and extremely low-end bicycles. I wonder what she brought as a present to his wedding.
- a. # Guess what: She brought a low end BICYCLE.
 - b. Guess what: She brought a LOW-END bicycle.

The question under discussion does not choose between antecedents in this case, so Sauerland (2004) and Schwarzschild (1999) are in trouble, while Relative Givenness accounts for the pattern. What is at stake in the all-given examples is not just whether a constituent is given *per se*, but whether any constituent is given *relative to some other constituent*.

3.2. *Inherently Unstressed Elements*

A resilient problem in accounting for sentence stress is that some items seem to resist accenting. An example is the word ‘something’ in English (Bresnan 1972).

- (31) a. Helen had WRITTEN something.
b. Helen had written a BOOK.

Bolinger (1972) argues that accents fall on ‘newsworthy’ constituents, and claims ‘something’ is generally not accented because it is not newsworthy (31). But what is more newsworthy about ‘some food’ compared to ‘something’ in (32)?

- (32) Ad Neeleman (p.c.):
a. She ate some FOOD.
b. She ATE something

Bolinger’s appeal to ‘newsworthiness’ is circular, unless criteria are specified to assess whether a constituent is newsworthy or not independent of accentedness.

The present proposal explains the difference in accent placement in (32). The direct object can move, and the presuppositions that are then derived are in (33).

- (33) a. There is an alternative proposition in the context about some food.
b. There is an alternative proposition in the context about something.

Presupposition (33b) is trivially satisfied, so ‘something’ can always be marked as given; presupposition (33a) is only satisfied when there was talk about food, which is only the case in the appropriate context.

The proposal here accounts for why ‘someone’ and ‘somewhere’ tend to be unstressed: This is due to the fact that the presupposition that is introduced by marking them as given is trivial. In explaining the contrast in (32), the present theory goes beyond Bolinger’s approach, while capturing the intuition that marking ‘something’ is related to the poverty of lexical content: It makes it easy to accommodate the presupposition.

A similar rationale can be made for other examples that Bolinger (1972) discusses. They also invoke presuppositions that can be accommodated.¹³

¹³Some of the items that can be deaccented can even be omitted:

- (1) I’m going to the *dóctor*’s. vs. I’m going to the doctor’s *bárn*.

- (34) Bolinger (1972: 636–637)
- a. I'm going to the DOCTOR's place. vs. I'm going to the doctor's BARN.
 - b. I'm doing it for JOHN's sake. vs. I'm doing it for John's WELFARE.

Bresnan (1971) suggests that these items are semi-pronouns. As Bolinger (1972) observes, this approach runs the risk of being circular, at least if this label is used as a mere diacritic for not receiving stress. Again, the presupposition that marking those items as given introduces may simply be easy to accommodate: an obvious alternative for 'John's' in (b) would be for instance 'my own'.

The more contentful an expression is, the harder it may be to accommodate the presupposition encoded by marking it as given. Consider the difference between 'something' and 'some stuff'¹⁴ 'Some stuff' is more likely to be accented in the following context:

- (35) Where did he go?
He went to buy something/some stuff.

The indefinite 'some stuff' can only refer to physical material and is much more restrictive than 'something'. If you are 'hoping for something', it might be something abstract the arrival of a friend or the fulfillment of a wish, in which case you wouldn't say that you're 'hoping for some stuff'. It is therefore less likely that there is a salient proposition about some stuff than that there is a salient proposition about something. This is the reason 'some stuff' may be more likely to be stressed.

The claim is that the tendency of 'something' to avoid stress is explained by the same mechanism that explains deaccenting more generally. Two further predictions emerge then. First, 'something' is predicted not to be deaccented that easily in coordinate structures. Since a conjunct cannot be entailed by another conjunct, it is not that easy to coordinate 'something' with anything (cf. Hurford 1974):

- (36) a. # I saw a lion and/or an animal.
b. # I saw a lion and/or something.

