Focus, Questions and Givenness

Daniel Büring (University of Vienna)

`daniel.buring@univie.ac.at`

February 2016

Abstract

This paper combines a Question(-under-Discussion) account of focusing with a givenness account of prosodic demotion ('deaccenting'). Its main tenets are, first, that all focusing is contrastive, i.e. points to a proper question —a question with contrasting answers; second, that any deviation from default stress signals focusing; there is no 'anaphoric deaccenting' of given elements, only contrastive focusing. Third, the question that licenses focusing need *not* be contextually salient, merely identifiable and relevant. Fourth and finally, where the prosodic realization of focusing requires prosodic demotion —the assignment of less-than-default stress to a constituent— that constituent must be given; a question under discussion, even if identifiable and relevant, cannot lead prosodic demotion of discourse-new elements.

The approach is couched in terms of unalternative semantics, a new method of relating stress patterns to sets of potential focal targets ('alternatives') which does not rely on syntactic F-marking. The overall approach is argued to successfully explain cases in which given elements fail to deaccent, in which focal backgrounds are not contextually salient, as well as, more speculatively, cases of double focus.

Keywords: focus, alternative semantics, unalternative semantics, givenness, contrast, F-marking, question under discussion, double focus

1   Claims and Proposals

1.1   Preview of the main claims

This paper argues for a particular division of labor between GIVENNESS and CONTRAST in accounting for stress and accent patterns in English and similar languages, sketched in figure 1.

Figure 1 contains a number of new terms (printed in boldface), which will be explicated in what follows. To a first approximation, PROSODICALLY DEMOTED corresponds to 'deaccented' in existing accounts, FOCAL TARGET to a Q(uestion) U(nder) D(iscussion), and 'compatible with the focussing' to 'among the utterance's F-alternatives'; CONTRAST, RELEVANT and IDENTIFIABLE more or less have their common sense meanings, which I will also elaborate on below.
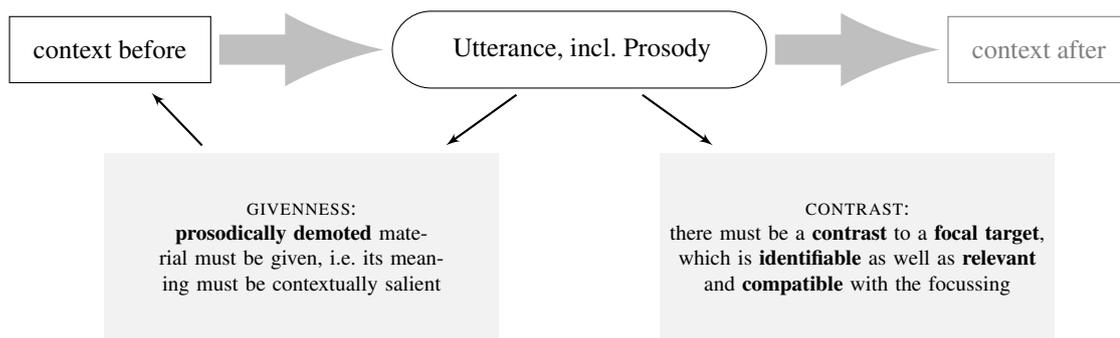

Figure 1: Proposal in a nutshell

The main theses of the present papers are:

- There is no such thing as givenness deaccenting; all manipulation of stress placement involves focusing, and all focusing is truly contrastive.

- Targets for contrastive focussing need not be salient/given in the context, as long as they are, among other things, identifiable.

- Givenness is a necessary (but not sufficient) condition for any departure from the default stress pattern, which can indirectly constrain the possibility of realizing a focus.

Though based on (almost) familiar concepts, the picture advocated here is, I believe, novel. First, those previous approaches which utilize both givenness and contrast (also often simply called 'focus') have contrast/focus override givenness where in conflict, i.e. given elements are nevertheless accented if in narrow focus;[1] on the present view, both are necessary conditions for marked prosody, so there is no such thing as 'givenness deaccenting' without concomitant contrastive focussing; no conflict between focussing and givenness can arise.

---

[1] E.g. Féry and Samek-Lodovici (2006), but also, if not in these terms, Selkirk (1984, 2001).

Second, the target for focussing is usually taken to have to be contextually salient —like the antecedent for givenness deaccenting;[2] on the present view, it is not, which opens up a wider range of focal targets.

Third, there is no consensus in the literature regarding the question to what extent focussing is contrastive (and what exactly this means);[3] on the present view, focussing is strictly contrastive. Though this paper is hardly the first place to opt for such a contrastive meaning for focussing, the consequences of such a move are rarely discussed explicitly; a precondition of the treatment advocated here is the insight that focus (and deaccenting) can be taken to invariably be contrastive precisely *because* we do not require that the contrasting alternative(s) under discussion be contextually salient; figure 2 attempts to schematize this network of ideas.

1.2   Preview of this paper

In order to make the empirical side of the proposal advocated here plausible, I will present a number of related but different arguments. First, that, by themselves, neither givenness of an element, nor the presence of a pragmatically plausible and identifiable contrast, are sufficient to allow for prosodic reversal (section 2).

Second, that not all focal targets that are required for a working theory of contrastive focus are given; this argument has two parts, one regarding associated and other obviously contrasting foci, and one foci in narrative contexts and answers. This is the subject matter of section 4.

Third an finally, I will offer, in section 5, some more speculative remarks about cases in which, I would argue, we have foci with non-given backgrounds, which, however, are not prosodically demoted, but *pro*moted as foci of their own.

---

[2]This is most clearly the case in Schwarzschild (1999), but quite arguably also in Rooth (1992b,a), if we take serious the idea that the focus variable C is anaphoric; in many cases I found it surprisingly hard to decide whether a given paper takes, in particular, a Question under Discussion to have to be contextually salient or not, so I will not attempt to classify any more papers to belong to one camp or the other here.

[3]Again, Rooth (1992b,a) and Schwarzschild (1999) are the most explicit to state that focusing is *not* contrastive, whereas Wagner (2012) is perhaps the most explicit to argue *for* obligatory contrastiveness; given that contrast itself is rarely defined precisely (a notable exception being Katzir, 2013), the subsequent question of how to treat answer focus seems rarely discussed in sufficient detail.
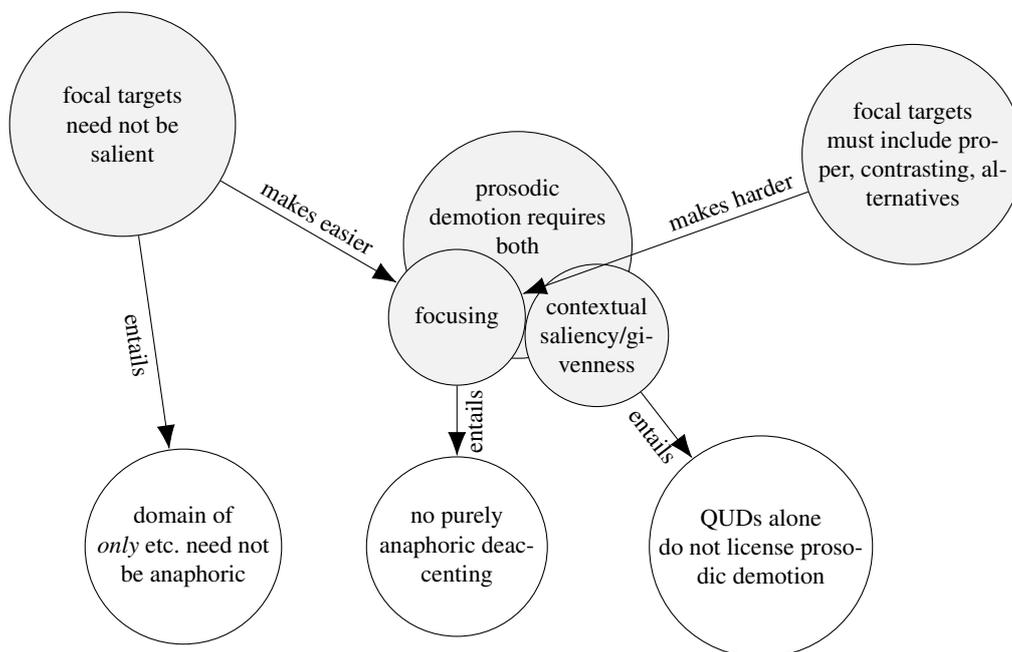
Figure 2: Core ideas (gray,top), their interdependencies, and consequences (white, bottom).

2   Contrast and Givenness Are Necessary Conditions for Prosodic Reversal

2.1   Givenness alone does not license deaccenting

Consider example (1), a case of focussing which is neither an answer focus, nor obviously contrastive to a contextual target.

(1)   [one thief to another] I'm afraid I'm developing a moral conscience lately. Last week, I went to a book store and BOUGHT a book.

There are, in principle, two ways of analyzing an example of this kind: One could postulate a broad, e.g. VP, focus (or no focus at all), and analyze the accent shift from *book* to *bought* as a function of GIVENNESS/ANAPHORIC DEACCENTING: the mentioning of *bookstore* makes books CONTEXTUALLY SALIENT, and hence *book* GIVEN. Or one could claim that *I BOUGHT a book* contrasts with 'I stole a book', i.e. has only V interpreted as focus.

Only the latter view, however, successfully captures the difference between (1) and (2), in which deaccenting seems considerably less natural, if possible at all.

4

(2)   [regular person] I'm bored. I'll go to the book store and...

    a.   ...buy a BOOK.   b.# BUY a book.

If the stress pattern in (1)/(2b) inevitably involves focussing *bought*, a straightforward story emerges: there has to be a focal target of the form 'I R a book'; in (1) this is 'I stole a book'. The contrast between stealing a book and buying a book is relevant here, because the latter, but not the former, offers motivation for the earlier claim a about a growing moral conscience.

In (2), on the other hand, no similarly obvious focal target exists. For one thing, it is not clear that doing something else with a book at a bookstore would contrast in a RELEVANT way as *not* relieving boredom. For another, even if we think of things that *might* in fact provide a relevant contrast, say, looking at a book, or taking a picture of a book (or perhaps *not* buying it), we get no contextual or encyclopedic cue as to *which* of these is intended here; the focal target is not IDENTIFIABLE; I will return to the details of this story in section 3.4 below.

I would like to emphasize that the main argument here —that givenness of a word or phrase alone is not sufficient to license its prosodic demotion— is made by the contrast between (1) and (2), regardless of the question of what exactly *is* required for prosodic demotion in addition. I hypothesized that what is required is that the demoted (and given) element can be interpreted as the background of a focus, and the the larger constituent containing that focus and its background can be contrasted with a focal target. And more specifically yet, that a focal target must be identifiable and relevant vis-à-vis the literal meaning of the focused sentence. The gist of the argument, however, should remain valid even if the latter two points turn out to be in need of refining.

