UC Santa Cruz
UC Santa Cruz Electronic Theses and Dissertations

Title

Syntax & Information Structure: The Grammar of English Inversions

Permalink

https://escholarship.org/uc/item/2sv7q1pm

Author

Samko, Bern

Publication Date

2016

Copyright Information

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

SANTA CRUZ

SYNTAX & INFORMATION STRUCTURE: THE GRAMMAR OF ENGLISH INVERSIONS

A dissertation submitted in partial satisfaction
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

LINGUISTICS

by

Bern Samko

June 2016

The Dissertation of Bern Samko is
approved:

_____

Professor Jim McCloskey, chair

_____

Associate Professor Pranav Anand

_____

Associate Professor Line Mikkelsen

_____

Assistant Professor Maziar Toosarvandani

_____

Tyrus Miller
Vice Provost and Dean of Graduate Studies

Contents

4   The pragmatics of VPP   **143**

5   Derivational mechanisms   **187**

6   Conclusion   **205**

References **208**

<div align="center">**Abstract**</div>

<div align="center">**Bern Samko**</div>

<div align="center">**Syntax & Information Structure: The Grammar of English Inversions**</div>

This dissertation examines the relationship between form and function in VP-initial word orders in English. While the questions at its core are old (questions of the interaction between syntactic form and discourse context), they are addressed here with the aid of tools only recently made available. Those tools are in the first place theoretical— the Minimalist framework for syntax and a Question Under Discussion framework for formal pragmatics, but in the second place also methodological. The ability to search large electronic corpora for naturally produced data in full discourse context massively expands our ability to explore subtle interactions between syntactic form and discourse context. The goal of this dissertation is to exploit these new opportunities and in so doing to combine a technically sophisticated syntax with an equally sophisticated pragmatics in a way that gives serious consideration to both components of the grammar and, especially, to the often subtle ways in which they interact. The empirical focus is on *Participle Preposing*, as in (0.1a), and on *VP Preposing*, as in (0.1b):

(0.1)   a. Topping the list for least affordable communities were Laredo, San Francisco and Manhattan.

          b. . . . but criticize him they did.

Much existing work on these constructions incorporates a more or less sophisticated elaboration of the Minimalist model of syntax, but is largely silent on the important question of what effect such complex syntactic mechanisms have on an unfolding discourse. The analyses developrd here aim to be serious about the syntax, but equally serious about developing a pragmatic (and semantic) analysis that is not tailored to the problem at hand but that rather has some independent grounding. The analysis is in turn built on a close examination of patterns which are instantiated across hundreds of

inversions in hundreds of contexts. The combined approach leads to several important insights into the relationship between syntax and pragmatics and the overall picture that emerges is one in which the syntax makes both direct and indirect reference to discourse context.

For Phil, who might have read this

Acknowledgments

This dissertation didn't write itself. I may have been responsible for putting the words on the page, but the ideas those words convey and the order in which they appear owe a substantial debt to the linguistics community I've been fortunate to be a part of for the past seven years. My advisor, Jim McCloskey, exhibited remarkable patience and support as I came to the slow realization that I was not writing a syntax dissertation after all. His comments and professional guidance remained invaluable, even when he didn't share my judgments. The other members of my committee—Pranav Anand, Line Mikkelsen, and Maziar Toosarvandani—provided substantial feedback and asked probing questions. The lively discussions that ensued when they found themselves in the same room were a major source of inspiration. While Amy Rose Deal was not officially a member of my dissertation committee, her perceptive influence can be seen in Chapter 2 of the current work.

More generally, the linguistics community at UCSC has been more welcoming than I could have dreamed when I arrived. A number of faculty members and grad students supported me and my work as I abandoned my initial dreams of being a morphologist, spent a year working on theoretical phonology, and stumbled through syntax on my way to information structure and pragmatics. Judith Aissen, Adrian Brasoveanu, Sandy Chung, Donka Farkas, Jorge Hankamer, Junko Itô, Armin Mester, Jaye Padgett, Nate Arnett, Karl DeVries, Boris Harizanov, Mark Norris, Oliver Northrup, Deniz

Chapter 1

Introduction

1.1 The questions

The goal of this dissertation is to provide answers to a very old set of questions in linguistic theory about the relationship between (syntactic) form and (pragmatic and information-structural) function. I use VP-initial English word orders to probe this set of questions. Broadly, I am interested in the connection between the forms speakers use and the functions they use them for. In the types of examples here, how can we precisely characterize the meaning that speakers assign to non-canonical syntactic patterns derived by movement?

With the answers to those questions in place, I ask how we can make sense of such connections. What exactly are the mechanisms that link the form with the meaning?

At an empirical level, I intend to answer this question by giving particular attention to two VP-initial constructions that have sharply divergent syntactic and information-structural properties. I will then build on this empirical foundation to answer some narrower theoretical questions about the relationship between syntax and information structure.

With respect to the role of information structure in syntax, we can imagine two extreme positions. In the first, movement of consitutents to the left edge is free, and information-structurally infelicitous interpretations are filtered out post-syntactically. In the second, all movement is mediated by features that express more or less specific discourse requirements or correlations. This could be accomplished via either an extremely articulated C layer, or through the proliferation of features that can be borne by a single C head (or by some combination of the two, of course).

The constructions examined in this dissertation shed some light on these complex issues. Participle preposing shows that we need *some* discourse-sensitive features to drive movement. VPP shows that we need *some* post-syntactic felicity calculation. The difference is tied to the differences in the definition of topicality—familiarity vs. topic shift, sentence vs. discourse topic.

1.1.1 Summary of results

The dissertation focuses on two verb-initial word orders in English: participle preposing and VP preposing (VPP). The former is characterized by the word order participial verb phrase–copula–subject; compare (1.1b) to the canonical word order in (1.1a).

(1.1) a. Several visitors from Tampa, Fla. were arriving at Arlington Statium one afternoon in the hot summer of 1988.
       b. Arriving at Arlington Stadium one afternoon in the hot summer of 1988 were several visitors from Tampa, Fla.

VPP displays a verb phrase–subject–auxiliary word order, as illustrated in (1.2b).

(1.2) a. The audience will laugh.
       b. Laugh the audience will.

Chapter 2 presents a feature-driven movement analysis of participle preposing. From a theoretical perspective, the major finding is that information-structure-sensitive

features must be present in the narrow syntax in order to drive A-movement. Section 2.1 introduces the phenomenon and the goal of building an analysis that captures the relevant information structural generalizations without relying on the presence of multiple left-peripheral positions each associated with a particular information structural function. Section 2.2 draws parallels to other related phenomena. The analysis presented in this chapter builds on Rezac's (2006) analysis of locative inversion, the syntactic and information structural properties of which are strikingly similar to those of participle preposing, and Section 2.2.1 discussed that analysis of locative inversion and some of its precursors. Section 2.2.2 presents a brief overview of sentential subjects, which have also been argued to involve a close connection between SpecTP and SpecCP.

The core of the analysis of participle preposing is presented in Section 2.3. In Section 2.3.1, I provide an overview of the syntactic properties of participle prepsosing. I show that the preposed participle is in complementary distribution with a pre-verbal subject, that it can undergo raising, and that it behaves like a subject for the purposes of tag question formation. Section 2.3.2 lays out the pieces of the analysis. There, I claim that the preposed participle undergoes A-movement to SpecTP, followed by a second step of A′-movement to SpecCP. This two-step preposing derives the confluence of A- and A′-properties we see in participle preposing.

Section 2.4 is devoted to the information-structural properties of participle preposing. In Section 2.4.1, I review Birner's work on the information status of the various constituents in participle preposing, and in Section 2.4.2 I report on my own corpus study. A preliminary analysis of these systematically collected examples confirms Birner's generalization that the material in the preposed participle must be at least as familiar as the material in the post-verbal subject. In Section 2.4.3, I incorporate those insights into the syntactic analysis, claiming that the movement of the preposed partici-

ple is driven by the presence of a discourse-sensitive feature on T (inherited from C) and on the preposed *v*P. Section 3.4.3.1 discusses various predictions of the proposed analysis. In particular, I lay out the logic that allows the participial *v*P but no other phrases to move (Section 2.5.1) and allows participle preposing to occur in sentences with *be* but not those with *have* (Section 2.5.2). The chapter concludes in Section 4.6 with discussion of the implications of allowing information structure to exert direct influence over the syntax in the form of features.

Chapters 3 and 4 explore these implications in the context of VPP. Section 3.1 introduces VPP, in which the preposed VP appears to the left of the subject in its normal position. Section 3.2 discusses the syntactic properties of VPP, including the size of the moved constituent and its landing site. I also touch on some previous accounts of the syntax of VPP in Section 3.2.1, though the work discussed in that section has different goals from the investigation in this dissertation. Section 3.3 focuses on the antecedence condition on VPP, and discusses its connection to topicality and the QUD. The conclusion in that section is that a VPP-sentence must have a polar question antecedent that is not the immediately dominating QUD. This pattern of "skipping" back to a previous QUD brings with it the implication theories of the QUD that are strictly stack-based cannot be complete.

Section 3.4 represents a long excursis into the topic of verum focus. Given the state of the literature, the section begins in 3.4.1 by answering the question of what verum focus is. Section 3.4.2 presents several previous approaches to verum focus; these approaches were developed to handle a variety of different constructions, and they all involved special machinery that is not necessary for the analysis of other instances of narrow focus. In Section 3.4.5, I argue for an alternative semantics analysis with no such special machinery. I claim that the analysis of verum focus can easily and fruitfully be assimilated to the analysis of focus more generally.

4

I return to VPP in Section 3.4, where I argue that VPP sentences always express VF. In Section 3.4.5, I discuss the mechanics of the analysis, in which a Roothian ~ operator presupposes a polar question antecedent for the VPP-clause. In Section 3.4.6, I argue against accounts that would treat the VF interpretation of VPP as a purely prosodic or a purely pragmatic phenomenon.