But as predicted, if we coordinate 'something' with something that is mutually exclusive with it, then it remains accented:

- (37) She thought she heard someone or SOMETHING.

The second prediction is that in languages that lack givenness deaccentuation (e.g. Spanish, Italian), the equivalent of 'something' should not be deaccented. This prediction is borne out (cf. Ladd (1996) and references therein). Italian lacks deaccentuation of given material, as is illustrated by the following contrast between an Italian sentence and a close English counterpart:

- (38) a. le inchieste servono a mettere a posto cose andate fuori POSTO.

¹⁴Brought to my attention by Ivano Caponigro, who suggested that syntactic complexity might matter.

- b. the investigations help to put back in place things that have gone OUT of place.

And it also lacks the property of having unaccented ‘something’ etc.:

- (39) a. Ho sentito QUALCUNO.
- b. I HEARD someone.

The discussion in this section suggests a useful definition of the term ‘neutral stress’. The sentence in (31a) is ‘neutral’, in that stressing the direct object would require a much more restricted context than not accenting it—and yet a constituent is marked as given. I suggest then to use the term ‘neutral’ stress in the following way:

- (40) Neutral Stress
A stress pattern is called ‘neutral’ if it only triggers Relative Givenness presuppositions that are easily accommodated in most contexts.

3.3. *Interaction with Other Presuppositions*

Some lexical items tend to be prosodically subordinated, and yet the presupposition that they introduce is not easy to accommodate in any context. Consider pronouns such as ‘him’ or ‘there’.

- (41) The princess KISSED him there.

When given these sentences out of context, native speakers are likely to deaccent the pronouns. But in this context no other proposition about ‘him’ or ‘there’ is mentioned. However, these sentences cannot be used unless the context satisfies the presuppositions that are introduced by the lexical items ‘him’ and ‘there’. They require there to be a unique salient discourse participant that is male or that there is a unique salient location. A speaker confronted with these sentences without a context that does not satisfy these presuppositions will have to accommodate the missing context or ask to clarify the reference. The pronouns thus seem to be inherently unstressed because the presuppositions that allow their use usually entail that the presupposition of marking them as given is fulfilled.

The prediction is of course that similar to the deaccentuation of proper names, the givenness presupposition introduced by subordinating pronouns should depend on the syntactic context. Indeed, they are accented in coordinate structures:

- (42) Why do you think Mary might have been involved in the burglary?
 - a. They say they arrested John and/or HER.
 - b. ?? They say they arrested JOHN AND/OR her.
 - c. ?# They say they arrested JOHN and/or her.

Similar facts can be observed for indexicals, such as ‘here’, ‘I’, ‘you’, ‘now’. That they are generally marked as given is not surprising, since in any utterance a speaker, and addressee, a location, and a reference time can be taken as known. And yet in coordinate structures they can be accented.

- (43) a. Roger HIT me. *vs.* Roger and ME.
b. When will the movie play? At 10 pm and NOW.
c. Where will it be going to snow? In Ithaca and HERE.

Sometimes it seems that pronouns in coordinate structures *can* be deaccented in the absence of an obvious antecedent that would satisfy Relative Givenness: (based on similar example due to Lisa Selkirk, p.c.):

- (44) What did they say in the letter? They will invite MARY and me/ME for DINNER.

Once again, the facts are more clear cut with disjunction, presumably because accommodation is more difficult:

- (45) What did they say in the letter? They will invite MARY or ME/#me for DINNER.

The treatment of the deaccentuation of pronouns is then in no way different from the treatment of full DPs. In fact, their presuppositions can interact with the presupposition of Relative Givenness in a similar way. Consider the following dialogue:

- (46) What happened next? The princess kissed the frog.

This answer presupposes that there is a unique frog. The answer suggests then that there was talk about a frog in previous discourse. When confronted with this dialogue without context, it is not unlikely that a speaker who is asked to read it might deaccent ‘the frog’. But not every definite DP is going to need such an accommodation of uniqueness. Consider the following discourse:

- (47) Why was there an uproar in the palace?
The king slapped the queen.