Equally notably, the claim that givenness alone does not license prosodic demotion is closely related to the claim, also pursued here, that focusing is truly contrastive. To illustrate, where a concept like 'book' is contextually salient, as in (2), it is usually not too hard to come up with *some* proposition that is technically a focus alternative of the required sort. For example both 'go to a store that sells' and 'see' as alternatives to *BUY* in (2b) would lead to sentential focus alternatives —'I go to a store that sells books' and 'I see books'— that are contextually salient after uttering *I'll go to a bookstore*,[4] wrongly predicting the accent pattern in (2b) to be acceptable, even as a result of focusing.[5] In other words, excluding (2b) requires both ruling out prosodic demotion as a reflex of privative givenness of

---

[4]By encyclopedic bridging in the latter case: She who goes to a book store will see books.

[5]This property is elegantly exploited in Schwarzschild's (1999) notion of GIVENness, which, however, if the line of argument initiated in Wagner (2006, 2012) and pursued by Katzir (2013), Stevens (2013), Büring (2012), as well as in the present paper is valid, also suffers from exactly that feature.

book, *and* using 'I see/go to a store that sells books' as a focal target for *(I) BUY a book*. The latter should arguably be achieved by requiring focal targets to be truly contrastive, an issue more thoroughly discussed in section 4.2 below. Yet inversely, it is important to keep in mind that our account must prohibit prosodic demotion due to privative givenness in its own right, because otherwise a ban on non-contrastive focusing would not show any effect.

2.2 Contrast alone does not license deaccenting

The mirror image argument to that presented in section 2.1 above is based on examples like (3).

(3) a. (The store across the street sells refurbished computers, but)
          # we sell NEW printers.
     b. (This store sells new and refurbished computers, but)
          # it only sells NEW printers.

These, specifically the deaccenting of *printers*, sound odd. But it is perfectly easy to identify a matching focal target here, namely 'sell used printers'. Not only is 'used' salient after the mentioning of *refurbished*, it is arguably *the* obvious alternative to 'new' in this context on purely encyclopedic grounds. And equally certainly, the choice between selling new or used printers is relevant here, because only the former justifies the use of *but*, and the juxtaposition of the two clauses.

The diagnosis here seems rather straightforward: the problem with the sentences in (3) is that *printers* has been prosodically demoted, despite the fact that it is not given. So justifying the accent pattern indicated in (3) by an identifiable and relevant focal target is simply not sufficient.

The same argument carries over to Questions Under Discussions: If one thinks that focusing *new* in (3) targets the question 'what kind of printers does the store sell' (rather than the proposition that it sells used printers), then what these examples show is that a QUD *alone* is not sufficient to license prosodic demotion in an answer.

Note that in the *buy/steal a book* examples in section 2.1 above, the demoted constituent *a book* was indeed given (due to the previous mentioning of *bookstore*). Those examples, combined with the ones presented in this section, then, argue that neither givenness nor focusing alone are sufficient for prosodic demotion, but both a are necessary, which is the main empirical claim of the present paper.

The acceptable *book*-example (1) also illustrate that it is not the actual focal target that needs to be given (which is what the theories in Schwarzschild, 1999, and, arguably, Rooth, 1992b entail), but merely those constituents that need to

be prosodically demoted in order to realize the focusing: 'steal a book' is not contextually salient, only 'a book' is.[6] This is the next central empirical claim of this paper: the background of a contrastive focusing need not be given. Section 4 argues this claim in more detail.

3 Implementation in Unalternative Semantics

Before going on, I will present a more formal implementation of the concepts crucial to our arguments, first and foremost, the distinction between focus–background and prosodically demoted–non-demoted (as well as strong–weak). It is crucial for the analysis given here that there is no one-to-one correspondence between these distinctions and that, in fact, no grammatical properties —other than interpretive ones— correspond, even loosely, to the notions 'focus' and 'background'. This implementation is couched in the formalism of UNALTERNATIVE SEMANTICS (Büring, 2015, forthcoming), which expresses the independence of the above notions in a particular clear way. The main claims, however, could presumably be implemented in more 'standard' varieties of alternative semantics as well.
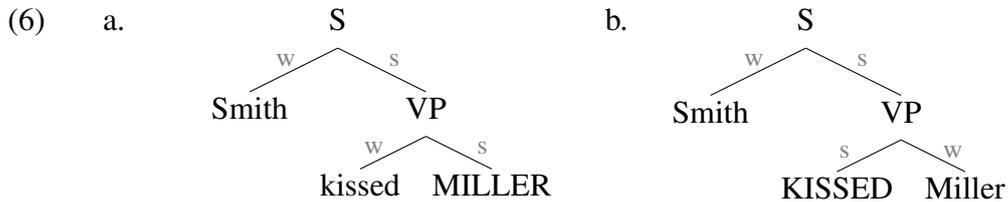
3.1 Prosody

Prosody is represented in the form of metrical *s(trong)–w(eak)* annotations, as in (6a) and (6b), which translate into stress and accent patterns.[7]

---

[6]It is irrelevant that 'steal' is arguably contextually salient in the context of (1), too. For one thing, this would not explain why just *a book*, rather than *steal a book* is prosodically demoted. For another, as shown convincingly e.g. in Williams (1997, pp.598f), two givens do not add up to a given; that is to say, 'steal a book' is not automatically contextually salient, just because 'steal' and 'book' separately are.

[7]... by the following rather standard conditions:

(4) Metrical Tree to Stress Grid:
     An assignment of degrees of stress to the terminals of a metrically annotated phrase marker T is legitimate iff for any branching node N in T, N's *s*(trong) daughter dominates a terminal with a higher degree of stress than that of any terminal dominated by a w(eak) daughter of N.

(5) Stress–Accent Association:
     For every (improper) substring S of terminals, the rightmost pitch accent in S is associated with a strongest-stress-level terminal in S (i.e. a terminal T in S for which there is no T* in S that bears a higher stress level than T).

(6)   a.
```
              S
        w ╱     ╲ s
    Smith        VP
             w ╱    ╲ s
          kissed   MILLER
```
b.
```
              S
        w ╱     ╲ s
    Smith        VP
             s ╱    ╲ w
          KISSED   Miller
```

The tree in (6a) shows what I take to be DEFAULT PROSODY; the tree in figure (6b), accordingly, has non-default prosody. Specifically, *Miller* in (6b) is said to have been PROSODICALLY DEMOTED; the VP node has undergone PROSODIC REVERSAL (which ultimately translates into *kissed* bearing the final pitch accent in the sentence, as indicated by capitalization).
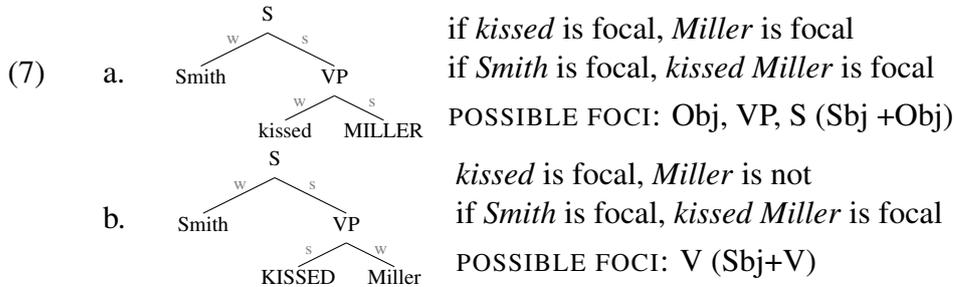
The terms PROSODIC REVERSAL and PROSODIC DEMOTION cover any case in which the metrical weights of two sisters are the opposite of what the default says. 'Deaccenting', as the term is usually used in the literature —shift of the nuclear stress/accent to the left of its default location— is one instance of prosodic reversal: the default strong node is to the right of the weak node(s), so that after reversal the default strong node is post-nuclear (after the strongest stress), and hence remains accentless (see note (5)). Other cases of prosodic reversal involve the opposite: the main stress shifts to the *right*, e.g. in cases where the right element is a pronoun (or other functional element) —default *KISSED them* vs. reversed *kissed THEM*— or a predicate to the left element —default *have your SHOES polished* vs. reversed *have your shoes POLISHED*. In this sense, prosodic reversal is the broader of the two notions; the conditions on any of its instances are, I argue, the same: givenness of the demoted element, focusability of the *pro*moted one. For the bulk of this paper, the difference between 'prosodically demoted' and 'deaccented' is immaterial, but for compatibility with papers such as Büring (2015, forthcoming) I will stick to the former term.

The distinction between default and non-default prosody is the only information unalternative semantics requires to calculate focus alternatives. In a nutshell, this is done by two simple rules: WEAK RESTRICTION, which applies to all nodes whose daughter nodes have default metrical weights (such as VP in (6a), and S in (6a) and (6b)) and says 'if weak daughter is focal, strong daughter is, too'. And STRONG RESTRICTION, which applies to all nodes which have undergone prosodic reversal (such as VP in (6b)) and says 'strong daughter is focal, weak daughter is not'.[8]

Combined, these yield the characterizations in (7); as indicated in the bottom

---

[8] 'Is focal' here abbreviates 'is, contains, or is part of a focus'; it roughly corresponds to 'is F-marked' or 'gets to introduce (non-trivial) alternatives' in standard systems. I will also sometimes say that these nodes can be INTERPRETED AS FOCUSED.

lines, the resulting possible focusings are exactly the expected ones (parenthesized are DISCONTINUOUS FOCI, which are of no concern in the present paper, see Büring, forthcoming, for discussion).

(7) a.

$$\begin{array}{c} S \\ \underset{w}{\text{Smith}} \quad \underset{s}{\text{VP}} \\ \underset{w}{\text{kissed}} \quad \underset{s}{\text{MILLER}} \end{array}$$

if *kissed* is focal, *Miller* is focal
if *Smith* is focal, *kissed Miller* is focal

POSSIBLE FOCI: Obj, VP, S (Sbj +Obj)

b.

$$\begin{array}{c} S \\ \underset{w}{\text{Smith}} \quad \underset{s}{\text{VP}} \\ \underset{s}{\text{KISSED}} \quad \underset{w}{\text{Miller}} \end{array}$$

kissed is focal, *Miller* is not
if *Smith* is focal, *kissed Miller* is focal

POSSIBLE FOCI: V (Sbj+V)

3.2   Semantics

In their official form, Weak and Strong Restriction are semantic rules. They characterize what are usually called FOCUS ALTERNATIVES. A basic idea of unalternative semantics is that focus alternatives are *restricted* as we go towards the root of the tree, rather than introduced or propagated (as is the case in standard Roothian alternative semantics). WEAK RESTRICTION —defined in (8)— applied to e.g. *[VPsaw JOHN]* excludes all VP-alternatives of the form '$R^{\backslash saw}$ John', where $R^{\backslash saw}$ ranges over transitive verb meanings/relations other than 'saw'.[9] All other VP meanings are permitted alternatives. This amounts to saying that *[VPsaw JOHN]* could express VP focus, or just object DP focus, but not narrow V focus. A handy way to notate this is $R^{\backslash saw}$ john, to be read as: 'no alternatives of the form 'R John', except 'saw John'. Accordingly, 'called John', 'kissed John', 'likes John' etc. are the *unalternatives* after which the idea is named.

(8) WEAK RESTRICTION
     If the relative stress among sisters S$_{strong}$ and S$_{weak}$ accords to the default, exclude all alternatives that differ in the weak sister, but not the strong one, for short $x^{\backslash S_{weak}}$ S$_{strong}$

Figure 3 illustrates how Weak Restriction derives unalternatives step by step. Note

---

[9]For ease of exposition, I will feel free to characterize meanings as 'of the form ...', where '...' is a formula or similar expression, rather than the more accurate but more convoluted 'meanings expressible by formulae of the form...'.