Chapter 4 further develops the pragmatic thread, arguing that VPP has additional interpretive properties that distinguish it from canonical-order VF and cannot be attributed to the semantics. These properties—the possibility of accommodating an antecedent question, and an "emphatic" interpretation—are introduced in Section 4.1. Section 4.2 is devoted to a reexamination of the antecedence requirement on VPP. Rather than strictly requiring a linguistic antecedent, as had been claimed in the literature, I argue that VPP requires a sufficiently salient polar question antecedent that may be overt or may be inferred from the discourse context. The implications of this requirement for theories of the QUD are discussed in 4.3, where I argue that Büring's discourse trees offer the most intuitive understanding of the antecedence restrictions.

Section 4.4 discusses what has been called in the literature a "scalar" emphatic interpretation of VPP. I argue that not only is this emphatic component not part of the at-issue contribution of VPP, its appearance is not limited to VPP-sentences. Emphasis, I argue in Section 4.5, is the result of a particular intonational contour that occurs optionally both in VPP-sentences and in sentences with the canonical word order. Section 4.6 concludes that the phenomenon known as VPP is in fact the clustering of three independent and logically distinct components: verum focus, topicalization that induces an anti-recency effect, and the emphatic intonational contour.

1.2 Syntax

Throughout this dissertation, I assume a syntax informed by the so-called minimalist program (Chomsky, 1995). In particular, I assume that movement is driven by the presence of uninterpretable, unvalued features associated with particular heads. These heads probe their c-command domain and Agree with constituents bearing interpretable, valued instances of the same feature. Both A- and A′-movement are parasitic in this way on the Agree relation. Syntactic structures are built up cyclically via internal and external Merge. Once a phase—the crucial phases in this work being CP and *v*P—is built, it is spelled out and is impenetrable to further extraction operations.

In many ways, the syntactic analyses in this dissertation serve to modernize the pioneering work of Emonds (1976). Both participle preposing and VP preposing, the two foci of the dissertation, are root transformations in Emonds's characterization—movements into positions that are immediately dominated by a root S node. In the first generative syntactic analysis of participle preposing, he identified the construction as one member of a larger class of English preposings around *be*.

The pretheoretical notion that has guided analyses of participle preposing and related constructions is that predicate inversion involves the fronting of a syntactic constituent that corresponds to the predicate. Harwood (2015), for example, argues that progressive aspect is included within the predicate constituent. His evidence is based, in part, on the fact that *being* is obligatorily fronted in predicate inversion constructions,[1] while *have* (which expresses perfect aspect) cannot be:

(1.3) a.   [Also **being** examined for body parts] is the tonnes of rubble being removed from the site.

  b.   * [Also examined for body parts] is **being** the tonnes of rubble being

---

[1] Harwood (2015) cites Hooper and Thompson (1973); Emonds (1976); Heycock and Kroch (1999) as evidence for the claim that the fronted constituent in these cases is in fact the predicate.

removed from the site.

<div align="right">(Harwood, 2015, (35))</div>

(1.4)   a.   [Also examined for body parts] will **have** been the tonnes of rubble being removed from the site.

     b.   * [Also **have** been examined] for body parts will the tonnes of rubble being removed from the site.

<div align="right">(Harwood, 2015, (36))</div>

I follow Harwood and several other previous authors (Holmberg, 2001; Chomsky, 2008; Fowlie, 2010; Koopman, 2010; Roberts, 2010; Aelbrecht and den Dikken, 2013) in assuming that the only phrases that can undergo movement are phases. This assumption leaves the *v*P as the constituent that undergoes movement in the verb-initial word orders under consideration in this work.

1.3   Information Structure

The domain of information structure is primarily concerned with the expression of topic, focus, and givenness. In what follows, I assume an information structure that can make reference to all three. More controversially, in Chapter 3, I argue that these information-structural features can be manipulated by the syntax. While topicality is not directly relevant for the analyses in the following chapters, a brief survey of the literature is necessary to provide background for why topicality as it is normally construed is not appropriate for either participle preposing or VPP. I do assume the standard view of focus discussed in this section. And while I ultimately depart from Schwarzschild's view of Givenness, I survey his influential approach here. Throughout, I maintain that all three information-structural properties are independently necessary.

1.3.1 Topic

Traditionally (Strawson, 1964; Reinhart, 1981), sentential topics are viewed as the pivot for truth-value assignment. In other words, truth values are assessed relative to topics.

Krifka (2008) follows Reinhart and others in identifying the sentential topic as an entity, with the information in the comment (*i.e.*, non-topic portion of the sentence) being stored in the common ground under the heading identified by that entity. This intuition has been captured in a number of influential analyses of sentential topics.

Vallduví (1992); Vallduví and Engdahl (1996) implement an address-based system for storing information about a sentential topic. While the relevant notion for these authors is not "topic", but rather "link", the basic idea is that the focus is *about* the link. More specifically, the link provides the hearer with instructions for where to update her information state; the update is applied to the link's Heimian (1982) file card.

Portner and Yabushita (1998) build on Vallduví's (1992) file change account while noting that the identity of a sentence's topic affects the way in which the sentence updates the context. The analysis, which is based on the behavior of topic-marked phrases in Japanese, makes use of a semantically enriched common ground rather than the representational system of file cards, but the core idea is the same: The topic is part of the conversational background, and new information is associated with the discourse referent of the topic as it is added.

Evidence that syntactic categories larger than DP can be topics comes from Miller (2001), who notes that sentential subjects—which are in many ways similar to preposed participles—are topics.

This standard characterization of aboutness topic is not completely uncontroversial, however. Jacobs (2001) recognizes a complication in the conceptualization of aboutness topics, and argues that the difference between frame-setting and aboutness topics is often not clearly delineated. Other problems with the traditional idea of aboutness

topic are pointed out by Bianchi and Frascarelli (2010), who argue that topics are not restricted to clauses with the type of illocutionary force that would ordinarily implement a conversational move—namely, nonreported speech acts.

The verb-inital constructions under consideration in this dissertation can be thought of as instances of topicalization. The stark syntactic and information-structural differences between participle preposing and VPP, though, are indicative of a lack of consensus in the literature as to what a topic in fact is. The notion of topicality is apparently necessary for information-structural purposes; many languages place topics in dedicated positions, for example (e.g., German object scrambling to the left middle field). Algorithmic characterizations of what makes a constituent a topic are hard to come by, however. Part of the problem is that not all familiar material is a topic: In answers to constituent questions, for example, the phrase corresponding to the question's *wh*-word is the focus, and the rest of the sentence is given. The given material, then, is not a constituent and does not have a coherent meaning.

The difficulty of identifying topics with given material led historically to an identification of sentence topics with *aboutness topics*. Building on the foundation of the Prague School, Strawson (1964), Reinhart (1981) and others identify the sentence topic with the entity that the sentence is about. As a consequence, the topic is always interpreted with highest scope and must be referential.

It is clear, however, that if movement that targets a consituent the size of a VP can fall under the umbrella of topicalization, referential aboutness topics cannot be the whole story. As we will see, it is possible for topicality-sensitive movement to require that the entire VP constituent be familiar (in the case of VPP). But there also exist situations in which some subpart of the fronted VP constituent must be familiar (namely, participle preposing). The existence of both possibilities means that a simplistic view of topicality is not tenable. At the same time, the fact that both possibilities are indeed

sensitive to topicality in some sense shows that the notion of topicality (or familiarity) is grammatically relevant.

The elusiveness of the notion of topicality means that it has been and continutes to be difficult for researchers to be clear about what the relevant notion is for their particular purposes. In this dissertation, I will lean heavily on a familiarity metric for topichood, but that should not be taken to imply that I deny the necessity of other definitions in other circumstances. I aim throughout to be as precise as possible in my characterization of discourse familiarity. It is clear that a simple metric like "the referent of the DP was mentioned in previous discourse" is too restrictive; at the same time, there must be some constraints on the inferrability relations between what has been mentioned and what is familar. The nature of these restrictions is particularly puzzling in the case of VPP, where the discourse antecedent must be an entire clause, and much of the discussion in Chapter 4 is dedicated to exploring them.

Within the realm of topic constructions, things get more complicated when we consider the fact that, for example, constructions can be used to mark a *shift* in topic. As a preliminary illustrative example, consider the English topic marker *as for*. I assume that *as for* marks a shift in topic back to a previously mentioned, but less salient discourse topic. Evidence for this claim comes from the fact that the DP following *as for* cannot be the most salient entity in the discourse:

(1.5) John Kerry has recently taken over for Hillary Clinton as Secretary of State. Critics are concerned that the change will cause a lack of continuity in US foreign policy, especially in Asia.
   a.   . . . As for Kerry, he will be making his first visit to China this week.
   b. # . . . As for the critics, most of them are on the conservative side of the political spectrum.

The notion of topic shift will be central in Chapters 3–4.

1.3.2 Focus

I assume a standard alternative semantics for focus (Rooth, 1985, 1992). This approach makes use of syntactic [F(OCUS)] marking of the focused element (Jackendoff, 1972; Selkirk, 1984). The focus semantic meaning of the marked constituent is an alternative set. Rooth's $\sim$ operator constrains the possible focus interpretations by requiring a contrasting set to exist in the discourse. The $\sim$ is adjoined to the syntactic structure at LF; it's adjuncton site determines its scope, which in turn determines the level at which focus is interpreted. The contrasting expression must be identical to the constituent to which the operator adjoins with the exception of the focused expression.

One subspecies of focus construction will be particularly relevant to the concerns of this dissertation—what has been called "verum focus". Unfortunately, the term has not been used consistently in the literature. A more thorough overview of the verum focus literature can be found in Chapter 3, but some preliminary remarks are in order here. Verum focus was first identified as such in Höhle (1992). Höhle describes verum focus as arising when the verb is assigned a semantic element VERUM. Stressing the verb then highlights this element, resulting in emphasis on the truth of the utterance. In German, such emphasis on the truth value occurs when the element in C is stressed. In V2 clauses, stress falls on the finite verb (which moves to C to produce the verb-second order), even in negated clauses. In embedded clauses, the verum focus stress falls on the embedding complementizer.