That palaces usually house only a single king and a single queen if any at all can be taken to be part of the Common Ground—of course there might be neither, so their presence cannot be taken for granted. The presupposition of uniqueness is not necessarily satisfied by previous mention in the immediate context but can be shared by world knowledge that can be taken as part of the common ground. A nice illustration from Prince (1981: 233): ‘I got on a bus and the driver was drunk.’)

This type of definite description happily encodes information new to the discourse, and is thus expected not to be deaccented or move for givenness purposes.¹⁵ The relation between definiteness and givenness is an indirect one.

¹⁵This issue and consequences for givenness-related movement is further discussed in Wagner (2002), and differs from earlier approaches who relate givenness movement and definiteness more directly (e.g. Diesing (1997)).

A problem for the present approach are reflexive pronouns (Thanks to Hye-Sook Lee for this observation):

(48) a. 'In the washroom, a man was SHAVING himself.'

Why can 'himself' be deaccented here? There does not seem to be an alternative proposition about that 'man' that is salient. A second problem relates to cases of multiple contrasts (cf. Sauerland (2004) for relevant discussion).

(49) First John kicked Mary, and then SHE kicked HIM.

It seems that the intuition of a double contrast in this case cannot be captured using just Relative Givenness. I do not have the space to elaborate these issues here.

4. Givenness Marking and Recursion

Sometimes non-constituents seem to be marked as given:

- (50) Who will get married?
a. (A or B) and C?
b. No! (A' or B) and C.

This seems to be incompatible with the claim that the two arguments of G_R are always the given constituent and its sister. However, example (50) would be compatible with the present approach if it involved two separate steps of givenness marking: 'and B' is marked as given relative to A, and 'and C or D' is marked as given relative to the first conjunct, 'A and B'. We would expect that the two antecedents can be given separately, which does indeed not seem impossible, but it's a subtle judgement:

- (51) - Last week, John or Mary were there, this week, it was Bill and Sally. I wonder who will come next week.
- I heard it will be GEORGE or Mary, and Sally.

There is ample evidence that givenness marking is indeed recursive. First, consider the following example, where the last accent falls on the subject and the VP is marked as given, but in (b) the direct object is furthermore marked as given *within the VP* (Neeleman and Reinhart 1998)¹⁶:

- (52) a. Only MAX can afford buying cars.
b. Only MAX can afford seeing her.

Another type of case of recursive givenness-marking is 'second occurrence focus'. Rooth (1996) and Beaver (2004) show that relative prominence within the VP disambiguates the location the second occurrence focus:

¹⁶Neeleman and Reinhart (1998) argue based on this example for different kinds of destressing, but this distinction is argued to be unfounded in Wagner (2005).

- (53) a. This time, Mary only gave ANNA a book.
Last time, JOHN only gave Anna a book.
b. This time, Mary only gave Anna A BOOK.
Last time, JOHN only gave Anna a book.

This can be accounted for as follows: ‘Book’ is marked as given at the VP level in (a), and ‘Anna’ in (b). But then, the entire VP can be marked as given relative to the subject. Givenness marking is recursive, just as prominence marking and phrasing more generally according to Wagner (2005: and references therein).

5. Givenness Marking and Predictability

This paper outlined generalizations about when a constituent can be grammatically marked as given. Constituents that have been previously mentioned in the discourse may not be able to be marked as given in this technical sense because the strong presupposition of Relative Givenness is not satisfied.

According to the assumptions of this paper (and the semantic literature on givenness and focus more generally), deaccenting a constituent is categorical. I have argued that it encodes a presupposition that imposes a restriction on the context by imposing conditions on what is taken to be the ‘Common Ground’ (Stalnaker 1978, Clark 1994), and a similar picture underlies other semantic approaches.