I also, throughout this paper, mean to be agnostic about the question whether focus alternatives are restricted by semantic type alone (e.g. 'all relations in $D_{e,et}$'), or additionally by 'natural expressibility' (e.g. 'all transitive verb meanings'), or some other criterion, though I may use either way of characterizing alternatives, depending on which seems more transparent.

The unalternative semantics system should be compatible with either view, given that it propagates restrictions, rather than the sets of alternatives allowed by these restrictions.

that there are *two* restrictions at the S level, one from applying Weak Restriction to the meanings of the subject and the VP, one from PROPAGATING the restrictions introduced (by Weak Restriction) at the VP level (for a formal version of Propagation, see section 7 below). These two characterize *one* set of allowed alternatives however, and can be subsumed by the single restriction in the tree in figure 3(iii). Since terminals do not introduce any restrictions, propagation has no consequences at the first branching level, VP in figure 3.
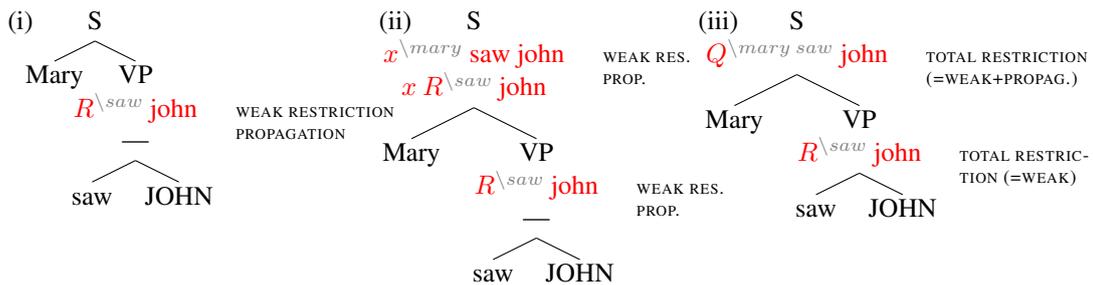

Figure 3: Unalternatives calculated at the VP, (i), and S level, (ii); (iii) shows how the (weak) restriction introduced at the S level, and the weak restriction propagated from the VP level can be combined into a single restriction.

The third and final mode besides Weak Restriction and Propagation, STRONG RESTRICTION, introduces a restriction saying of one daughter that it *has* to be interpreted as focussed.

(9) STRONG RESTRICTION
     If the relative stress among sisters S_{strong} and S_{weak} does not accord to the default, allow only alternatives that differ in the strong sister, but not in the weak one, for short $x^{\backslash S_{strong}}$ S_{weak}

As said above, Strong Restriction is triggered in English in cases of PROSODIC REVERSAL, as illustrated in the tree in figure 4(i), where the left daughter of VP is prosodically stronger than the right, contrary to the default.

Since prosodic relations at the S level are normal again (VP stronger than the subject), Propagation and Weak Restriction apply here as usual, see the tree in figure 4(ii), where in this case the former properly subsumes the latter, 4(iii).

The restrictions introduced by Strong Restriction are characterized positively in (9) and figure 4 —'only alternatives of the form $R^{\backslash saw}$ John'; formally Strong Restriction, too, describes unalternatives, excluding all VP-meanings *other* than '$R^{\backslash saw}$ John' (this could be written as $(D_{et} \backslash R\,john) \cup \{saw\,John\}$ or $P^{\backslash R^{\backslash saw}\,John}$ but I will stick to the more transparent positive characterization notation $R^{\backslash saw}$John).

(i)   **VP**

$R^{\backslash saw}$ john   STRONG RESTRICTION PROPAGATION

—

SAW   John

(ii)   **S**

$x^{\backslash mary}$ saw john   WEAK RESTRICTION PROPAGATION

x $R^{\backslash saw}$ john

Mary   VP

$R^{\backslash saw}$ john   STRONG RESTRICTION PROPAGATION

—

SAW   John

(iii)   **S**

x $R^{\backslash saw}$ john   TOTAL RESTRICTION (=PROPAGATION)

Mary   VP

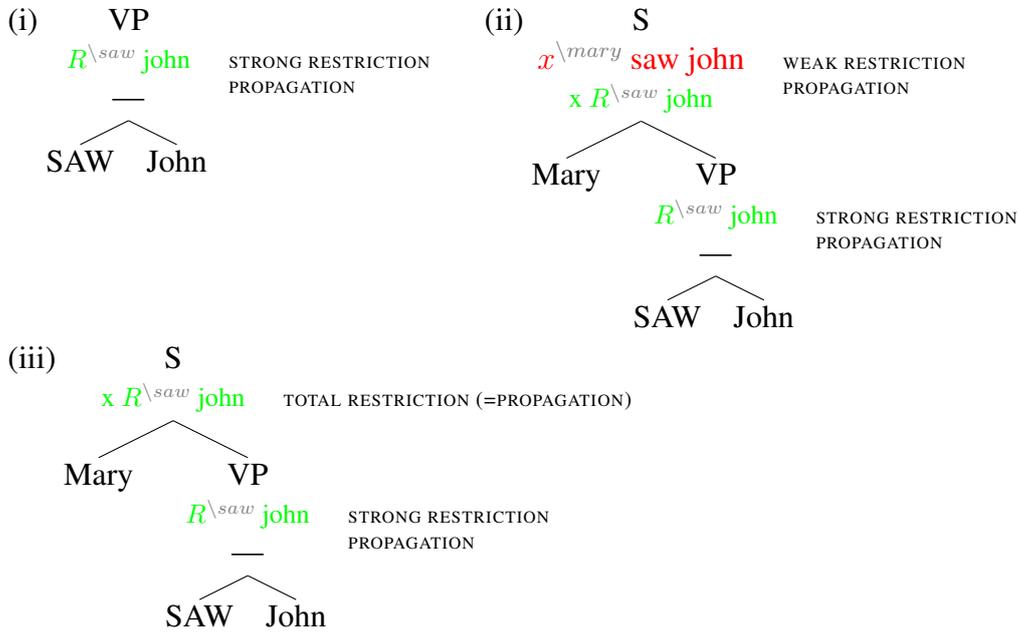$R^{\backslash saw}$ john   STRONG RESTRICTION PROPAGATION

—

SAW   John

Figure 4: Strong Restriction. Note that the propagation of the strong restriction from VP to S results in a restriction that properly subsumes the weak restriction introduced at the S level.

3.3 Pragmatics

In choosing one of the metrical patterns discussed, a speaker relates her utterance to what I call a FOCAL TARGET —a question, or perhaps a previous assertion. In this paper I uniformly model focal targets as questions —sets of propositions. The nature of the rules that relate metrical patterns to possible focal targets is the subject matter of focus pragmatics. The rules of focus pragmatics make reference to the (un)alternatives derived by focus semantics.

Like virtually all proposals for focus pragmatics, unalternative semantics assumes that the focal target must be made up of focus alternatives of the utterance; focus alternatives thus delimit the class of focal targets of an utterance (for this reason I also call focus alternatives POTENTIAL FOCAL TARGETS). In the case of unalternative semantics this means that the focal target must *not* be made up of unalternatives.

(10) gives a definition in the form of a variation on Rooth's (1992b) squiggle operator, where clause (10a) corresponds directly to Rooth's condition that the value of C be a subset of S's focus alternatives.

(10)   S'   is well-formed only if there is a value α, the
                    FOCAL TARGET, for C s.t.
       S $\sim C$

     a. α contains at least one element that is neither an unalternative, nor the literal meaning, of S.
     b. α is a proper question,
     c. α is relevant to the participants at the time of the utterance of S
     d.   the participants can unambiguously identify α given the utterance of S

Clauses (10b), (10c) and (10d) impose additional restrictions on α (the denotation of C), which I will discuss in the remainder of this paper. Crucially for now, nothing in (10) requires that the focal target must be previously mentioned, nor even contextually salient; all that it requires is that that it be made up of focus alternatives/potential focal targets (and that it be a proper, identifiable and relevant question).

A stricter requirement is imposed on elements that are prosodically demoted, such as *Miller* in (6b)/(7b).[10] These need to be coreferent, synonymous or hypernymous to a previously mentioned word or phrase. Following the common use in the literature I call such elements GIVEN and their meanings CONTEXTU- ALLY SALIENT. So while words and phrases in the background of a focus do not, according to (10), need to be GIVEN, prosodically demoted elements must be:

(12)   CONDITION ON PROSODIC REVERSAL
       A prosodically demoted node must be given (i.e. it is coreferent, synonymous or hypernymous to something that was contextually salient before the utterance).

In effect, then, prosodic reversal is subject to two necessary conditions: givenness of the demoted daughter, and focusability of the promoted daughter. Unalternative semantics naturally allows to link these two, since focus alternatives, too, are calculated depending on the question 'prosodic reversal or default?' That is, the difference between default prosody and prosodic demotion is already an integral

---

[10]Where branching nodes have a strong *left* daughter by default, prosodic reversal will actually result in a 'rightward shift' of the main PA, often in the form of accent addition. Thus the prosodic defaults in (11a/b) have the left daughter strong and the right daughter weak and unaccented.

(11)   a.   a TRAIN arrived
        b.   SAW her

Prosodic reversal here results in nuclear pitch accents on *arrived* and *HER*, with the possibility of prenuclear pitch accents on *train* and *saw*, i.e. no obligatory deaccenting. This is also the situation characteristic of the VP in Germanic OV languages like Dutch and German.

part of the algorithm to calculate focus alternatives (and it is, hence, particularly easy to add a givenness condition like (12) to it).

Finally, turning to the technical terms used in (10), I will only offer informal characterizations of RELEVANCE and IDENTIFIABILITY in this paper, and point out what role they should eventually take in explaining the data patterns. As to 'relevant', the idea is that it must matter to participants which answer to the question is true. As a stand-in I will say for now that participants must entertain the various propositions in the question as real possibilities, and that their behavioral dispositions vary depending on which of them is true.

Clause (10d) on the preceding page replaces the (ostensible) requirement that C needs to be anaphoric by the weaker notion of IDENTIFIABILITY —'after the fact', as it were. I will say a little more about this below, but generally the same pragmatic conditions that govern and restrict the interpretation of a non-anaphoric pronoun should be expected to apply here.

The notion of PROPER QUESTION will be formalized in section 4.2 below. Intuitively, a proper question is one whose answers contrast with one another. *Did you use a hammer, or a screw driver?* and *Is this car expensive, or cheap?* express proper question, *Did you use a hammer, or a tool?* and *Is this car expensive, or red?* do not. Note at this point that the answers to a proper questions need not strictly be exclusive: one may well use a hammer *and* a screw driver. But intuitvely it sounds coherent to say *a hammer, not a screw driver*, but incoherent to say *a hammer, not a tool*. In section 4.2 this intuition will be cashed in formally, building on Katzir's (2013) use of INNOCENT EXCLUSION.