Romero and Han (2004) discuss VERUM in the context of polar questions. Specifically, they argue that negative preposing in polar questions contributes VERUM, which they analyze as an epistemic operator. Much subsequent work has taken these high negation polar questions to be the canonical instantiation of verum focus, and the analyses presented in that line of work are informed by that choice. As a consequence, special machinery is often introduced to deal with verum focus. I argue in Chapter 3

that the desired understanding of verum focus is closer to Höhle's original conception, and that it should in fact be treated in the same Roothian way as other focus types.

Even syntactic analyses of verum focus in a broadly cartographic framework treat verum focus as distinct in some sense from other types of focus. Lipták (2006), for example identifies several types of sentential emphasis, any of which might fall under the general umbrella of verum focus, including contradictory emphasis (Lipták's verum focus) and two types of non-contradictory emphasis: contrastive emphasis and modal emphasis.

In English (but not in Hungarian), both non-contradictory and contradictory emphasis can be expressed by placing stress on an auxiliary:

(1.6) a. Peter wanted to buy a book, and he DID buy it (in the end).
    b. Peter did not buy a book.
     No, he DID buy a book.

<div align="right">(Lipták, 2006, (5))</div>

Lipták analyzes contrastive emphasis as TP-focus by means of verb fronting. That is, as verb movement to a focus position.[2] *Strengthening* emphasis receives a similar analysis. *Modal emphasis*, emphasis on the speakers' judgment about how expected the event is, is also very similar, except that it includes some additional material above the proposed FocP. Sentences with verum focus, on the other hand, involve a dedicated VFocP (which selects a FocP.

---

[2]In Hungarian, this also co-occurs with a left-dislocated copy of the verb.

(1.7) TopP   (Lipták, 2006, (46))
        |
       DistP
        |
       VFocP
      /   \
  (igenis)   FocP
          /   \
       (PV)-V/focus/negation...
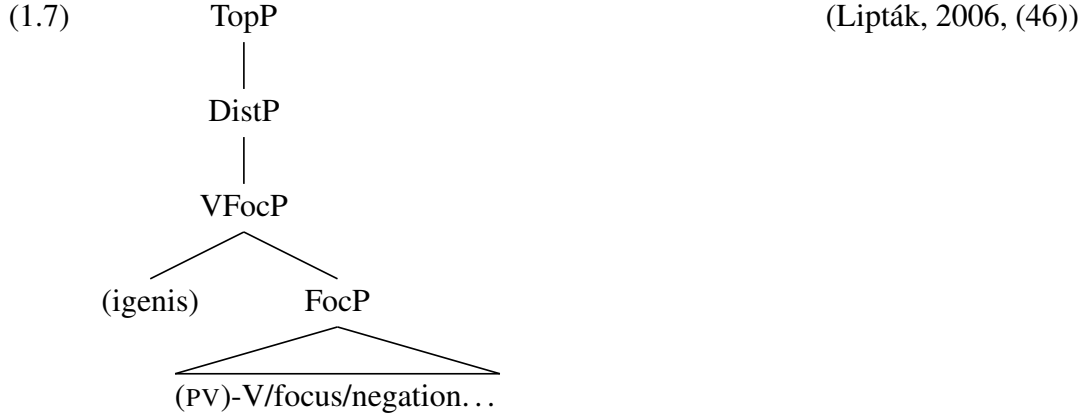
While analyses along these lines might be more plausible for Hungarian, which has a dedicated focus position, positing structures specific to verum focus risks obscuring the commonalities between verum focus and other types of focus.

1.3.3 Givenness

Schwarzschild's (1999), the most influential treatment of Givenness, presents a recursive theory of Givenness and focus assignment. Constituents that are not in focus must be Given, and focus is assigned only when necessary to signal that a constituent is not Given. Schwarzschild's main aim is to charachterize when non-given material is focus-marked; the definition of Givenness he uses makes crucual use of an antecedent and existential F-closure , which interprets focused expressions as existentially bound variables:

(1.8)   An utterance B counts as GIVEN iff it has an antecedent A and
        a. if the semantic type of B is e, $\forall \langle w, g \rangle \in_c \exists h[[\![A]\!]^g = [\![B]\!]^{g,h}]$
        b. if the semantic type of B is conjoinable: $\forall \langle w, g \rangle \in_c \exists h[ExClo([\![A]\!]^g)(w)$
            $\rightarrow ExClo([\![B]\!]^{g,h})(w)]$

At a more informal level, Krifka (2008) gives the folowing definition of Givenness:

(1.9)   A feature X of an expression α is a Givenness feature if X indicates whether the denotation of α is present in the CG [common ground] or not, and/or

indicates the degree to which it is present in the immediate CG.

<div align="right">(Krifka, 2008, (35))</div>

Constituents can also be given by virtue of being in a salient relationship with some entity that is uncontroversially given. Prince (1981b) defines inferrable discourse referents (recursively) in the following way:

(1.10)   A discourse entity is *inferrable* if the speaker assumes the hearer can infer it, via logical—or, more commonly, plausible—reasoning, from the discourse entities already evoked or from other inferrables.   (Prince, 1981b, p. 236)

Some of her examples are given below:

(1.11)   I got on **a bus** yesterday and <u>the driver</u> was drunk.   (Prince, 1981b, (22c))

(1.12)   I went to **the post office** and <u>the stupid clerk</u> couldn't find a stamp.

<div align="right">(Prince, 1981b, (26a))</div>

These inferrable discourse entities behave for the purposes of this dissertation as given. This will be important and useful. One potential limitation of this understanding, however, is that it only applies to discourse entities or referents, whereas we will see throughout the dissertation that givenness and inferrability must apply to fronted constituents the size of VP that do not correspond to any single discourse entity.

1.3.4   The distinctness of information structural notions

Tancredi (2016) argues that topic, focus, and givenness are all necessary and independent parts of the grammar. The fact that focus must be distinguished from givenness can be seen in cases of association with focus, as in (1.13), under the assumption that givenness-marking, but not focus-marking, is recursive:

(1.13)   a.   # John saw Mary. In fact, he_G ONLY [saw_G MARY$_{F,G}$/HER$_{F,G}$]$_G$. (He didn't see SUE.)

          b.   # John saw Mary. In fact, he_G ONLY [saw_G '$er_{F,G}$]$_G$. (He didn't see SUE.)

c. # John saw Mary. In fact, *he*$_G$ ONLY [*saw*$_G$ HER$_{F,G}$/MARY$_{F,G}$]$_G$. (He didn't see SUE.)

<div align="right">(Tancredi, 2016, (6))</div>

While *Mary/her* is the semantic focus, it also meets all the requirements for givenness. In pronunciation, *Mary/her* is strengthened (and cannot be reduced) but cannot bear a pitch accent. If focus were syntactically marked but givenness were not, we would expect *Mary* to behave as a focus and bear a pitch accent; after all, it does associate with *only* and contrast with *Sue*. If givenness were marked but focus were not, we would expect reduction of *her* to be possible, contrary to fact. Similar arguments hold for contrast (1.14) and question-answer congruence (1.15).

(1.14) John saw Mary and Sue saw Bill. Then,

    a. ALICE$_F$ [*saw*$_G$ MARY$_{F,G}$/HER$_{F,G}$]$_G$ and TOM$_F$ [*saw*$_G$ BILL$_{F,G}$/HIM$_{F,G}$]$_G$.

    b. # ALICE$_F$ [*saw*$_G$ 'er$_{F,G}$]$_G$ and TOM$_F$ [*saw*$_G$ 'im$_{F,G}$]$_G$.

    c. # ALICE$_F$ [*saw*$_G$ HER$_{F,G}$/MARY$_{F,G}$]$_G$ and TOM$_F$ [*saw*$_G$ HIM$_{F,G}$/BILL$_{F,G}$]$_G$.

<div align="right">(Tancredi, 2016, (7))</div>

(1.15) John saw Mary. Who did Bill see?

    a. BILL$_{F?}$ [*saw*$_G$ MARY$_{F,G}$/HER$_{F,G}$]$_G$.

    b. # BILL$_{F?}$ [*saw*$_G$ 'er$_{F,G}$]$_G$.

    c. # BILL$_{F?}$ [*saw*$_G$ HER$_{F,G}$/MARY$_{F,G}$]$_G$.

<div align="right">(Tancredi, 2016, (8))</div>

In each of these cases, we would expect focus accenting of *Mary/her* to be obligatory if givenness were not a primitive of the information-structural system, and we would expect phonological reduction to be possible if focus were not a primitive. Furthermore, the licensing conditions on focus and givenness are distinct. In (1.16), the associate of *only* is the clause *Mary tripped John*, which contrasts with the embedded clause in (C), but not with the embedded clause in (A).

(1.16) A: Everybody knows that John$_1$ fell.

B: Most of them, however, only(C_5) know [[that [MARY TRIPPED *John*$_{1,G}$.]$_F$]∼C_5]

C: They don't also know [that that was an accident.]$_5$

But *John* in the same (B) clause behaves as given based on the antecedent *John* in (A), not the one in (C). Tancredi concludes from this that the focus antecedent must be distinct from the givenness antecedent, and that the two must therefore be distinct theoretical entities.

He further argues for the distinctness of topic and givenness by showing that given contrastive topics exist—in other words, that some, but not all, topics must also be marked for givenness:

(1.17) Q: Did Edward see anyone?

    A: i.   Well, **EDWARD**$_{T,G}$ ...*saw* **ELIZABETH**$_T$ ...

        ii.   # Well, **EDWARD**$_{T,G}$ ...*saw* **ELIZABETH**$_T$ ...

    (though I don't know if he saw MARY. But who did JOHN see? That's what I want to know.)

The examples in (1.17) show that there is a particular intonational pattern associated with contrastive topics that are also marked as given; the lesser degree of accenting of *Edward* in the felicitous answer indicates that given contrastive topics are formally distinct from other contrastive topics.

Tancredi rounds out the argument by providing evidence that (contrastive) topics and foci are also formally distinct. In (1.18a), *Mary* is both given and a contrastive topic. In order to receive that interpretation, it must obligatorily bear an accent. This contrasts with *Mary* in (1.18b), which is a given focus and may not bear any kind of accent. Since they behave differently from an intonational perspective even though both are given, contrastive topic and focus must be distinct information-structural notions.