There is a very line of research that looks at ‘givenness’ effects using notions such as predictability. This approaches are able to model also quantitative data. Bard and Aylett (1999) and Bard et al. (2000) report that in addition to deaccentuation, reducing token length and decreasing articulatory detail is also a reflex of givenness. Constituents that are accented and thus not marked as given might still be subject to such gradient reduction effects when they are contextually salient or ‘recoverable’ and ‘predictable’ (cf. Prince 1981, Jurafsky et al. 2000).¹⁷

The two ways of looking at things are not necessarily mutually exclusive, and I want to end this paper by pointing to a possible way of uniting some insights. Prince (1981) argues that it is important to distinguish different types of givenness, different grammatical phenomena related to givenness, and specify how they correlate with each other, and drawing such distinctions might be fruitful in this case.

The prediction of the theory presented here vis-à-vis the gradient reduction effects based on predictability is the following: renditions of ‘convertible’ in sentences such as (4) may be shorter and less articulate whenever ‘convertible’ is given, predictable, or salient, whichever one might assume to the right notion; but it can only be *deaccented*, shifting the nuclear stress to the adjective, when the presupposition of Relative Givenness is fulfilled, i.e. when ‘used convertibles’ are given, predictable, or salient. Finding out which of givenness, predictability, or saliency is the right notion and how it can be modeled best is a question that I think both lines of research still have to figure out.

¹⁷Whether or not this type of reduction involves audience design (Gregory et al. 2002) or is purely speaker oriented (Bard et al. 2000) remains controversial.

References

- Bard, E.G. and M.P. Aylett: 1999, 'The Dissociation of Deaccenting, Givenness, and Syntactic Role in Spontaneous Speech', in J. Ohala, Y. Hasegawa, D. Ohala, A. Granville, and C. Bailey (eds.), *Proceedings of the XIVth International Congress of Phonetic Sciences*, 1753–1756.
- Bard, Ellen Gurman, Anne H. Anderson, Catherine Sotillo, Matthew Aylett, Gwyneth Doherty-Sneddon, and Alison Newlands: 2000, 'Controlling the intelligibility of referring expressions in dialogue', *Journal of Memory and Language* **42**, 1–22.
- Beaver, David I.: 2004, 'Five Only Pieces', *Theoretical Linguistics* **30**, 45–64.
- Bolinger, D.: 1972, 'Accent is predictable (if you are a mind reader).', *Language* **48**, 633–644.
- Bresnan, Joan: 1971, 'Sentence Stress and Syntactic Transformations', *Language* **47**, 257–81.
- Bresnan, Joan W.: 1972, 'Stress and Syntax: A Reply', *Language* **48**, 326–342.
- Büring, Daniel: to appear, 'Focus Projection and Default Prominence', in V. Molnár and S. Winkler (eds.), *Proceedings from the Symposium 'Informationsstruktur —Kontrastiv' (working title)*. Mouton De Gruyter.
- Chomsky, Noam: 1971, 'Deep structure, surface structure, and semantic interpretation.', in D. Steinberg and L. Jakobovits (eds.), *Semantics: An Interdisciplinary Reader in Philosophy, Linguistics, and Psychology*. Cambridge University Press, Cambridge.
- Clark, Herb H.: 1994, 'Discourse in production', in M. Gernsbacher (ed.), *Handbook of Psycholinguistics*. Academic Press, San Diego.
- Diesing, Molly: 1997, 'Yiddish VP Structure and the Typology of object movement', *Natural Language Semantics* **15**, 369–427.
- Goldsmith, John A. (ed.): 1995, *The Handbook of Phonological Theory*. Blackwell, London.
- Gregory, Michelle L., Alice F. Healy, and Daniel Jurafsky: 2002, 'Common Ground in Production: Effects of Mutual Knowledge on Word Duration'.
- Groenendijk, Jeroen and Martin Stokhof: 1997, 'Questions', in J. van Benthem and A. ter Meulen (eds.), *Handbook of Logic and Language*, 1055–1124. Elsevier/MIT Press, Amsterdam/Cambridge.
- Heim, Irene: 1991, 'Artikel und Definitheit', In von Stechow and Wunderlich (1991), 487–535.
- Hurford, James R.: 1974, 'Exclusive or inclusive disjunction', *Foundations of Language* 410–411.
- Jackendoff, Ray S.: 1972, *Semantic Interpretation in Generative Grammar*. MIT Press, Cambridge, Ma.
- Jurafsky, Dan, Alan Bell, Michelle Gregory, and William D. Raymond: 2000, 'Probabilistic Relations between words: evidence from reduction in lexical production', in j. Bybee and P. Hopper (eds.), *Frequency in the emergence of Linguistic structure*. John Benjamins, Amsterdam.
- Kratzer, Angelika: 1991, 'The Representation of Focus', In von Stechow and Wun-