When it comes to predicting which focusings are possible and which are not, there is noticeable overlap between RELEVANCE, IDENTIFIABILITY and PROPER QUESTION-HOOD (clauses (10b), (10c) and (10d)), as the reader will see in the remainder of this paper. I suspect that definition (10) can ultimately be simplified by unifying some of its sub-clauses. On the other hand, I submit that (10b) and (10c) express very general conditions on Questions under Discussion (and that (10d) applies to non-anaphoric pronouns in general); none of these is specific to focusing.

3.4 Illustration

Jointly, conditions (10b)–(10d) are meant to make sure that even though we allow for focal targets to be concocted on the fly, not everything goes. Take the case of (13), repeated from section 2.1 above

(13)   Last week, I went to a book store and BOUGHT a book.

In the case of the thief complaining about their newfound conscience, C is identified as {**speaker bought a book (and did not steal any), speaker stole a book (and did not buy any)**}, plausibly because buying is made salient by the utterance itself, and stealing is what thieves do. Certainly, an addressee who knows they are talking to a thief will also entertain both of these possibilities, and the choice between them is relevant: stealing a book would fail to substantiate the claim that our thief is in fact becoming honest.
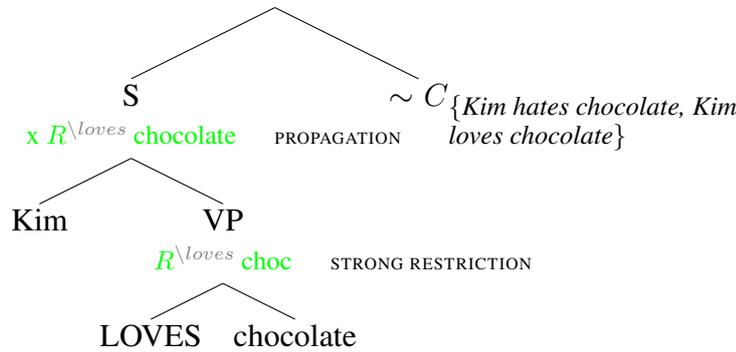
All of this is different if (13) is uttered by a law-abiding citizen. First and foremost, no particular alternative to *buying* immediately jumps to mind, i.e. is identifiable: what else would we expect a bored (but honest) person to do with a book in a book store? Yet, suppose, for the sake of argument, that addressees could still identify some very general question like **speaker** $R^{\backslash bought}$ **a book** ('what non-buying relation obtains between the speaker and a book?'), essentially the set of potential focal targets. Wouldn't this suffice, given that C needs to be identifiable only *after* the utterance of (13)? No, since this question is not a proper question: it includes answers like 'bought a book', 'saw a book', 'skimmed a book' etc. which are 'orthogonal' to one another. Furthermore, the addressee has no clue how to identify which of these should be used to form a proper question, and hence *a fortiori* cannot identify the question C —the focal target the speaker had in mind— in the sense of clause (10d).

Finally, again for the sake of argument, what if the addressee took the question to be something along the lines of {**speaker bought a book and did nothing else with it, speaker did something other than buying with a book**}, i.e. the most general proper question to be baked from the potential focal targets? Such a question, I would like to argue, fails to be relevant. Given the overarching issue of how the speaker escapes boredom, non-buying a book subsumes things that could serve that purpose (reading it in the store, stealing it) and things that could not (ignoring it, looking at its title, misplacing it in the store). Knowing, in particular, that the speaker non-bought a book is of no use to the addressee in this context and hence makes the question non-relevant.

As said before, there are probably ways to achieve the desired effect of excluding (13) in the law-abiding context (and similar cases to be discussed) in fewer steps, with fewer conditions. I leave this for future research. In the meantime, proper-question-hood, relevance and identifiability between seem to sufficiently cover what may and what must not be used as a focal target.

In the case of contrastive focus, α is simply the alternative question formed from the literal meanings of the correction and the 'correctee'. This is illustrated in (14) (here and henceforth I annotate the focal target on the variable C for perspicuity).
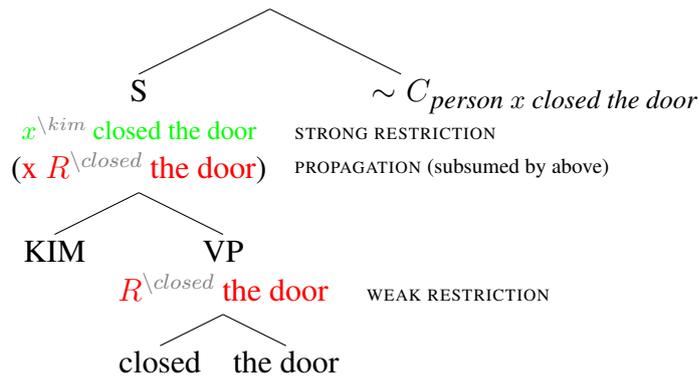
(14) (Kim hates chocolate —) No,

The first tree diagram:

$$S \sim C_{\{Kim\ hates\ chocolate,\ Kim\ loves\ chocolate\}}$$

- S: x $R^{\backslash loves}$ chocolate   PROPAGATION
  - Kim
  - VP: $R^{\backslash loves}$ choc   STRONG RESTRICTION
    - LOVES
    - chocolate

The question alluded to in clause (10c) above then would be {**Kim loves chocolate, Kim hates chocolate**} —or informally: 'does Kim love or hate chocolate?'

In the case of focus in an answer to an overt constituent question Q, Q itself can serve as the focal target, as illustrated in (15).

(15)   (Who closed the door? —)

$$S \sim C_{person\ x\ closed\ the\ door}$$

- S: $x^{\backslash kim}$ closed the door   STRONG RESTRICTION
  (x $R^{\backslash closed}$ the door)   PROPAGATION (subsumed by above)
  - KIM
  - VP: $R^{\backslash closed}$ the door   WEAK RESTRICTION
    - closed
    - the door

QUD: Did Kim open the door, or did someone else?

Note that the literal meaning of the sentence is an unalternative in both (14) and (15). This is irrelevant though, as long as the focal target contains at least one other element that is not an unalternative, which is the case here.

4   Non-given focal targets

In this section I aim to substantiate the claim that 'being in the background of a focus' is indeed independent of being given, or put differently, that focal targets need not be contextually salient. Obviously, to show this we have to have a way of establishing a focus–background partition, or its focal target, without using an overt question or target of correction/contrast (which would automatically make the focal target and hence everything in the background of the focus contextually

salient). I can see two ways of doing so. The first was already touched upon in the discussion of the *buy/steal a book* examples in section 2.1 above: show that the target of contrast must be something different than what is contextually salient; this method will be picked up again in 4.2–4.4. The second way is to use the interpretation of focus sensitive elements like *only* to determine a focus and its focal target; this is pursued in section 4.1.

4.1 Non-given alternatives for *only*

The argument in the subsection hinges on elements that are in the background of a focus, but not prosodically demoted. This is typically the case if they linearly precede the focus and hence the main stress of the focus domain. The verb *likes* in Kadmon and Sevi's (2011) (16) is an example of this.

(16)   (What's peculiar about Granny's dog?) She only likes JOHN.

As Kadmon and Sevi note, (16) is curious in that, as an answer focus, the sentence's focus alternatives (or potential focal targets as I call them here) must be 'granny's dog Q' (VP-focus), whereas the domain of *only* consists of properties 'like x', i.e. object focus (as witnessed by the interpretation: (16) say that the dog does not like anyone else, not that it does not have any other properties).

This suggests, on the one hand, that one stress pattern can simultaneously realize two different focus–background structures (the F-less system of course 'natively' has this feature). More importantly in the context of the argument pursued here, the focal target restricting *only* is not contextually salient: whom the dog (or anyone for that matter) likes has not been under discussion or otherwise salient.

(17) CLAIM: The background of a focus associated with *only* need not be given
             (if it is not prosodically demoted).

(17) presupposes, of course, that *only* associates with a focus in the first place (see Beaver and Clark, 2008, for a battery of arguments in favor of that view), or, put in present terms, that the quantificational domain of *only* is grammatically restricted to consist of focal target focal targets compatible with the focusing in *only*'s syntactic sister.[11] This is inherent to the type of argument made here: *only* is used to detect a focus, independent of a contextual focal target (without *only* there would be no reason to suspect that there is a narrow focus on *John* in (16)).

---

[11]The argument as presented also presupposes that the focusing associated with *only* remains 'active' as a contrastive focus outside of the c-command domain of *only*, *pace* Rooth (1992b); while I take this to be hardly controversial (see in particular Schwarzschild, 1993, for arguments), the argument does not hinge on this at all: what is relevant is the focus associated with *only*, the background of which is not given. Whether there is a free, answer focus in (16) is not relevant.

Again, let me conclude this section by dissecting the argument further: Kadmon and Sevi's (2011) (16) alone illustrates the validity of Claim (17) on the preceding page, without the parentheses, which lends support to the more general claim made here that focal targets need not be contextually salient. The generalization about *when* this is possible is specified in the parentheses in (17). Note that it could not be stated without differentiating between the pragmatic concepts of 'being in the background' and 'being given' on the one hand, and the prosodic concept 'being prosodically demoted' on the other —thereby providing motivation for the introduction of the latter.

Standard systems of focus interpretation interpret patterns of F- and/or G-markers. The prosodic realization of these markers (in terms of prosodic reversal, or deaccenting, for that matter) is governed by independent realization principles such as 'stress F', 'don't stress G', or focus projection rules relating F-markings to accents. Rules of focus *interpretation* do not make reference to either stress nor accents directly. But, as just pointed out, neither 'being G-marked' nor 'being in the background of a focus' correspond to 'being prosodically demoted' one-to-one. Being prosodically demoted entails both being given and being in the background, but asymmetrically so, which is why (17) —or any theory that derives it— cannot be stated in terms of G- or F-marking.

While one could presumably *add* the notion of 'prosodically demoted' to a theory of interpreting F/G-markers (with or without a marker of its own), the system of unalternative semantics achieves the same results in an arguably more parsimoneous way: focal targets, too, are calculated directly off the metrical tree.

4.2 Non-given targets for contrastive focus: Convertibles

Wagner (2006, 2012) points out the surprising contrast in (18).

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

Wagner argues, correctly I think, that (18b) is odd because 'he brought a red convertible' cannot contrast with 'he brought an expensive convertible'. Two of the core claims of the present paper directly reflect that insight: that givenness of *convertibles* alone is not sufficient to license prosodic demotion, and that focusing involves true contrast. In the present context I want to show that, in addition, examples like these also require the third of our assumptions: that focal targets need not be contextually salient (*pace* Wagner, 2006, 2012). Before doing so, in section 4.2.2 below, though, it is time to clarify the notion PROPER QUESTION,

which, in the present paper, implements the intuition that some alternatives truly contrast and others do not.

4.2.1 Proper question

As said in 3.3, the PROPER QUESTION clause (10b) in the definition of the squiggle above is meant to restrict focal targets to questions whose answers, intuitively, contrast; for any two propositions p, p' in it, it should sound felicitous to say 'p, not p''. This should, among others, exclude questions like those in (19).

(19)   a.   Did you use a hammer, or a tool?
         b.   Is this car expensive or red?