(1.18) a. Who saw Mary?
            JOHN$_F$ *saw **MARY**$_{T,G}$ . . .*

        b. John saw Mary.
            In fact, *he* ONLY *saw Mary$_{F,G}$*

(Tancredi, 2016, (17))

Given this body of evidence, I will assume throughout that givenness, topicality, and focus are independent of one another and not inter-definable.

1.3.5 The QUD

In addition to aboutness topics, Roberts (1996); Büring (2003); Constant (2014) identify *contrastive topics*, which split issues (questions) into sub-issues (sub-questions). Contrastive topics occupy a tricky place in the literatue because, in many respects, they behave more like foci than like topics. Though contrastive topics are not relevant to the issues addressed in this dissertation *sui generis*, they are worth mentioning here because they provide the basis for the most influential theoretical investigations of the question under discussion, which will be an important element in what follows.

The theory of questions under discussion (QUDs) I assume in this dissertation has its origins in Büring's work. In his work on contrastive topics, Büring is concerned with two types of accents: focus, which is realized with an A- or H*-accent, and contrastive topic, which is ealized with a B- or H*L-H%-accent. The analysis is framed in terms of d(iscourse)-trees, which have the form given in (1.19):

(1.19)

```
                                    discourse
                          ┌─────────────┴──────────────┐
                       question                     question
             ┌──────┬──────┴──────┬──────┐             │
           subq    subq          subq   subq          ...
            │       │           ┌──┴──┐    │
         answer  answer     subsubq subsubq answer
                               │       │
                            answer   answer
```
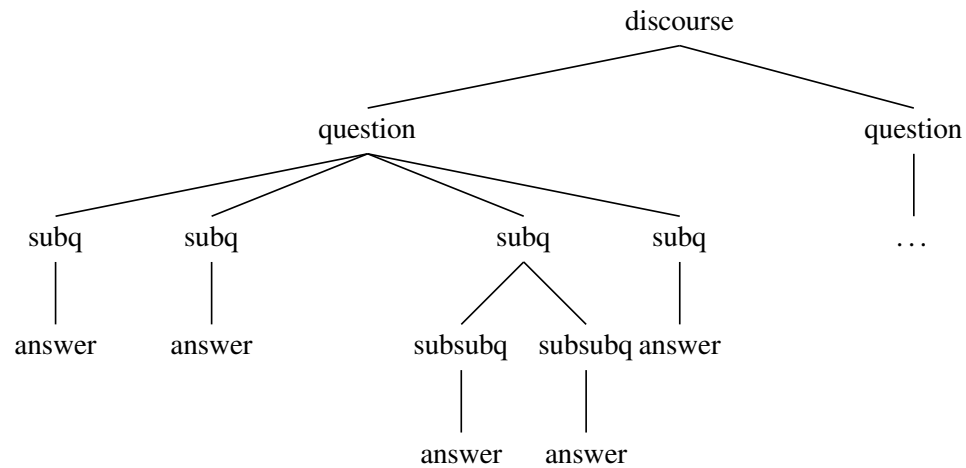
<div align="right">(Büring, 2003, (6))</div>

Most of the terminology in Büring (2003) is derived from Roberts (1996); in partic-ular, the notion of "strategy" is clearly defined in terms of a conversational game. The participants in any given conversation attempt to answer a QUD. The strategy for an-swering that question may include pursuing answers to subquestions. More concretely, a series of related questions can be part of a strategy to answer the logically strongest of the questions. The strategy therefore has a hierarchical structure, and the questions might be related logically only by way of and in light of contextual entailments.

Roberts notes that a question-answer pair can be congruent even if the answer is not among the alternatives raised by the question. All that is required is that the question and the answer give rise to the same set of alternatives, as in (1.20):

(1.20)   a.   Who did Mary invite?
         b.   Mary invited NOBODY.

<div align="right">(Roberts, 1996, (5))</div>

Roberts claims that there is no consistent convention for marking topics (or links) in English. Only contrastive topics are marked consistently. This claim lays the foun-dation for Büring's work.

For Büring, the distinction between new and old information, then, is orthogonal

to the function of contrastive topics. Sometimes, contrastive topic-marked material is given; sometimes, it's not. In all of its uses, contrastive topic-marking indicates a strategy.

This closes the discussion of the syntactic and information structural building blocks that form the foundations of the analyses in subsequent chapters. I turn now to a different, but related, set of questions about how these components of the grammar interact.

1.4 The relationship between syntax and information structure

Under standard minimalist assumptions, there is no direct interaction between syntax and information structure. Information structural properties are not represented in the syntax, since no features refer to such properties. Even the status of F-marking is unclear in this framework; the inclusiveness condition seems to rule out its syntactic representation. The hardest line in this regard is taken by Chomsky (2008) (see also the discussion of Fanselow and Lenertová 2011 below), who claims that internal merge (movement) yields "discourse-related properties such as old information and specificity, along with scopal effects" (140). But Chomsky proposes no restriction as far as the narrow syntactic mechanism goes. Movement to phase edges is free, and the sensorimotor interface, along with conceptual-intentional conditions rule out derivations that fail to converge. Chomsky uses DP topicalization as an example:

> Suppose that the edge feature [EF] of the phase head is indiscriminate: it can seek any goal in its domain, with restrictions (e.g., about remnant movement, proper binding, etc.) determined by other factores. Take, say, Topicalization of DP. EF of a phase head PH can seek any DP in the phase

and raise it to Spec-PH. There are no intervention effects, unless we assume that phrases that are to be topicalized have some special mark. That seems superflous even if feasible, particularly if we adopt Rizzi's approach to the left periphery: what is raised is identified as a topic by the final position it reaches, and any extra specification is redundant. [. . .] We need not postulate an uninterpretable feature that induces movement, and can thus overcome a long-standing problem about crash at the lower phase levels in successsive-cyclic movement. (Chomsky, 2008, pp. 151)

Of course, there is no guarantee in this system that the DP that undergoes topicalization is actually a (contrastive) topic. It is up to the interface with semantics to rule out the very many generable sentences that are not consistent with the discourse context. The major problem here is that there is no theory of the interface that successfully explains which derivations are ruled out, especially not without making reference to the particular information-structural properties of the moved DP. In other words, putting a particular DP in topic position doesn't *make* it a topic in the given context.

Working in a non-cartographic theory in which movement to the left edge is triggered by an edge feature associated with an undifferentiated C head, Fanselow and Lenertová (2011) argue that focus fronting in Czech and German that appears to be sensitive to information structure can in fact be derived *via* free movement to the left edge. They follow Chomsky in assuming that minimality does not restrict movement to the left edge, and they claim that any phrase at all can be attracted by C's edge feature. Evidence for the lack of syntactic sensitivity to information structure comes from the fact that the fronted phrase may be larger (a), smaller (b), or idential in size to the focused constituent:

(1.21)   *What have you bought?*[3]

___

[3]The answers in (b), at least, are also compatible with broad focus contexts like *What have you*

a. [$_{VP}$ Ein BUCH gekauft]$_i$ hab' ich mir t_i.   (German)
   a   book   bought have I   myself
'I bought a book'.   (Fanselow and Lenertová, 2011, (70b))

b. BÜCHER$_i$ hab' ich mir   ['npaar t_i] gekauft.   (German)
  books   have I   myself a-few   bought
'I have bought a couple of books.'
                     (Fanselow and Lenertová, 2011, (13a))

c. [Ein BÜCH]$_i$ hab' ich mir t_i gekauft.   (German)
  a   book   have I   myself bought
'I bought a book.'   (Fanselow and Lenertová, 2011, (70a))

From these patterns, together with the fact that focus fronting does not conform to general principles of pied piping, Fanselow and Lenertová conclude that information structure cannot be the driving force behind such focus movement. Without differentiated left-peripheral landing sites, however, it is even less clear how the relevant information structural interpretation is to be derived. Since we know from phenomena like association with focus that focus placement may affect a sentence's truth conditions, the identity of the focused constituent must be recoverable at the interface with interpretation; there is apparently no mechanism by which this occurs in a system with free movement to SpecCP. Since they assume a syntax free from [F]-marking, Fanselow and Lenertová's (2011) analysis preuspposes that the identity of the focus can be determined via question-answer congruence alone. We will see in Chapter 4, however, that there are cases in which question-answer congruence is not suffcient to predict the felicity of a particular information-structurally marked syntactic form.

The cartographic approach to the left periphery (Rizzi, 1997, *et seq.*) posits a number of distinct functional projections as landing sites to replace what has often been thought of as a homogenous class of A$'$-movements to SpecCP. The idea behind the multiplicity of specifier positions is that each one is associated with a particular interpretive function. Linear order is determined by the hierarchy of specifier positions, and

done? and *What's new?*

is assumed to be constant across languages. Thus, while there is evidence for only one left-peripheral position in English, Italian data tell us that there must be at least three distinct postiions for topic (two) and focus (one) in all languages:

(1.22) (Domani,) QUESTO (a Gianni,) gli   dovremo dire
        tomorrow this   to Gianni to.him should.we say

<div align="right">(Rizzi, 1997, (46))</div>

Cinque (1999) in fact proposes 32 left-peripheral functional projections encoding functions corresponding to a large number of categories of sentence-initial adverbials, along with displaced phrases like topics and foci. Once again, the elements appearing in the specifiers of these projections receive their interpretations in virtue of their position in the clause.

van Craenenbroeck (2009) points out several problems with the cartographic theory of the left periphery. In the case of movement in particular, he notes that the cartographic approach makes interpretive predictions that are not borne out across languages. If each fucntional head bears a particular morphosyntactic feature and attracts phrases bearing the same feature to its specifier,[4] we expect any interpretive effects to be limited to the moved phrase itself. But there are in fact many examples of movement causing interpretive effects associated with another phrase that is not involved in the movement operation. We will closely examine, in fact, a number of such cases in the chapters that follow. Another case comes from Neeleman and van de Koot (2008), who argue that scrambling of topics actually serves to create a particular interpretive template for relating topic and comment; scrambling of foci creates a similar relation between the focus and the background. Gill and Tsoulas (2004), to take a more concrete example, note that object scrambling in Korean cancels the focal interpretation of the subject when both phrases represent new information. Importantly, the scrambled

---

[4]Or, in a view more consistent with Chomsky (2008), if movement is free (not driven by features) but interpretation is determined by the particular landing site.

object itself is not a focus:

(1.23) Chelswu-ka   Younghee-nun cohanta
         Chelswu-NOM Younghee-CF   likes
         'It is Younghee that Chelswu likes.'   (Gill and Tsoulas, 2004, (6))

(1.24) Younghee-nun Chelswu-ka   cohanta
         Younghee-TOP Chelswu-NOM like
         'As for Younghee, Chelswu likes her (but not others).'
                                                       (Gill and Tsoulas, 2004, (7))

The information structural effect on the subject would not be expected in a framework that assigns information structural interpretations to phrases based only on their surface positions.