- derlich (1991), 825–834.
- Ladd, Robert: 1980, *The structure of intonational meaning*. Indiana University Press, Bloomington.
- Ladd, Robert D.: 1996, *Intonational Phonology*. Cambridge University Press, Cambridge.
- Neeleman, Ad and Tania Reinhart: 1998, ‘Scrambling and the PF-Interface’, in M. Butt and W. Geuder (eds.), *The projection of arguments*, 309–353. CSLI.
- Prince, Ellen: 1981, ‘Toward a Taxonomy of Given-New Information’, in P. Cole (ed.), *Radical Pragmatics*, 223–255. Academic Press, New York.
- Reinhart, Tanya: 2006, *Interface Strategies*. MIT Press, Cambridge, Ma.
- Rizzi, Luigi: 1997, ‘The Fine structure of the left periphery’, in L. Haegeman (ed.), *Elements of Grammar*. Kluwer.
- Rooth, Mats: 1985, *Association with Focus*, PhD dissertation, University of Massachusetts, Amherst.
- Rooth, Mats: 1992a, ‘Ellipsis Redundancy and Reduction Redundancy’, in S. Berman and A. Hestvik (eds.), *Proceedings of the Stuttgart Ellipsis Workshop*.
- Rooth, Mats: 1992b, ‘A Theory of Focus Interpretation’, *Natural Language Semantics* **1**, 75–116.
- Rooth, Mats: 1996, ‘On the Interface Principles for Intonational Focus’, in T. Galloway and J. Spence (eds.), *SALT VI*, 202–226. Cornell Working Papers in Linguistics, Ithaca, NY.
- Sauerland, Uli: 1999, ‘Why variables?’, in P. Tamanji (ed.), *Proceedings of NELS 29*, 323–337. GLSA, UMass Amherst.
- Sauerland, Uli: 2004, ‘Do not interpret Focus! Why a Presuppositional Account of Focus Fails, and How a Presuppositional Account of Givenness Works’. Presented at Sinn und Bedeutung, Nijmegen.
- Schwarzschild, Roger: 1997, ‘Interpreting Accent’. Ms. Rutgers University.
- Schwarzschild, Roger: 1999, ‘Givenness, AVOIDF and other constraints on the placement of accent’, *Natural Language Semantics* **7**, 141–177.
- Selkirk, Elisabeth: 1995, ‘Sentence Prosody: Intonation, Stress, and Phrasing’, In Goldsmith (1995), 550–569.
- Stalnaker, R.: 1978, ‘Assertion’, *Syntax and Semantics* **9**, 315–332.
- von Stechow, Arnim and Dieter Wunderlich (eds.): 1991, *Semantik. Ein internationales Handbuch der zeitgenössischen Forschung. (HSK 6)*. de Gruyter, Berlin.
- Steedman, Mark: 2000, ‘Information Structure and the phonology-syntax interface’, *Linguistic Inquiry* **34**.
- Wagner, Michael: 2002, ‘Holmberg’s Generalization in an OV-Language’. Poster presented at NELS 33. MIT 2002.
- Wagner, Michael: 2005, *Prosody and Recursion*, PhD dissertation, MIT.
- Williams, Edwin: 1997, ‘Blocking and Anaphora’, *Linguistic Inquiry* **28**, 577–628.