Formally, I approximate this by the following definition:

(20)   a set of propositions Q is a **proper question** iff

    a.   for any $p \in Q, p \setminus \bigcup(Q \setminus \{p\}) \neq \emptyset$
        ('p and none of the others in Q' is coherent)

    b.   for any two $p, p' \in Q$, if '$p \,\&\, \neg p'$' entails some $p*$, but p alone does not (even contextually) entail $p*$, then for some $P \subseteq Q, P$ must jointly (contextually) entail $p*$
        (consequences of negated answers must themselves be answers)

(20a) excludes any two p, p' of which one entails the other (such as (19a)), but also any $p, p', \ldots p^x$ whose negations jointly ('neither p nor p' nor$\ldots p^x$') exclude another $p* \in Q$. To understand the latter, take the question 'what kind of wine did Kim bring?', assuming for simplicity that 'what kind' ranges only over the colors or countries of origin, and that all wines are either red or white, and either French or Italian. This question is not a proper question in the sense of clause (20a), since if Kim brought neither red nor white wine, she brought no wine at all, and that excludes bringing French wine (as well as bringing Italian wine). The more specific questions 'did Kim bring white or red wine?' and 'did Kim bring French or Italian wine?', on the other hand, are both proper, since non-red wine allows for bringing white, and non-French for Italian wine (and nothing changes if more colors, or countries, respectively, are added). So intuitively, clause (20a) excludes answer alternatives along 'different dimensions'.

It does not yet rule out alternative questions like (19b), which are, in a manner of speaking, random subsets of the kind of question just excluded; 'expensive, but not red', as well as 'red but not expensive' are both coherent. Enter clause (20b), which requires Q to be 'complete': since 'red but not expensive' entails 'inexpensive', there must be another $p'' \in Q$ which —possibly together with other $p* \in Q$— entails 'it is inexpensive'. The question {**it is expensive, it is inexpen-**

sive, it is red, it is non-red}, for example, would meet this requirement. But that question is excluded again by clause (20a) on the preceding page.[12]

The denotations of run-of-the-mill constituent questions like *Who was there?* will either automatically qualify as proper questions, or be easily turned into them by exhaustification. Returning to the example in (18), {**he brought a cheap convertible, he brought a high-end convertible**} is a proper question, {**he brought a cheap convertible, he brough a red convertible**} is not, for reasons analogous to those discussed for (19b): as it is, it is not complete (by clause (20b) is should contain 'he brought a non-cheap convertible' as well as '…a non-red convertible'), and, were it completed, it would not be coherent ('he brought a cheap, not non-cheap, not red and not non-red convertible' is a contradiction, in violation of clause (20a)).

With this much in our tool box we now turn to the question what the focal target in the *convertible* examples really is.

4.2.2   The domain of *convertible* foci

Wagner (2006, 2012) suggests that the contrast between (18a) and (18c) can be dealt with at the level of the nominal: 'cheap convertible' contrasts with 'high-end convertible', but 'red convertible' does not. Since 'high-end convertible' is made salient by the previous utterance, this analysis only requires contextually salient focal targets.

However, Katzir (2013) shows that the domain of contrast, and hence the focal target, needs to be bigger than assumed by Wagner. Katzir notes that 'red convertible' and 'high-end convertible' may very well be intuitively contrastive —as witnessed by the deaccenting of *convertible* after *red* in example (21b).[13]

(21)   (The people in this club are very particular about the cars they collect. Mary, for example, collects high-end convertibles.)
  a. And John collects CHEAP convertibles.
  b. And John collects RED convertibles.

Evidently, the larger domain of the focus makes the difference here: {**John collects red convertibles, John collects high-end convertibles**} is a proper question as defined in section 4.2.1.

By analogy, the domain of the focus in example (18) above should then be *brought a cheap convertible*; that, however, does not have a salient target (we

---

[12]The reference to '*contextual* entailment' in clause (20b) is intended to cover the intuition that (19a) and (19b) may qualify as proper questions in very specific contexts in which a hammer is not considered a tool, or red cars are never expensive.

[13]His (20), with *high-end* where Katzir has *expensive*, to guarantee minimal contrast with Wagner's example.

have 'high-end convertible' and 'bring something for the wedding', but not 'bring a high-end convertible'). So. . .

(22) CLAIM: focal targets for a free focus domain need not be contextually salient.

One might still argue with (22): in Katzir's example (21), the focal target 'collect high-end convertibles' actually *is* given. And we still haven't established that the focus domain in Wagner's (18a) *must* be bigger than *red/cheap convertible* (which has a salient focal target). Perhaps the NP is sufficiently large a domain in (18a) to establish a contrast between high-end and cheap convertibles; perhaps only the 'red'–'high-end' contrast in (21b) requires the larger domain (which, again, *does* have a salient focal target).

Examples like (23) are needed to complete the argument. Here, deaccenting *convertible* is odd, even though *cheap convertible* does have a contextually salient focal target in 'expensive convertible'.

(23)   (Yesterday, I left my expensive convertible at home and took the bus. As luck would have it,. . .)

    a.   #the bus was hit by a CHEAP convertible
    b.   the bus was hit by a cheap CONVERTIBLE

    (. . . and never got me where I needed to go).

Intuitions are again quite clear in this case: It is irrelevant whether the bus was hit by a cheap or by an expensive convertible; that question is not a relevant focal target. This jibes with the general spirit of the Wagner/Katzir position that focussing is contrastive, but it also shows that contrastiveness cannot be established at the level of the NP. If the contrast 'high-end convertible' v. 'cheap convertible' (without regard to any larger constituent) were sufficient to license deaccenting in Wagner's (18a), there is no reason it shouldn't be in (23). If, on the other hand, one always needs to consider a larger, perhaps propositional,[14] domain to establish contrast and relevance, we can correctly rule out (23) and (18b), and rule in (18a) and (21b); provided we allow, at least for the case in (18a), a focal target that is not contextually salient —Claim (22).

Before leaving the world of convertibles we need to revisit one potential loophole in ruling out (18b): why can we not simply take the focal target to be, for example, 'he brought a blue/non-red convertible', which would truly contrast with (18b)? The fact that 'he brought a blue/non-red convertible' is not contextually salient cannot be the problem, given present assumptions.

---

[14]Which is arguably a consequence of Katzir's approach. A crucial case to investigate this further are *farmer* examples as discussed in Rooth (1992b); I have to leave this for future research.

Arguably, the focal target 'he brought a blue convertible' can be ruled out by reason of identifiability. Unlike in the case of 'used'–'new' in section 2.2 above, there are many different, equally plausible alternatives to red —blue, green, white etc.—, so the hearer cannot know which of these the speaker would have in mind. The case of 'he brought a non-blue convertible', on the other hand, is different. I assume that in general, the negation of the focused sentence (or more technically: the exhaustified disjunction of all possible focal targets) is an identifiable focal target. This is what is arguably going on in example (24).

(24)   (Like most girls, Mary went through an 'all pink' phase, followed by an 'I hate pink' phase. Unfortunately, her godfather, who has a teddy bear factory, wasn't aware of the change and) brought her a PINK teddy bear.

Note that in (24), there is no specific contextually salient alternative —'white teddy', 'brown teddy'...; rather, we understand the focusing to contrast with 'rather than a teddy of any other color than pink'. Since the context does not mention 'non-pink', I conclude that this potential focal target is identifiable as a kind of default. Moreover, the context in (24) makes the contrast between pink and non-pink teddies relevant, which is, I submit, where (24) differs from (18b): even if 'non-red convertible' is IDENTIFIABLE as the intended focal target in (18b), the question whether the convertible Mary's uncle brought was red or some other color does simply not seem RELEVANT in the context —unlike whether the teddy Mary got was pink or not.

It is important to stress that relevance is a stronger condition than informativity. Given that (18c) is an acceptable answer, we must conclude that the color of the convertible is interesting enough to merit mentioning in general, as it is informative to the hearer(s). The point is that it is not *crucial*. Nothing else of interest would follow if the convertible had been non-red. The focus in (18c), on the other hand, is presumably on *red convertible*. This means that the focal target would be 'he brought something other than a red convertible'; this is already more promising, since evidently, the question what he brought is relevant in (18), so it *will* make a difference whether he brought a red convertible or, say, a cake cutter.

4.3   Non-given targets for 'Anaphoric Deaccenting'

Wagner's (2006; 2012) *convertible* argument does not just argue that there *is* such a thing as truly contrastive focus, it argues that *all* focusing is contrastive (how else to rule *out* a case?). This presents a conundrum, since the original impact of examples like (25) was precisely to argue that, since there was no narrow contrast target for *make* ('eat French toast'?; 'buy French toast'?), this could not be (contrastive) focussing but had to be (anaphoric, non-contrastive) givenness deac-

centing (Ladd, 1980).

(25)   (Let's have some French toast! —) I've forgotten how to MAKE French toast.

Wagner (2012), discussing parallel examples like (26), suggests that, *pace* Ladd, the focus here is not narrow, but broad, on *a police officer arrested* (after movement of *Smith* to a position external to it).

(26)   (Smith walked in. A minute later,) a police officer arRESted Smith.

Wagner argues that *a police officer arrested* (or: the property of being arrested by a police officer) contrasts with 'walk in' in (26). Intuitively, however, these two feel hardly more contrastive than 'red' and 'high-end'. And in fact, neither by Wagner's (2012) own condition on the *red convertible*-type deaccenting, nor by Katzir's (2013) more elaborate condition, does 'being arrested by a police officer' qualify as a contrasting with 'walking into the store'.[15] Wagner (2012) has to assume two distinct focus conditions —a truly contrastive one along the lines spelled out by Katzir— and a barely (if at all) contrastive one to capture cases like (26), each with a different syntactic domain of application, stipulated so as to fit the observations. In fact, no existing theory has, to my knowledge, succeeded in formulating a single focus condition that is at the same time contrastive enough to rule out 'red convertible'–'high-end convertible' type juxtapositions, and non-contrastive enough to allow juxtaposing 'walk into the story' and 'get arrested by a police officer'.

The missing piece, I want to suggest, is to permit that the focal target in examples (25) and (26) need not be contextually salient. The focussing on *the police arrested* does not relate to a contextually salient property like 'walk in' as its focal target; rather, its focal target is 'Smith wasn't arrested' or 'Smith's store visit commenced without unexpected interruptions'.[16] These *do* form proper questions in the sense of 4.2.1, and they are relevant; they are just not contextually salient.

   An entirely parallel story suggests itself for the *French toast* type of example. Again, focus here is wide, on *forgotten how to make*. But the contrastive target for 'forgotten how to make French toast' is not 'have French toast', but 'know how to make French toast'. That in turn is not contextually salient, but that does

---

[15]Conversely, the True Contrast condition Wagner does apply to cases like (26) would, if extrapolated to the A+N cases, equally permit {**he brought a red convertible, he brought a high-end convertible**} as a proper question.

[16]I thus concur with Wagner that *a police officer arrested* is interpreted as the focus in example (26), with *Smith* as its background. Unlike Wagner (2012) I am not committed to analyzing *a police officer arrested* as a syntactic constituent. The official implementation using unalternative semantics allows for discontinuous foci (as well as discontinuous backgrounds).

not matter. Deaccenting of *toast* on the other hand, is only possible because it is
—also— given.

Like these narrative sequences, the usual cases of anaphoric deaccenting in question–
answer focus do not easily fit the mold of the 'contextually salient target' view
either. Take example (27).[17]

(27)   (What did KIM's mother do when you complained about Kim's behavior? —) She
        deFENded Kim.