On the basis of evidence from scrambling in the German middle field, Struckmeier (2016) argues that cartographic approaches to argument placement are empirically inadequate. The argument starts from the generally accepted assumption that a focus in German cannot scramble from its base position (A) to the left of the middle field (A'):

(1.25) Q: Who did you see?
         A: Ich habe wohl [einen MANN]$_{Foc}$ gesehen
              I   have PRT a   man   seen
              "I have probably seen a man."
         A': # Ich habe [einen MANN wohl gesehen.
                                                       (Struckmeier, 2016, (2))

Struckmeier then notes that a German sentence contains only one main stress, and that therefore only one F-marked constituent receives that main stress. This in turn means that discourse status (whether or not an element is given) and prosodic focus-marking can be dissociated. Leftward scrambling *is* possible for F-marked but unstressed arguments:

(1.26) Q: What did you give to who?
         A: Ich habe [dem Mann]$_{Foc}$ wohl [das GELD]$_{Foc}$ gegeben.
             I   have to-the mann   PRT the   money   given

"I have probably given the money to the man."

<div align="right">(Struckmeier, 2016, (3))</div>

The constraint on leftward scrambling of foci, then, cannot be due to the information status of that focus as would be predicted by a strictly cartographic account. A similar conundrum applies to topic scrambling in German; in contrast to foci, topics seem to undergo obligatory leftward scrambling. The example in (1.27) shows that it is odd to leave *den Fritz in situ*:

(1.27)   I will tell you something about Fritz:
     # Morgen   wird wohl eine reiche Dame den Fritz heiraten.
      tomorrow will PRT a   rich   lady   the Fritz marry
      "Tomorrow, a rich lady will marry Fritz."

<div align="right">(Struckmeier, 2016, (4))</div>

But obligatory scrambling of topics cannot be the whole story—if *den Fritz* remains the sentence topic but the focus is changed, it becomes acceptable to leave the topic *in situ*:

(1.28)   You know that Fritz could never find a woman who would even only go out with him. But let me tell you something new about Fritz now:
     ...Morgen wird wohl eine reiche Dame den Fritz [HEIRATEN]$_{Foc}$.

(1.29)   Fritz only ever married women who were penniless crooks. But let me tell you something new about Fritz now:
     ...Morden wird wohl eine [reiche DAME]$_{Foc}$ den Fritz heiraten.

Again, this contextual variability in whether a phrase with a given information-structural status scrambles or appears *in situ* provides evidence against a strict cartographic view under which topics always appear in a topic position and foci always appear in a focus position. Permissible outcomes seem to depend not on properties of topics or foci themselves, but rather on aspects of the organization of the larger contexts in which topics and foci find themselves.

Another theory of integrating information structure into a minimalist-like syntax comes from Erteschik-Shir (2006), who proposes that the syntactic features TOP(IC) and FOC(US) are optionally assigned to lexical items when those lexical items enter the syntactic derivation. Like φ features, these information-structural features may percolate up from the lexical item to its maximal projection. This system of percolation provides a framework for explaining the interpretation of TOP- and FOC-bearing phrases, but it makes no predictions about the size of constituents that can be moved for information-structure-dependent reasons. Further, this theory requires giving up on, or radically diluting, one of the core tenets of the minimalist program—Chomsky's (1995) inclusiveness condition, which requires that all features of a given phrase be associated with (one of) the lexical items that make up that phrase. A great deal of lexical information is duplicated if every lexical entry may include an optional TOP or FOC feature.

1.5   The phenomena

The dissertation probes these central questions by way of close examination of a range of phenomena in English. These phenomena have as a common property that verbal phrases appear in unexpected positions.

1.5.1   Participle Preposing

Chapter 2 begins with an analysis of participle preposing, an example of which is given in (1.30). Throughout the dissertation, the preposed participle is underlined, and the canonical subject—the DP that would be the subject in the canonical word order—is italicized.

(1.30) Two other people beat the 80% favorability mark but fell short of [Aaron] Rodgers' 89%. One was George Washington at 86% rating him favorably to 3% with an unfavorable opinion.
<u>Holding him back</u> is *only a 64% favorability with African Americans, who may have pause about his status as a slave holder.*[5]

Participle preposing is an instance of what Emonds (1976) identified as "preposing around *be*"—a class of inversions that is possible only in the presence of copular or auxiliary *be*. As a root transformation, participle preposing cannot occur in embedded clauses of various kinds:

(1.31) a. * Bill wonders why <u>speaking at today's lunch</u> will be our local congress-man.

  b. * The person who <u>taking tickets at the door</u> was had roomed with me at Yale.

  c. * Since <u>examined today and found in good health</u> was our nation's chief executive, we can all breathe more easily.

  d. ? Bill announced that <u>speaking at today's lunch</u> would be our local con-gressman.

(Emonds, 1976, p. 36)

Emonds is less than explicit about the concrete details of the analysis. What is clear is that participle preposing consists of two transformations: the preposing itself, and a case of subject-aux inversion triggered by movement of the preposed VP into COMP position, as schematized in (1.32).

(1.32)
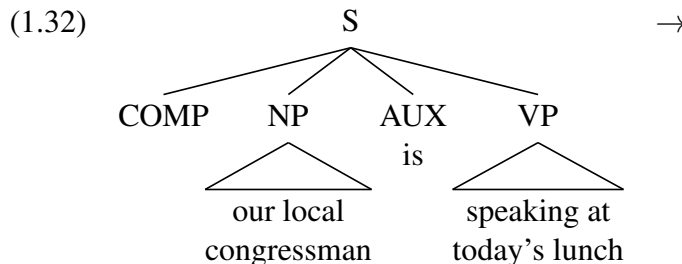
[5]Jensen, Tom. 2011. Who's more popular than Aaron Rodgers? *Public Policy Polling.* http://www.publicpolicypolling.com/main/2011/11/whos-more-popular-than-aaron-rodgers.html accessed 14 December 2015.

```
                    S
         _____|_____
        |           |           |
      COMP         AUX          NP
       /\           is          /\
      /  \                     /  \
  speaking at              our local
 today's lunch            congressman
```
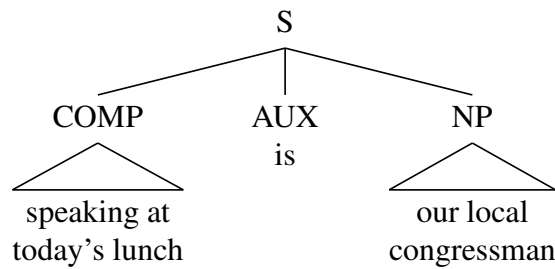
Both of these transformations are classified as root transformations in Emonds's system. He does, however, note that some root transformations are possible for some speakers in a subset of embedded clauses. While participle preposing is not mentioned as belonging to this class of transformations, some of the examples Emonds marks as ungrammatical are acceptable for many speakers. An example of this type appears in (1.33).

(1.33)   Bill said that <u>taking turns</u>, as usual, were his two sisters.

<div align="right">(Emonds, 1976, p. 36)</div>

While Emonds's analysis is foundational, it offers no explanation for why participle preposing (and other root transformations) are acceptable in certain types of embedded clauses. Instead, he claims that such sentences are strictly ungrammatical. When they occur, it is because speakers break the structure-preserving constraint "for purposes of emphasis, clear communication, etc." (Emonds, 1976, p. 35). Why ungrammaticality should lead to "clear communication" remains unexplained.

Emonds's analysis also lacks an explanation for why participle preposing should be limited to structures in which the VP follows *be*. Subject-auxiliary inversion does not generally require that the auxiliary involved be *be*; the transformation would have to be amended to state that, if COMP contains something other than WH, NEG, or *so*, AUX must contain *be*.

A more desirable analysis would account for the fact that participle preposing is acceptable in the CP complements of certain verbs but not in embedded questions,

relative clauses, adjuncts, or other types of verbal complements. Finally, the analysis should offer a principled account of the fact that preposing is possible for participial complements of *be* but not participial complements of *have*.

Unlike its close cousin locative inversion, participle preposing has received little attention in the syntactic literature since Emond's work. Much of the focus of the syntactic analysis of preposing around *be* (see Bresnan 1994; Culicover and Levine 2001; Rezac 2006 for locative inversion) is on deriving its combination of A- and A′-properties. Participle preposing shares this set of properties, but the larger size and non-referential nature of the preposed constituent introduce additional complexities.

Where pragmatic analyses of participle preposing exist, they tend to lump participle preposing in with other types of inversion (Birner, 1996) or are concerned with the interpretation of the word *be* (Birner and Ward, 1992). While it is clear from Birner's work that the relative familiarity of the preposed consituent and the post-verbal subject is relevant to the felicity of participle preposing, the exact nature of this connection is not probed in her work. Of course, since a preposed participial phrase is larger and more complex than a preposed DP or PP, the analysis (or even description) of this connection may not be trivial. One of the goals of Chapter 2 is to describe in precise terms the information-structural subtleties of felicitous participle preposings.

Bresnan (1994) claims that certain examples of participle preposing are in fact cases of locative inversion. In particular, she notes that participial VPs may be preposed around verbs other than *be* when the preposed VP contains a locative PP (1.34); it is only when *be* is present that non-locative complements may be preposed.

(1.34) a. <u>Crashing through the woods</u> came *a wild boar.*

<div align="right">(Bresnan, 1994, (5a))</div>

  b. ?? <u>Crashing</u> came *a wild boar*.

Bresnan also notes that locative inversion in English (and in Chicheŵa) has presen-

tational focus as its discourse function. That is, the post-verbal subject in a sentence with locative inversion is most suitable for (re-)introducing a referent. B's response in (1.35) is odd because A's utterance makes the referent of *Rose* discourse-familiar and does not provide an appropriate context for presentation of that referent.

(1.35) A: I'm looking for my friend Rose.
       B: # <u>Among the guests of honor</u> was sitting *Rose*.

(Bresnan, 1994, (42))

The analysis that Bresnan proposes is couched in the framework of Lexical Functional Grammar. The locative PP is topicalized not *via* movement, but rather by identification of the discourse function (topic or focus) in f-structure with a syntactic function (subject or object). Because f-structure is not subject to the same categorical restrictions as c-structure, it is possible for the locative PP to be identified with the subject even though PPs are not normally possible subjects in English. This, according to Bresnan, accounts for the distinctive properties of locative inversion, including the fact that agreement is with the post-verbal DP, the impossibility of locative inversion in non-finite clauses, raising of locative PPs, and the fact that locative PPs cannot undergo subject-auxiliary inversion.

Culicover and Levine (2001) add additional nuance to this picture by distinguishing between two types of locative inversion: Heavy Inversion and Light Inversion. Light Inversion displays the syntactic properties that Bresnan discusses—indeed, the properties that I will argue are characteristic of participle preposing—and is restricted to sentences containing unaccusative verbs. Unlike Bresnan, Culicover and Levine claim that the PP subject in Light Inversion is a true subject, appearing in the SpecIP position. The evidence they martial in favor of this argument includes the facts that extraction of the PP gives rise to a *that*-trace effect, that it undergoes raising, and that it does not give rise to weak crossover effects.

Rezac (2006) builds upon Culicover and Levine's (2001) understanding of these facts, which are all compatible with A-movement of the PP to SpecIP (SpecTP in Rezac's (2006) version of the analysis). He proposes a second, A′-movement of the locative PP to SpecCP. This additional derivational step accounts for a different set of facts about the distribution of locative inversion: It is not possible in nonfinite ECM clauses (because they lack a CP-layer), and the locative PP interferes with extraction in the way we would expect A′-moved phrases to. *Modulo* some additional structural complexities that arise from preposing a constituent the size of a participial VP, the analysis I propose for participle preposing is based on Rezac's analysis of locative inversion.

1.5.2   VP preposing

The second construction under consideration in the dissertation is verb-phrase preposing (VPP; see (1.36)).

(1.36)   I was part of a group that opened an antiwar storefront coffee shop near Fort Dix in New Jersey, a camp where thousands of recruits received basic training before being shipped out to Vietnam. We served up coffee, cake, music, posters, magazines, and antiwar conversation to any soldiers **who came in** during their off-hours—
—and <u>come in</u> they did.
I met young men from as far away as Nebraska and Iowa, as close by as Queens and Brooklyn.[6]

The import of VPP is that its confluence of properties provides fertile ground for investigating the broad questions outlined above. The first of these properties is syntactic movement. In (1.36), the underlined phrase *come in* has been topicalized, moving it away from its base position following *did*. Second, VPP has an antecedence

---

[6]Gologorsky, Beverly. 2013. Why have American writers ignored the wars in Iraq and Afghanistan? One word: class. *Mother Jones*. `http://www.motherjones.com/politics/2013/12/economic-status-class-affects-awareness-war-military-us` accessed 10 December 2015.

requirement associated with it. The required antecedent is bold-faced in (1.36); the VPP-sentence is not possible without it or in out-of-the blue contexts. On the pragmatic side, we see that VPP has an affirmative function (see Ward 1990 for discussion). In other words, the VPP-sentence addresses the material in the antecedent. In (1.36), it affirms the possibility, raised in the previous clause, that soldiers came into the cafe. Finally, VPP is used for emphasis—there is an additional pragmatic effect beyond affirmation associated with the VPP-sentence. In (1.36), for example, we get the sense that a surprisingly large number of soldiers patronized the antiwar cafe.

Once again, two distinct bodies of literature have dealt with VPP. In formal syntax, Pesetsky (1995); Lechner (2003); Phillips (2003); Landau (2007) and others have engaged in a relatively vigorous debate about the stranding of post-auxiliary material. These authors are interested in explaining how it is possible for VP-internal material not to be fronted along with the rest of the VP. Within this discussion, there is no attempt to understand the meaning of the resulting structures or, importantly, the contexts in which they are used. In particular, the strangeness of there being an antecedence requirement on a movement rule is not addressed. Even the question of the landing site of the preposed VP does not figure largely in these discussions.

At the descriptive level, the syntactic properties of VPP are not difficult to characterize: The preposed VP may be the complement of an auxilary (1.37) or a modal (1.38).[7]

---

[7]The preposed phrase may also be the complement of a main verb; in that case, it is not clear that the preposed constituent is actually a VP:

(1.1) a. Listen, **I've put Mr. Jones in the Green Room**,
           and <u>in the green room</u> he stays.
       b. East German leader Erich Honecker has dismissed the possibility of German reunification
           and has offered major concessions to the Soviet Union on other issues that have disrupted
           Soviet-East German ties in recent months. '**The two German states exist**,
           and <u>two</u> they will remain,' Honecker said in an article published yesterday in the Soviet
           Communist Party daily Pravda.

                                                                            (Ward, 1990, (24))

(1.37) a. It seems as if it has taken forever for **Robert Altman's 'Come back to the 5 & Dime Jimmy Dean Jimmy Dean' to make it to Philadelphia**. It has been playing in LA for almost a year, and it came and went in NY so long ago it's only a dim memory there.
But <u>come here</u> it has—and, as it turns out, the timing is pretty good.[8]

  b. One factor is the Irani belief that there is no greater deed than **to die for Iran**.
And <u>dying</u> they are, by the thousands.

(1.38) a. I just think our team knows **how to win**.
And <u>win</u> they must.   (Ward, 1990, (20))

  b. Nobody thinks **Jones can win the election**,
but <u>win it</u> he can—with a little help from his wife's estate, that is.

  c. The human mother's keenness to interact with her baby continues to be at a peak in the first days after birth. An example of this urge is the almost irresistible tendency mothers have to unwrap their new baby and look at it all over when it is first brought from the nursery. If the nurses, in the interests of asepsis, are particularly fierce about not permitting this, **the mother may do it secretly**,
but <u>do it</u> she will, with the inevitability with which a little girl of two or three will strip the clothes off a new doll.

  d. After he finishes, **he goes**.
And <u>go</u> he should.   (Ward, 1990, (21))

The core generalization in Landau (2007)—adapted from Phillips (2003)—is that only optional arguments can be stranded. That is, the fronted VP must be able to stand on its own as a "complete" VP:

(1.39) a. * ... and <u>give the children</u> he did candy in libraries on weekends.

  b. * ... and <u>put the book</u> he did on the table during the climax of the game.

  c. ?* ... and <u>nail the diploma</u> he did to the wall on the weekend.

  d. ?? ... and <u>pour the wine</u> he did into the glasses before the toast.

  e. (?) ... and <u>send a telegram</u> he did to the queen on her seventieth birthday.
                                                         (Landau, 2007, (20))

---

[8]Ward notes that this is the only example he found where the main verb in the antecedent is not repeated in the preposed VP. See Chapter 4 for indications that non-repeated preposed material is in fact relatively common.

The proposal is that the "stranded" arguments are in fact adjuncts. Specifically, they undergo late adjunction after the VP has been fronted. This proposal then has some theoretical consequences.

While a linguistic antecedent is generally required (though see Chapter 4 for an important class of exceptions), the proposition affirmed in the VPP-sentence does not necessarily correspond to a syntactic constituent in the antecedent (a fact that already hints at a pragmatic analysis):

(1.40) a. They don't know a bisque from a brioche or a pâté from a pot-au-feu, but **babies and toddlers are some of the most discriminating eaters on the gastronomic scene**.
And <u>discriminate</u> they do—against vegetables, protein foods, and just about everything their parents would like them to eat.

b. **A teller handed over a packet of bills with exploding red dye in it**,
and <u>explode</u> that red dye did. (Ward, 1990, (27))

In an aside, Landau (2007) claims that "[u]nlike VP-ellipsis, the antecedent for VP-fronting need only be conceptually present, possibly implied in the context":

(1.41) John promised to bring something nice to everyone...
a. ...and <u>give the children candy</u> he did when he returned.
b. *...and <u>give the children</u> he did candy when he returned.
(Landau, 2007, (32))

This generalization is supported—and in fact expanded upon—by the corpus data discussed in Chapter 4. But as mentioned above, the bulk of Landau 2007 is concerned with argument stranding when ditransitive VPs are fronted in Hebrew and English.[9]

The investigation in this dissertation follows an important pragmatic tradition, the apogee of which is Ward 1990. This work contains many foundational observations and important description, but it goes less far in constructing an integrated theoretical understanding of how the pieces fit together. Ward's work presents the pragmatics

---

[9]In this discussion, for reasons of relevance and space, I focus on the English.

of VPP as an arbitrary list of discourse effects that is not integrated into any larger theoretical or formal framework.

According to Ward, VPP serves two discourse functions. The first of these he calls *proposition affirmation*. In cases of *independent proposition affirmation*, the antecedent is explicitly evoked but not entailed or presupposed in the prior discourse:

(1.42)   It was necessary **to pass**, if I was to stay at Oxford,
         and <u>pass</u> I did.[10]   (Ward, 1990, (1))

(1.43)   As members of a Gray Panthers committee, we went to Canada **to learn**,
         and <u>learn</u> we did.   (Ward, 1990, (2a))

(1.44)   'If **you don't jump**,' the Sandinistas yell, 'you're a contra,'
         and <u>jump</u> they do.   (Ward, 1990, (2b))

The main idea is that there is a syntactic identity condition on the verb, and a pragmatic condition that makes reference to whether the proposition has been entailed or presupposed. The syntactic identity condition is illustrated in (1.45) below:

(1.45)   a. John didn't mean **to insult his aunt**.
            #But <u>upset her</u> he did.
         b. I told my boss I was going **to quit today**.
            #And <u>resign</u> I did.
         c. **Betty wasn't hungry today**.
            #But <u>eat</u> she did.[11]   (Ward, 1990, (30))

Ward also identifies a class of *concessive affirmations*, in which a propostion evoked by the antecedent is affirmed in the context of some countervailing consideration conceded in the prior discourse. Concessive affirmation, in contrast to independent proposition affirmation, may involve a proposition that is entailed or presupposed by the preceding discourse (1.46b).