Neither *defended* nor *she defended* find an obvious contrastive target in this mini-
context;[18] this is why deaccenting *Kim* is usually seen here, too, as a reflex of
(privative) givenness of *Kim* alone. On the other hand, privative givenness, re-
call, would wrongly allow deaccenting of a given element in the *red convertible*
example (18b) above —Wagner's original argument for contrastiveness.

   Under the present proposal, we get the best of both worlds. A fitting focal
target for (27) is 'Kim's mother shared your criticism of Kim's behavior' (which
again seems to jibe with intuitions). That takes care of the focussing. That *Kim*
is given merely is a precondition for expressing that focussing by post-focal deac-
centing (rather than, say, two intermediate phrases).

4.4   Non-given targets in contrastive and answer focus

In the discussion of the contrastive focus example (14) in section 3.4 above, re-
peated here, I already indicated how these should be analyzed within the present
proposal: the focal target is the alternative question formed from the meanings of
the utterance to be corrected and of the correction itself.

(28)   (Kim likes chocolate. — No,) Kim HATES chocolate $\sim C_{\{Kim\ likes\ chocolate,\ Kim\ hates\ chocolate\}}$

On this analysis the focal target (the value of C) is not itself contextually salient,
providing another instance of the pattern being documented in this section; this
will generally be the case for contrastively used foci.

   This case is less pressing empirically, though. If, as in Rooth (1992b) we had
given a disjunctive definition of the $\sim$operator —with one clause for questions
focal targets (Rooth's 'Set Case') and another for declarative focal target (the 'In-
dividual Case')— we could analyze (28) by making 'Kim likes chocolate' itself
the focal target, so no 'derived' focal target question would be required.

---

[17]Slightly modified from Schwarzschild's (1999) example (9).

[18]'she is-the-mother-of' may qualify in a very technical sense such as Schwarzschildian
GIVENness, but it certainly should not count as Truly Contrastive in Wagner's.

The present proposal, on the other hand, cashes out the intuition that the relation between contrasting utterances like those in (28) is essentially the same as that between an answer to a constituent question and the other potential answers to that question: proper contrast. This is possible because the meaning of the targeted utterance may be 'transformed' into a question, used as the focal target.

Some proposals have attempted to go the same route, but in the opposite direction. Discussing *The POLICE arrested Smith* as an answer to *Who arrested Smith?*, Wagner (2012:sec.1.2.6) argues that. . .

> '[t]he context makes available a set of propositions of the form *x arrested Smith* [. . .] [T]he stress shift an be explained in the same way as we would explain it if the context included the statement *Sally arrested Smith*.'

In other words, the answer focus/set case is assimilated to the contrastive focus/individual case, not the other way around, by picking one individual answer as *the* contrasting element. Empirically, these two strategies probably converge on the same predictions. I would argue that it is conceptually more plausible to think that a focal target can be identified by all participants, as is implied by the present proposal; note that, on Wagner's proposal, the addressee will not actually know *which* other potential answer the speaker of the answer is intending to contrast with —if indeed they are (and not just relating to the question as a whole).

What is more crucial to note in the present context, though, is that on Wagner's proposal, too, examples like (28) require focal targets that are not contextually salient. Note that the above quote contains the phrase 'make available' to characterize the relation between the question *Who arrested Smith?* and any one of its potential answers, e.g. 'that Sally arrested Smith'. But note that *that particular* answer is not contextually salient in the sense the term is usually used. For example, it is not possible to deaccent the corresponding clause in an answer to the constituent question, as (29) shows.

(29)   (Who arrested Smith. —)
      a. #I REAlly DOUBT that Sally arrested Smith.
      b.   I REAlly doubt that SALLy arrested Smith.

On the other hand, if the context includes the actual statement, thereby making it given, as in (30), such deaccenting is flawless.

(30)   (Sally arrested Smith. —) I REAlly DOUBT that Sally arrested Smith.

This shows that the equivocation in the above quote from Wagner (2012) is not correct. Nor is, accordingly, the underlying premise of the argument in that paper that an answer focus can, in the general case, be analyzed as directly contrasting

with a single *contextually given* proposition. The bottom line is: Answer focus and contrastive focus can only be unified at the price of admitting non-salient focal targets; whose existence, of course, is the very point argued here.

4.5 Why contrastive focal targets are not accommodated

How different is the position taken in the present paper —that the focal target of contrastive focusing may be discourse new, as long as it is relevant and the addressees are able to identify it— from one that invokes ACCOMMODATION to maintains that all focusing is anaphoric (and, hence, that all focal targets must be contextually salient)? Cases of (apparently) non-salient focal targets then would really just be cases of 'accommodating saliency': the focal target is treated *as though* it had been contextually salient. Wagner (2012:119) contemplates (and arguably adopts) this latter position, saying e.g. in the context of example (31) that 'maybe the question "what kind of wine shall we get?", clearly relevant . . . , is accommodated here —it's as if someone had asked it, but it was not necessary to say it out aloud because it's quite an expected next step'.

(31)   A: Shall we bring some wine to the party?
        B: Yes, let's bring some FRENCH wine.

Of course, (31B) is also compatible with the present analysis, in particular since *wine* is evidently given, regardless of whether the question 'what kind of wine shall we bring?' is. To tease the two positions apart, we need to look at examples in which the putatively accommodated question contains concepts that are *not* contextually salient, for example (32).

(32)   (Let's go to Kim's party! —) Yes, # let's bring some FRENCH wine.

Surely the *content* of the question that would need to be accommodated —'wine from which country should we bring?'— is as clear in (32) as it was in (31); the same, I would argue, is true for the relevance of the question. So why, then, should that question —once accommodated— not license the deaccenting? On the present perspective, the problem is simply that *wine* is given in (31), but not in (32) (this same point was already illustrated by the *printer* examples in section 2.2 above). On the 'accommodated question' perspective an explanation for the contrast seems to be missing.

Strictly speaking, I did not demonstrate that e.g. the question 'what kind of wine should we bring?' has not been accommodated in (31) or (32);[19] I have merely

---

[19]Given the general lack of consensus about what accommodation is and how to detect it, I wouldn't know how.

shown that, even if accommodated questions exist, they do not have the same effect on prosody 'as if someone had asked' them: they do not license deaccenting (of a focal background) —otherwise the hallmark of things that were actually said. Once we agree on that, I do not see much use for a concept like 'treated as though it had been uttered, except it does not license additional deaccenting', though strictly speaking I would not know how to show that it does not exist.

5   Double Focus without Double Givenness

I want to close the empirical part of this paper with a look at another phenomenon that I believe to illustrate the dissociation of 'background' and 'given', and offer a novel perspective on ways to analyze it.

5.1   Double Focus

Kehler (2005) and Büring (2012) discuss the contrast between (33) (from Schwarzschild, 1999) and (34).

(33)   John cited Mary, but...
    a.   ...he DISSED SUE.
    b.   ?...he dissed SUE.

(34)   Fred read the menu and then...
    a.   ...he ordered a HAMburger.
    b.   #...he ORdered a HAMburger.

Starting from intuitions again, (33a) seems to be a case of DOUBLE CONTRAST: *dissed* is contrasted with 'cited', and *Sue* with 'Mary'. No comparable contrast between ordering and reading, or the menu and a hamburger exists in (34a). If the prosodic pattern indicated by double capitalization —by assumption an INTERMEDIATE PHRASE accent on V, followed by an intermediate phrase break between V and object— indicates double contrast, the infelicity of (34b) is explained.

In this section I want to pursue an analysis that cashes in on this intuition. A crucial ingredient to this will be —again— that focal targets need not be contextually salient; therefore, the focal targets in (33a) can be 'did he diss Sue, or Mary?' and 'did he quote, or diss Sue?' A second ingredient is that *Sue*, not being given, cannot be prosodically demoted, so other means are required to realize narrow focus on *dissed*, namely the pattern with two intermediate phrases, each with its own nuclear pitch accent. This aspect of the analysis is novel and requires some additional machinery, to be introduced in section 5.2. In a nutshell, a sentence

with two intermediate phrases will be allowed to have two sets of potential focal targets ($\approx$ two sets of focus alternatives). Corresponding to these, there are two squiggle operators, each retrieving one of those, and each accompanied by a different focal target, call them $C_{dissed/quoted}$ and $C_{Mary/Sue}$, the two questions mentioned above.

Before going into the technical details, however, let me motivate a little more the assumption that there may be two sets of potential focal targets in a sentence like this. To do so, I will again use sentences with focus-sensitive particles. (35) shows that the narrow focus on V can serve as the associate to such a particle.

(35)   (John quoted Mary at great length but) he only MENtioned SUE.

In the context given in (35) we understand *only* to exclude John discussing Sue to any greater extent than mere mention, i.e. the alternatives here are '$R^{\backslash mention}$ Sue'. (36) demonstrates the parallel fact for interpreting the object as focused: John did not quote anyone but Sue.

(36)   (John used insights from various scholars, but) he only QUOTed SUE.

Finally, (37) —though somewhat contrived— completes the demonstration; here we see that both foci may be used by two different particles within the same structure.

(37)   John's discussion of other peoples' work was sketchy, as usual. But at least their work was discussed a little bit. He only only CITED SUE.

'the only person he merely cited (not discussed even a little bit) is Sue'

The crucial point about all these cases is that the alternatives *only* quantifies over —'John R-ed Sue' in (35) (and (37)), 'John quoted x' in (36), and 'John only cited x' in (37)— are not contextually salient. That is, any analysis on which the restriction on *only* needs to be anaphoric runs into problems with cases like these. An analysis on which the restriction on *only* is merely constraint by focus does not, provided we allow for non-anaphoric focal targets —the line of analysis pursued in the present paper.

5.2   Prosodic Domain Splitting

How to derive two sets of potential focal targets of these structure? Prosodic configurations like that in (33a) are beyond the reach of the purely relational metrical representation assumed so far: what is special about it is not that relative metrical

weights between sisters are reversed, but rather that the *absolute* metrical weight of one element is greater than expected. Concretely: The stress/accent on *dissed* is stronger than a regular pre-nuclear accent, perhaps even equally strong to that on *Sue* (again, something not expressible in standard relational metrical trees), but the stress/accent on *Sue* is what is expected, i.e. *Chris* is not prosodically demoted.

As said earlier, I will assume that there is an intermediate phrase boundary between *dissed* and *Sue*, so that each of the two pitch accents is nuclear (regardless of the question whether one of them is eventually stronger, being the head of a higher prosodic category such as the intonational phrase). For all intents and purposes we may see example (33a) above as the realization of a mother node with *two* strong daughters. The anticipated result is shown in structure (38).