---

[10]The font faces used in this dissertation differ from those used in Ward (1990). Throughout, I have underlined the preposed *v*P and marked the antecedent clause in bold. I have also placed the VPP-clause on its own line wherever possible.

[11]The judgement reported here is Ward's. See Chapter 4 for similar, naturally occurring examples that are accepted by many speakers.

(1.46) a. **Waiting in long lines to pay someone else more money than they seem to be entitled to is lunacy**.
But <u>wait in line</u> they did Monday in Chicago and the Cook county suburbs.

b. It was ironic, he continued, that **he eventually learned more from his mother's papers and tapes than he had directly from her**.
But <u>learn her story he did</u>...

(Ward, 1990, (3))

Even when the affirmation is concessive, the proposition must be explicitly evoked, as illustrated by the contrast in (1.47):

(1.47) a. Tchaikovsky was one of the most tormented men in musical history. In fact, one wonders **how he managed to produce any music at all**.
But <u>produce music</u> he did.

b. Tchaikovsky was one of the most tormented men in musical history.
But <u>produce music</u> he did.

(Ward, 1990, (7))

In Ward's taxonomy, *scalar proposition affirmation* is a third function of VPP, in which a logically dependent proposition is affirmed. The dependent proposition contains a predicate construable as a scale upon which the subject is being assigned a high value. An exclamative interpretation renders the affirmation non-redundant, as illustrated in (1.48).

(1.48) Led by police cars with flashing lights and trailed by other vehicles and more police, the seven cyclists were carefully watched for about the first three weeks of their journey [across the Soviet Union]. Neither the Soviets nor the Americans knew how to get rid of the police "shadows." "They stopped when **we hit the mud**," Jenkins said.
And <u>hit mud</u> they did. And swamps. And paths so small they could barely be followed.   (Ward, 1990, (15))

Independent proposition affirmation may also have a scalar interpretation:

(1.49) Kenny rogers had asked **his fans to bring cans to his concerts to feed the hungry in the area**.
And <u>bring cans</u> they did.   (Ward, 1990, (18))

35

The assertion of a proposition in a given modality requires that the proposition in that modality be independent in the prior discourse:

(1.50)   a.   # John finally realized that **he likes his job**.
               And <u>like it</u> he does—they pay him much more than he's worth.
       b.   John finally realized that **he should like his job**.
               And <u>like it</u> he does—they pay him much more than he's worth.

The second category of functions Ward identifies for VPP is *proposition suspension*, which suspends a speaker's commitment to an evoked proposition (1.51). Because the corpus contains no instances of propostion suspension, I set it aside for the remainder of the present work. I believe, however, that the antecedence requirements on the various types of propsition affirmation can be extended without complication to cases of proposition suspension.

(1.51)   a.   **Mark finished his thesis late**,
               if <u>finish it</u> he did.
       b.   It's strange that **Joseph objected**,
               if <u>object</u> he did.   (Ward, 1990, (31))

Ward concludes that VPP shares with other types of preposing a marking of the preposed constituent as anaphorically related to other discourse entities, and notes that the focus (in this case, tense or modality) saturates an open proposition in the discourse. The difference, he argues, is that the antecedent in VPP must be explicit, something that is not true for other types of preposing.

Birner and Ward (1998), in the same pragmatic framework, treat VPP as a type of topicalization. For them, VPP requies a linking relation between (part of) the preposed consituent and a set in the discourse. The analysis of proposition affirmation and suspension is repeated from Ward (1990), including logically independent, concessive, and scalar affirmation, as well as proposition suspension. Topicalization is distinct from focus movement (another category of preposing) in that the focus of the utterance is not

included in the preposed constituent.

Birner and Ward also note that preposed VPs, unlike other preposed constituents cannot participate in proposition denial (1.52). They speculate that this is because the proposition being denied in proposition denial isn't usually explicitly evoked.

(1.52)   A: How's your new boss?
         B: # <u>Win a popularity contest</u> he wouldn't.

<div align="right">(Birner and Ward, 1998, (68))</div>

In Chapters 3–4, however, I show that preposed VPs can be felicitously used to deny propositions, so long as the proposition being denied is sufficiently given in the discourse. This property of VPP, like the others discussed above, emerge from the corpus from which the examples are drawn. I turn now to the construction of that corpus and the advantages of the methodology used in the dissertation.

1.6   The methodology

Throughout the dissertation, examples are drawn from the *New York Times* portion of the English Gigaword corpus (Graff and Cieri, 2003). The corpus contains over 900 million words from newspaper articles published between 1994 and 2000. The relevant portion of the corpus was syntactically parsed by Pranav Anand using the Stanford Parser. I searched the resulting parsed corpus for particular syntactic patterns using tgrep2.

The result is a subcorpus of systematically collected examples of the syntactic constructions in question. And, perhaps more importantly, a subcorpus of all of the instances of each construction that have appeared in the larger corpus. Each of the target sentences in the subcorpus was collected along with its surrounding context (four sentences before and four sentences after). This means that the information structural

properties of each of the examples can more easily be determined without guesswork or by constructing supporting contexts. The register of the *New York Times* corpus makes it likely that participle preposing is overrepresented and VPP is underrepresented; regardless, the examples collected are representative of a natural pattern of use.

The systematicity of this method is important in two respects. First, it ensures that all of the instances of the relevant word order (barring errors in parsing, for example) are collected. The risk of confirmation bias—of finding examples only with the hypothesized syntactic or information-structural properties—is therefore minimized. Second, it ensures that the most routine examples in the most common contexts are considered, not just the examples that stand out to the researcher or are unusual or surprising. A large collection of examples occurring in their natural contexts makes it possible to see patterns of actual use and make meaningful generalizations about the relative frequency of particular pragmatic properties of the word orders in question.

Corpus work plays an important role in building a body of observations with which to drive the theory. While previous work, especially that of Birner and Ward, has built a set of descriptive generalizations about the felicitous use of various inverted word orders in English, the present investigation goes beyond that work in attaining a higher level of systematicity. The search for examples was not happenstance, meaning that both the generalizations derived from the corpus and the numerical data can be compared to a known baseline.

While previous work in this domain (especially work by Betty Birner and Gregory Ward) draws generalizations based on individual collections of examples, the time is now right to make use of tools that were not readily available in the early 1990s. One of my aims in this work is to take advantage of these new opportunities to make use of large electronic corpora to ensure that the examples under consideration are collected systematically.

Chapter 2

Participle preposing

2.1   Introduction

In this chapter, I argue that movement in the narrow syntax—A-movement—must be sensitive to discourse-level factors (specifically, information structure). I base my argument on an analysis of participle preposing, a non-canonical word order in which a participial verb phrase appears to the left of passive or progressive *be*, while the DP that would be the subject in the more usual word order appears sentence-finally. I refer to this postverbal DP as the canonical subject. An example is given in (2.1b), in contrast with the truth-conditionally-equivalent alternative word order in (2.1a).[1]

(2.1) a. *His ever-present giant sideburns, each shaped like the state of Idaho*, were <u>jutting down from his long, graying locks</u>.

     b. <u>Jutting down from his long, graying locks</u> were *his ever-present giant sideburns, each shaped like the state of Idaho*.

While participle preposing looks superficially like an example of A′-movement in that it cannot appear in clauses that host A′-dependencies (or in certain types of em-

---

[1]Throughout, the participial phrase is underlined in examples, while the canonical subject is italicized. Unless otherwise specified, examples are adapted from the *New York Times* subcorpus of the English Gigaword corpus (Graff and Cieri, 2003).

bedded clauses), I show that the preposed participle undergoes an initial movement to subject position before moving on to its ultimate A′-position in SpecCP. This two-step movement process is significant because it shows that we must restrict the initial, A-movement to apply only under certain discourse conditions. In particular, participle preposing is felicitous only when the referent of the canonical subject is less familiar in the discourse than the referent of the verbal object,[2] and A-movements that feed participle preposing (*e.g.*, raising of the participle) are possible only when those discourse conditions are met.

The goal of this chapter is to use participle preposing to illuminate the relationship between syntax and information structure. I argue that information-structure-sensitive features must be present in the syntax in order to drive movement. These features are evaluated in a dynamic, comparative way; in this sense, the analysis departs both from cartographic approaches (following Rizzi 1997) that take information structural effects to be a property of the landing site of movement and from approaches like that of Fanselow (2008); Fanselow and Lenertová (2011) in which information structural effects emerge from some other property of the moved constituent.

The argument proceeds as follows. In Section 2.3, I present a *v*P-movement analysis of the syntax of participle preposing, beginning with some observations about its distribution. The analysis involves movement of the preposed participle first to SpecTP and then to SpecCP. Section 2.4 discusses the featural motivation for these movements. I present a corpus study that builds on earlier work by Birner (1996, 1994) and supports the idea that the construction is pragmatically licensed by a comparative notion of familiarity. I then incorporate this idea into the syntactic analysis, arguing that participle movement to both SpecTP and SpecCP is driven by a FAM(ILIARITY) feature

---

[2]This generalization is subject to some caveats, most notably: (a) the preposed participle may be intransitive, in which case the generalization is trivially satisfied; and (b) like other subject-final constructions, participle preposing has a presentational use. See below for discussion.

associated with C and with the participial *v*P. In Section 2.5, I discuss the predictions of the analysis, focusing on the identity of the preposed phrase and the verbs that license preposing. Section 2.2 offers a brief comparison to locative inversion and sentential subjects, and I conclude in Section 2.6.