(38)
$$VP$$
$$R^{\backslash dissed}\text{ sue}, R^{\backslash dissed}\text{ sue}$$

DISSED$_{\text{s}}$ SUE$_{\text{s}}$

The two restrictions are clearly incompatible; trying to unify them would exclude any alternative whatsoever. The structure thus genuinely has two separate sets of unalternatives, i.e. two different focussings, that need to be related to two separate focal targets (whence the comma between the two restrictions, see below for an implementation).[20] How do these come about? The weak restriction $R^{\backslash dissed}$ sue is what is expected since the default strong daughter *Sue* is not prosodically demoted. The strong restriction $R^{\backslash dissed}$ sue is what we would get if prosodic reversal had taken place and *dissed* were the (non-default) strong daughter. So far I have not been precise about whether Strong Restriction is invoked by prosodic promotion or by prosodic reversal, since both always went hand in hand. Taking into consideration the case of 'equalization' in (33a)/(38) we can now see what the correct choice is: Strong Restriction happens whenever a node is stronger than predicted by default; this is the case in prosodic reversal, but also in prosodic promotion without concomitant demotion, i.e. equalization.

The overall picture then can be summarized as follows:

(39) a. if the structurally designated strong daughter is in fact strong, apply Weak Restriction (in addition to Propagation)

   b. if the structurally designated weak daughter is not in fact weak, apply Strong Restriction (in addition to Propagation)

   c. if the structurally designated strong daughter is not in fact strong, it

---

[20]In Büring (2015) I argue that nodes for which the result of Weak/Strong Restriction is incompatible with those of Propagation are ill-formed. I have to assume that only a conflict between the two types of Restriction can be resolved by having two disjoint sets of unalternatives.

must be given

Clause (39c), the givenness condition, does not apply in example (33a) above, since nothing has been prosodically demoted. Unlike in previous cases, clauses (39a) and (39b) on the previous page *both* apply in (33a)/(38): *dissed*, being stronger than by default, triggers a set of strongly restricted focus alternatives: '$R^{\backslash dissed}$sue'. *Sue*, being strong by default and in reality, triggers a set of weakly restricted focus alternatives '$R^{\backslash dissed}$ sue'.

S
$\emptyset$

S
x $R^{\backslash dissed}$ Sue

$\sim C'_{\{he\ quoted\ Sue,\ he\ dissed\ Sue\}}$

S
x $R^{\backslash dissed}$ Sue, $Q^{\backslash he\ dissed}$ Sue COMBINED

$\sim C_{\{he\ dissed\ Mary,\ he\ dissed\ Sue\}}$

$y^{\backslash he}$ dissed Sue WEAK RESTRICTION
x $R^{\backslash dissed}$ Sue, x $R^{\backslash dissed}$ Sue PROPAGATION

he VP
$R^{\backslash dissed}$ Sue, $R^{\backslash dissed}$ Sue STRONG AND WEAK RESTRICTION
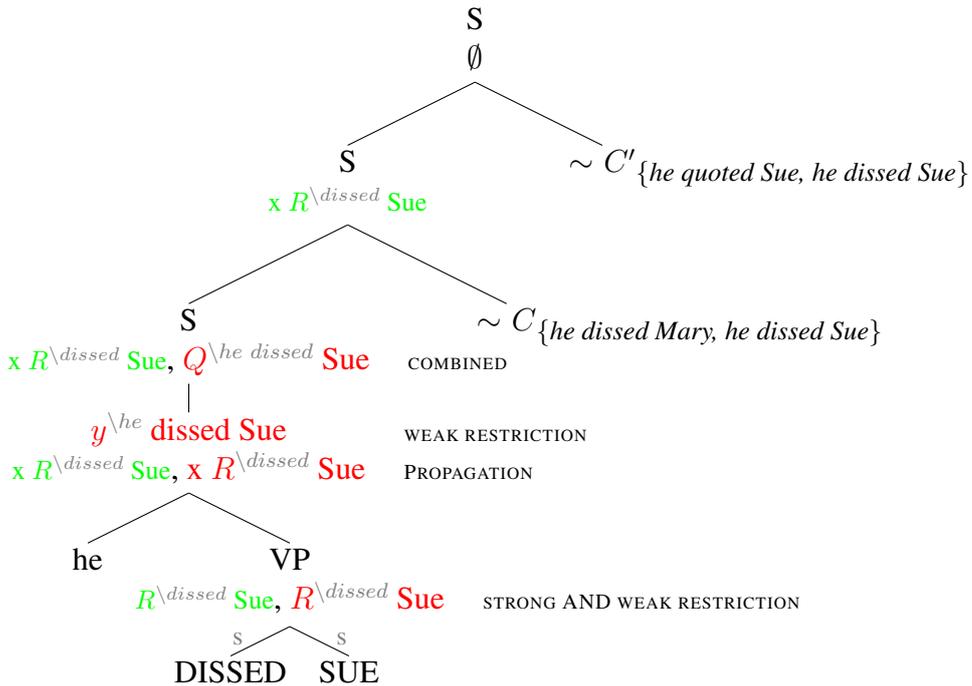
s   s
DISSED SUE

Figure 5: Full derivation for a double-focus example; for perspicuity, restrictions are removed where they are matched by a squiggle/focal target. The question {**he dissed Mary, he dissed Sue**} here corresponds to the contrast 'he dissed Sue, not/unlike Mary'.

A full derivation for example (33a) is given in figure 5, where the two 'foci' are retrieved by two separate squiggles, each relating them to a different focal target.

Summing up, the double focus configuration is one where two metrically equally strong sister constituents introduce incompatible restrictions on their focal targets. To get the analysis of these off the ground it is crucial that the individual focal targets need not be contextually salient (this is the part where the analysis in Büring, 2012, actually failed). A side-effect of this configuration is that the backgrounds of the two foci are not subject to the givenness condition. Put differ-

ently, the double focus configuration may generally come to the rescue where an intended focus cannot be realized by prosodic demotion. For example, the contrast intended in the earlier inacceptable examples (3), repeated in (40) below, can be felicitously rendered with a double-peak pattern instead, as in (41).

(40)   a.   (The store across the street sells refurbished computers, but)
            # we sell NEW printers.
       b.   (This store sells new and refurbished computers, but)
            # it only sells NEW printers.

(41)   a.   (The store across the street sells refurbished computers, but)
            we sell NEW PRINTERS.
       b.   (This store sells new and refurbished computers, but)
            it only sells NEW PRINTERS.

Once the possibility of this kind of configuration is realized, one actually finds them not infrequently. As Max Prüller (p.c.) pointed out to me, example (42), from Büring (2013/15), presupposes that the quantificational domain of *only* can be 'where should one wear sweat pants?', which does not seem to have to be contextually salient for the entire sentence to be felicitous.

(42)   (One should only wear hats outside, just like) one should only wear SWEAT pants at HOME.

I (conveniently) overlooked this riddle in Büring (2013/15), which shared the assumption that all quantificational domains for focus-sensitive elements must be anaphoric. Given what is proposed in the present paper, example (42) no longer constitutes a conundrum: there is no deaccenting of *sweat pants*, hence no givenness requirement. The focus on *at home*, on the other hand, relates to the QUD 'where should one wear sweat pants?', which is identifiable, relevant and proper in this context.

6   Summary

This paper argued for a number of distinct, yet interconnected claims: that prosodic demotion, but not backgrounding in general, is subject to an anaphoric givenness condition. That focusing is generally contrastive, but that its focal target need not be contextually salient. And that prosodic demotion always requires focusing in a larger domain (in addition to givenness of the demoted constituent). A particularly noteworthy consequence of this is that there cannot be such a thing as 'pure givenness deaccenting' or 'anaphoric deaccenting', a position empirically forced

upon us anyway by the *convertible*-type examples.

The present paper is, I believe, the first to propose a complete and reasonably formalized analysis of this empirical domain. The main obstacle to this in the past was, I would argue, the incompatibility of a strongly contrastive view of focussing (as necessitated by the *convertible*-examples) with an anaphoric view of focal targets: overt focal targets are in many instances —like focus in answers or apparent anaphoric deaccenting— not properly contrastive, necessitating a weak and, in some cases overly permissive, condition on focusing, like those in Rooth (1992b) and Schwarzschild (1999). On the other hand, any alternative approach that completely jettisons the anaphoricity of focal targets and instead freely allows focal targets (then usually called QUDs) to be accommodated or simply introduced implicitly is in need of a supplementary theory of what I here called prosodic demotion, so as to rule out prosodic demotion of non-given elements, as discussed in section 2.2 above. In the present paper this is accomplished by making privative givenness a necessary and inviolable, but not sufficient, condition for prosodic demotion —again a position I believe to be unique to the present proposal.

Formally, the proposal was couched in terms of unalternative semantics, rather than the more traditional alternative semantics of the kind introduced in Rooth (1985, 1992b). As mentioned in several places, the central positions mentioned just above could presumably be implemented in other frameworks as well. This is certainly true for the assumptions that focusing need not be anaphoric, but is always contrastive, which could directly be superimposed onto a Rooth-style system. Things are a little trickier when it comes to the generalizations about non-default prosody argued for here, since the notion of prosodic demotion has no counter-part in terms of F-marking, or accenting, or absolute stress, relying, as it does, purely on the metrical, relational default/non-default distinction. It is a hallmark of unalternative semantics that exactly the same distinction, and only it, is referred to in the calculation of focus alternatives. As such, it sits particularly well with the overall picture advocated in the present paper which can be somewhat provocatively, but I believe accurately, described as claiming that the notions 'focus/background of a domain' have no role to play in the grammatical analysis of the phenomena at hand.

7   Appendix: Definitions

The basic rules of unalternative semantics are summarized in more formal form in definitions (43)–(47) below. A restriction in the sense used above is, technically speaking, a set of unalternatives, i.e. the same type of semantic object as Rooth's focus semantic values (namely sets of ordinary meanings). Since a single node can be associated with more than one restriction, I introduce the function $[\![\ ]\!]_{\mathcal{U}}$

which maps a syntactic (sub)tree onto a set of restrictions (i.e. a set of sets of unalternatives).

As in standard Roothian alternative semantics, restrictions/unalternative sets, once introduced, are *propagated* to a mother node κ by point-wise combination of the unalternatives of the daughters. This combination may be by means of function application, or whatever other rule the ordinary compositional semantics use for a node like κ. I agnostically write $\oplus_\kappa$ for the ordinary composition rule, and $\otimes_\kappa$ for the same rule applying to sets of meanings (for example, if $\oplus_\kappa$ is rightward function application, $[\![[_\kappa \alpha \, \beta]]\!]_{\mathcal{O}} = [\![\alpha]\!]_{\mathcal{O}} \oplus_\kappa [\![\beta]\!]_{\mathcal{O}} = [\![\alpha]\!]_{\mathcal{O}} ([\![\beta]\!]_{\mathcal{O}})$, and $[\![[_\kappa \alpha \, \beta]]\!]_{\mathcal{F}} = [\![\alpha]\!]_{\mathcal{F}} \otimes_\kappa [\![\beta]\!]_{\mathcal{F}} = \{a(b) \mid a \in [\![\alpha]\!]_{\mathcal{F}} \ \& \ b \in [\![\beta]\!]_{\mathcal{F}}\}$).

I first define semantic operations that calculate Propagation, Weak Restriction and Strong Restriction based on single meanings and single restrictions.

(43) Let τ_w, τ_s be semantic types, and $\mathcal{W}, \mathcal{S}$ be sets of meanings in $POW(D_{\tau_w})$ and $POW(D_{\tau_s})$ respectively, and κ be a syntactic configuration s.t. the standard composition operation $\oplus_\kappa$ for κ can compose a member of $\mathcal{W}$ with a member of $\mathcal{S}$ (i.e. the domain of $\oplus_\kappa$ is $D_{\tau_w} \times D_{\tau_s}$), then the **Propagation** of $\mathcal{W}$ and $\mathcal{S}$ by κ, $Prop(\mathcal{W}, \mathcal{S}, \kappa)$ is $(D_{\tau_w} \otimes_\kappa \mathcal{S}) \bigcup (\mathcal{W} \otimes_\kappa D_{\tau_s})$[21]

(44) Let τ_w, τ_s be semantic types, ω, σ be meanings in D_{τ_w} and D_{τ_s} respectively, $\mathcal{W}$ be a set of meanings in $POW(D_{\tau_w})$, and κ be a syntactic configuration s.t. the standard composition operation $\oplus_\kappa$ for κ can compose ω and σ (i.e. the domain of $\oplus_\kappa$ is $D_{\tau_w} \times D_{\tau_s}$), then the **Weak Restriction** of ω, σ and $\mathcal{W}$ by κ, $weakRes(\omega, \sigma, \mathcal{W}, \kappa)$, is $(\mathcal{W} \setminus \omega) \otimes_\kappa \{\sigma\}$

(45) Let τ_w, τ_s be semantic types, ω, σ be meanings in D_{τ_w} and D_{τ_s} respectively, $\mathcal{S}$ be a set of meanings in $POW(D_{\tau_s})$, and κ be a syntactic configuration s.t. the standard composition operation $\oplus_\kappa$ for κ can compose ω and σ to yield a meaning in D_{τ_κ} (i.e. $\oplus_\kappa \in D_{\tau_\kappa}^{D_{\tau_w} \times D_{\tau_s}}$), then the **Strong Restriction** of ω, σ and $\mathcal{S}$ by κ, $strongRes(\omega, \sigma, \mathcal{S}, \kappa)$, is $D_{\tau_\kappa} \setminus ((\mathcal{S} \setminus \sigma) \otimes_\kappa \{\omega\})$

Based on these definitions I now define the rules for $[\![\ ]\!]_{\mathcal{U}}$, i.e. the rules associating syntactic structures with sets of restrictions.

(46) for any terminal node α, $[\![\alpha]\!]_{\mathcal{U}} = \{\{\}\}$

---

[21] κ here stands for whatever influence syntax has on semantic composition. Suppose all composition were function application, or at any rate purely type-driven, then κ must give us the semantic types of the daughters as well as their linear order, e.g. $\overbrace{\langle e, t \rangle \quad e}$.
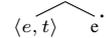
On the other hand, κ could also include information about the syntactic categories of mother and daughter nodes or any other of their morpho-syntactic features, if these are deemed crucial for the choice of semantic composition rule.

(47) for any branching constituent μ with daughters δ_w and δ_s, where δ_s is the metrically strong daughter by default prosody, $[\![\mu]\!]_{\mathcal{U}}$ is the smallest set that contains

a. $Prop(\mathcal{W}, \mathcal{S}) \bigcup weakRes([\![\delta_w]\!]_{\mathcal{O}}, [\![\delta_s]\!]_{\mathcal{O}}, \mathcal{W}, \mu)$ if δ_s is metrically strong in μ

b. $Prop(\mathcal{W}, \mathcal{S}) \bigcup strongRes([\![\delta_s]\!]_{\mathcal{O}}, [\![\delta_w]\!]_{\mathcal{O}}, \mathcal{W}, \mu)$ if δ_w is metrically strong in μ

for all $\mathcal{W} \in [\![\delta_w]\!]_{\mathcal{U}}, \mathcal{S} \in [\![\delta_s]\!]_{\mathcal{U}}$

Condition: If δ_s is weak in μ (prosodic reversal), δ_s is given.

Note: In case (47b), δ_w is the/a daughter that is *actually* metrically strong, and $\mathcal{W}$ are its unalternatives. Accordingly, δ_s corresponds to ω in definition (45) on the previous page, δ_w to σ and $\mathcal{W}$ to $\mathcal{S}$.

8   Appendix: The Relation between Givenness, Background and Deaccenting

This paper started out from the empirical generalizations that being in the background of a focus is not a sufficient condition for being deaccented; givenness is required, too. This was argued for with the help of examples like (48), repeated from section 2.2 above, in which the attempt to deaccent a non-given item in order to create a narrow focus seems to render the sentences unacceptable as an out-of-the-blue utterance.

(48) a. (The store across the street sells refurbished computers, but...)
      # we sell NEW printers.
   b. (This store sells new and refurbished computers, but)...
      # it only sells NEW printers.

The question whether the background of a focus must be given has not, to the best of my knowledge, taken center-stage in any papers on focus in English. In this appendix I will discuss those few sources in which the question is at least touched upon.

Katz and Selkirk (2011)'s experimental material consists almost exclusively of cases in which a non-given element is in the background of a focus. The result of the experiments reported in that paper is clear: Non-given elements must bear regular pitch accents, even if in the background of a focus. An example is given in (49) ((3A) from their appendix).

(49) Gary is a really bad art dealer. He gets attached to the paintings he buys. He acquired

33

a few Picassos and fell in love with them. The same thing happened with a Cézanne painting.

So he would only offer [that Modigliani]$_F$ $\underbrace{\text{to MoMA}}_{non-given}$.

I bet the Picassos would have fetched a much higher price.

Here, *to MoMA* is clearly in the background of the focus associated with *only*, yet is not (and cannot be) deaccented, confirming our generalization that deaccenting requires givenness, not just background-ness.

One of the few sources to explicitly argue the opposite position is Neeleman and Szendrői (2004), which discusses the SUPERMAN sentence in (50).[22]

(50)   Father: What happened?
         Mother: (You know how I think our children should read decent books.
             Well, when I came home, rather than doing his homework), Johnny
             was reading SUPERMAN to some kid.

According to Neeleman and Szendrői (2004), *(to some) kid* in example (50) is deaccented because it is in the background of a contrastive focus, *read Superman*$_F$ (rather than read decent books). Crucially, *some kid* is not given, yet deaccented.

I take Superman sentences to be the exception, rather than the rule. Structurally parallel cases to Neeleman and Szendrői's (2004) do not in general allow deaccenting of a new element, witness the very questionable status of (51) and (52).

(51)   (You know how I think our children should read decent books. Well, when I came home,
         rather than doing his homework,...)

         a. #Johnny was reading SUPERMAN to some woman.
         b. #Johnny was reading SUPERMAN in the bathroom.

(52)   (I said it is important that our family doesn't hang out with politicians. And yet, at the
         party, instead of staying in the kitchen,) # you introduced the MAYOR to my
         uncle.

Arguably it is significant that the deaccented item in the original Superman sentence (50) was the noun *kid* (rather than *woman*, *bathroom* or *uncle* in (51) and (52)); the context does contain the word *children*, and clearly the speaker's kid (and the fact that he is a kid) is salient in it.

---

[22]The only other one I am aware of is Féry and Samek-Lodovici (2006esp. pp.137ff), but the cases discussed there all involve some kind of *symmetrical* deaccenting.

References

Beaver, David and Brady Clark (2008). *Sense and Sensitivity: How Focus Determines Meaning*. Cambridge: Wiley-Blackwell.

Büring, Daniel (2012). "What's New (and What's Given) in the Theory of Focus?" In Sarah Berson, Alex Bratkievich, Daniel Bruhn, Ramon Escamilla Amy Campbell, Allegra Giovine, Lindsey Newbold, Marta Piqueras-Brunet Marilola Perez, and Russell Rhomieux, eds., *Proceedings of the Thirty-Fourth Annual Meeting of the Berkeley Linguistics Society, February 8–10 2008*, 403–424. Berkeley, CA: Berkeley Linguistics Society.

Büring, Daniel (2013/15). "A Theory of Second Occurrence Focus." *Language As a Cognitive Process/Language, Cognition and Neuroscience* 30(1–2):73–87.

Büring, Daniel (2015). "Unalternative Semantics." In *Proceedings of SALT 25*. available as Ms. University of Vienna.

Büring, Daniel (forthcoming). "Discontinuous Foci and Unalternative Semantics." In *Proceedings of SinFonIJA 8*.

Féry, Caroline and Vieri Samek-Lodovici (2006). "Focus Projection and Prosodic Prominence in Nested Foci." *Language* 82(1):131–150.

Kadmon, Nirit and Aldo Sevi (2011). "Without Focus." In Barbara H. Partee, Michael Ginzburg, and Jurgis Šķilters, eds., *Formal Semantics and Pragmatics. Discourse, Context and Models. The Baltic International Yearbook of Cognition, Logic and Communication, Vol. 6 (2010)*, 1–50. Manhattan, KS: New Prairie Press.

Katz, Jonah and Elisabeth Selkirk (2011). "Contrastive Focus vs. Discourse-New: Evidence from Prosodic Prominence in English." *Language* 87(4):771–816.

Katzir, Roni (2013). "A Note on Contrast." *Natural Language Semantics* 23:1–11.

Kehler, Andrew (2005). "Coherence-Driven Constraints on the Placement of Accent." In Effi Georgala and Jonathan Howell, eds., *Proceedings from Semantics and Linguistic Theory XV*, 98–115. Ithaca: CLC Publications.

Ladd, D. Robert (1980). *The Structure of Intonational Meaning*. Bloomington: Indiana University Press.

Neeleman, Ad and Kriszta Szendrői (2004). "Superman sentences." *Linguistic Inquiry* 35(1):140–159.

Rooth, Mats (1985). *Association with Focus*. Ph.D. thesis, UMass Amherst.

Rooth, Mats (1992a). "Reduction Redundancy and Ellipsis Redundancy." In Steven Berman and Arild Hestvik, eds., *Proceedings of the Stuttgart Workshop on Ellipsis*, no. 29 in Arbeitspapiere des SFB 340, 1–26. University of Stuttgart.

Rooth, Mats (1992b). "A Theory of Focus Interpretation." *Natural Language Semantics* 1:75–116.

Schwarzschild, Roger (1993). "The Contrastiveness of Associated Foci." Unpublished manuscript, Hebrew University of Jerusalem.

Schwarzschild, Roger (1999). "GIVENness, AvoidF and Other Constraints on the Placement of Accent." *Natural Language Semantics* 7(2):141–177.

Selkirk, Elisabeth (2001). "The syntax-phonology interface." In N.J. Smelser and Paul B. Baltes, eds., *International Encyclopedia of the Social and Behavioral Sciences*, 15407–15412. Oxford: Pergamon.

Selkirk, Elisabeth O. (1984). *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge, Mass.: MIT Press.

Stevens, Jon Scott (2013). "Against a Unified Analysis of Givenness and Focus." In *WCCFL 31*. paper presented at WCCFL 31.

Wagner, Michael (2006). "Givenness and Locality." In Jonathan Howell and Masayuki Gibson, eds., *Proceedings of the 16th Semantics and Linguistic Theory Conference*, 295–312. Ithaca: CLC Publications.

Wagner, Michael (2012). "Focus and Givenness: A Unified Approach." In Ivona Kučerová and Ad Neeleman, eds., *Contrasts and Positions in Information Structure*, 102–147. Cambridge: Cambridge University Press.

Williams, Edwin (1997). "Blocking and Anaphora." *Linguistics Inquiry* 28:577–628.