2.2 Comparison to other phenomena

In this section, I compare the syntax and the distribution of participle preposing to that of two other phenomena in English: locative inversion and sentential subjects. Both of these phenomena have been analyzed as involving a preverbal constituent in a left-peripheral topic position, and both are non-canonical word orders which are sensitive to the relative familiarity of the pre- and post-verbal constituents. I conclude that the same sequence of movements is involved in participle preposing as in locative inversion; the properties of sentential subjects arguably derive from a different mechanism of linking the SpecTP and SpecCP positions.

2.2.1 Locative inversion

Recent analyses of locative inversion (Rezac, 2006, *e.g.*) involves the kind of SpecTP-to-SpecCP movement that I will propose here for participle preposing. Locative inversion, like participle preposing, displays a number of properties that indicate that the preverbal PP has undergone A-movement to SpecTP. Namely, the fact that locative PPs can appear as the subjects of raising verbs (2.2) suggests an A-movement analysis, as does the lack of weak crossover effects (2.3).

(2.2)   <u>On the wall</u> seemed to be hanging *a picture of Robin*.
                                                    (Culicover and Levine, 2001, (8b))

(2.3)   <u>In every dog$_i$'s cage</u> hung *its$_i$ collar*.   (*ibid.*, (16a))

41

Locative inversion also is incompatible with A′ movements in the way that participle preposing is. It cannot be used in constituent questions (2.4a), topicalizations (2.4b), or in polar questions (2.4c).

(2.4) a. * *Who* among those awaiting Messier's decision was?
       b. * *The card machine* at hand was.
       c. * Did out of Dean's bitterness come *a better understanding of his role?*

Given these surface similarities, it is no surprise that locative inversion is syntactically similar to participle preposing. Consider first the subclass of locative inversion that can be characterized as inversion around *be*—either main-verb *be* or auxiliary *be*. These inversions can be analyzed in a manner parallel to the analysis of participle preposing developed above. *Be* takes a small-clause complement containing the canonical subject and a locative PP. In the canonical word order, the subject constituent moves to SpecTP; in the locative inversion word order, on the other hand, it is the locative PP that undergoes movement to SpecTP. This movement, which is schematized in (2.5b), is the same type of movement of a subject across a structurally higher phrase that we see in participle preposing. Given that the same type of relative familiarity condition is at play in both PP- and VP-inversions (see Birner 1996, 1994), it is reasonable to assume that this movement is also driven by a FAM feature associated with T.

(2.5) a. Among the concerns are *the generous incentives*.

b.
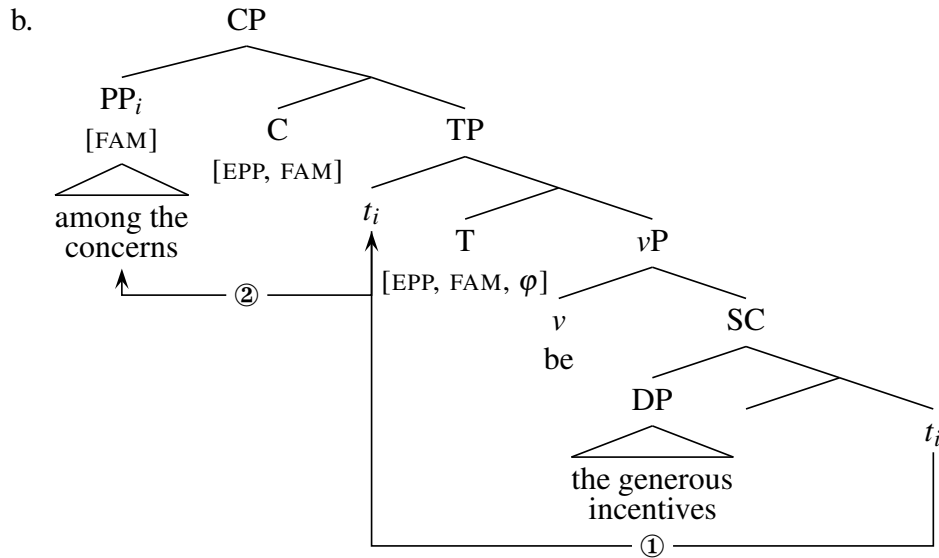
The main difference between locative inversion and participle preposing is that the preposed constituent in a locative inversion is not necessarily a verbal argument.[3] Other examples of locative inversion involve preposing of a modifier PP, as in (2.6). These examples usually feature unaccusative verbs rather than *be*, and the canonical subject remains in its base-generated postverbal position.

(2.6)   <u>From those starkly different diagnoses</u> come *equally divergent prescriptions*.

The derivation of these sentences is otherwise very similar to the derivation of locative inversions around *be*. An example derivation is sketched in (2.7b).[4]
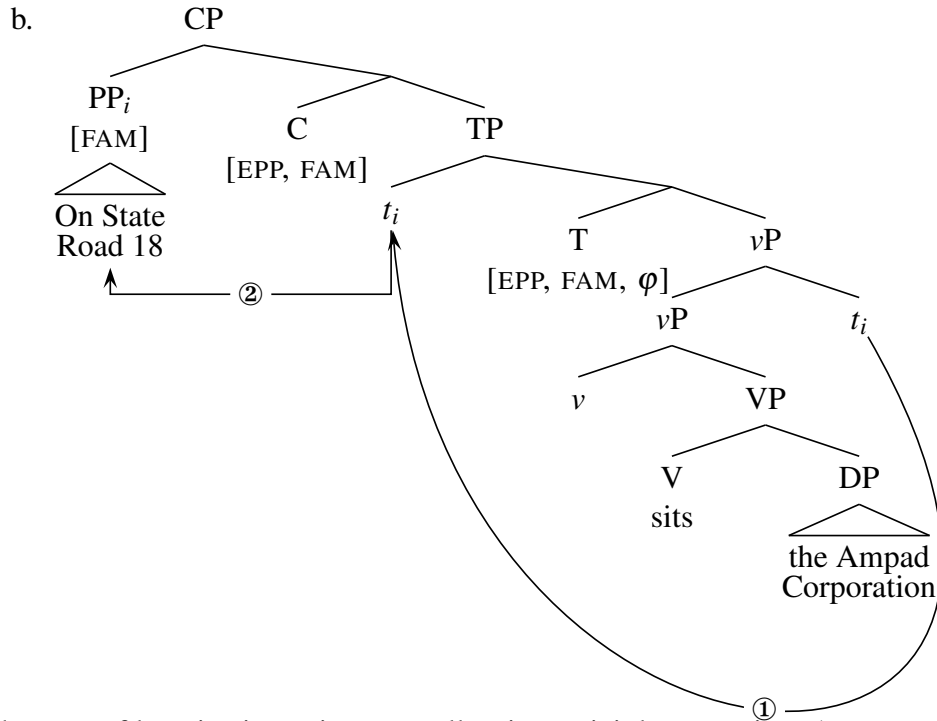
---

[3]Examples in which the preposed PP is locative but not adverbial are rarer, but attested. Two examples are given below; in both, the canonical subject cannot appear with the verb in the absence of the locatve PP:

(i)   Michael puts loose papers like class outlines in the large file-size pocket. He keeps his checkbook handy in one of the three compact pockets. The six pen and pencil pockets are always full. And <u>in the outside pocket</u> go *his schedule book, chap stick, gum, contact lens solution and hair brush*.   (Birner, 1996, p. 116)

(ii)   At such moments, the idiocy would leave his eyes which would blaze with ah holy fire, and <u>from the lips of this poor soft-brained creature</u> would issue *a flow of beautiful words in the accent of some place that was certainly not Ballyderrig*.
                    Laverty, M. 1942. *Never no more*. Virago Press. (cited in Birner 1996, p. 113)

[4]I assume that the preverbal PP is base-generated as an adjunct to *v*P. The derivation would procede similarly if it originated in another position.

43

(2.7)   a. <u>On State Road 18</u> sits *the Ampad corporation*.

b.

CP
- PP$_i$ [FAM]
  - On State Road 18
- C [EPP, FAM]
- TP
  - t_i
  - T [EPP, FAM, φ]
  - vP
    - vP
      - v
      - VP
        - V — sits
        - DP — the Ampad Corporation
    - t_i

(movement arrows labeled ① and ②)

In both types of locative inversion, as well as in participle preposing, Agreement is between T and the post-verbal canonical subject. The analysis of participle preposing presented in the previous sections, then, can be extended naturally to locative inversion, a more common phenomenon which has received more attention in the syntactic literature.

2.2.2   Sentential subjects

While sentential subjects bear little surface resemblance to preposed participles, I mention them here because an influential line of analysis of sentential subjects links the sentential subject in SpecCP with an element in SpecTP. The existence of such a construction provides credibility to an analysis that utilizes both positions for a single preverbal constituent. While sentential subjects are not a type of inversion, they do contrast with an alternative word order in which the CP has been extraposed. An example of this alternation is given in (2.8).

(2.8)   a.   <u>For them to have the opportunity to do that</u> is *the American way*.

         b.   It is *the American way* <u>for them to have the opportunity to do that</u>.

The distribution of sentential subjects is similar to that of participle preposings in that sentential subjects are not possible in clauses that host A′-dependencies—constituent questions (2.9a), topicalizations (2.9b), or polar questions (2.9c).

(2.9)   a.   * *Which industry* was <u>for the government to reduce that</u> *a shock to*?

         b.   * *Painful*, <u>for me to take that position</u> was.

         c.   * Will <u>for us to have a home as a team</u> be great?

As for the syntax of sentential subjects, I follow Alrenga (2005) (who builds on work by Koster 1978) and assume that the sentential subject is base-generated in a left-peripheral position but co-indexed with a null subject DP which undergoes A′-movement from SpecTP to SpecCP. This analysis is sketched in (2.10) below. Alrenga's analysis lends itself well to the type of feature-driven movement proposed above for participle preposing. While the null subject DP does not move across a structurally higher constituent as a preposed *v*P does, its movement from SpecTP to SpecCP suggests the same feature-sharing arrangement that we see in examples of participle preposing.

(2.10)
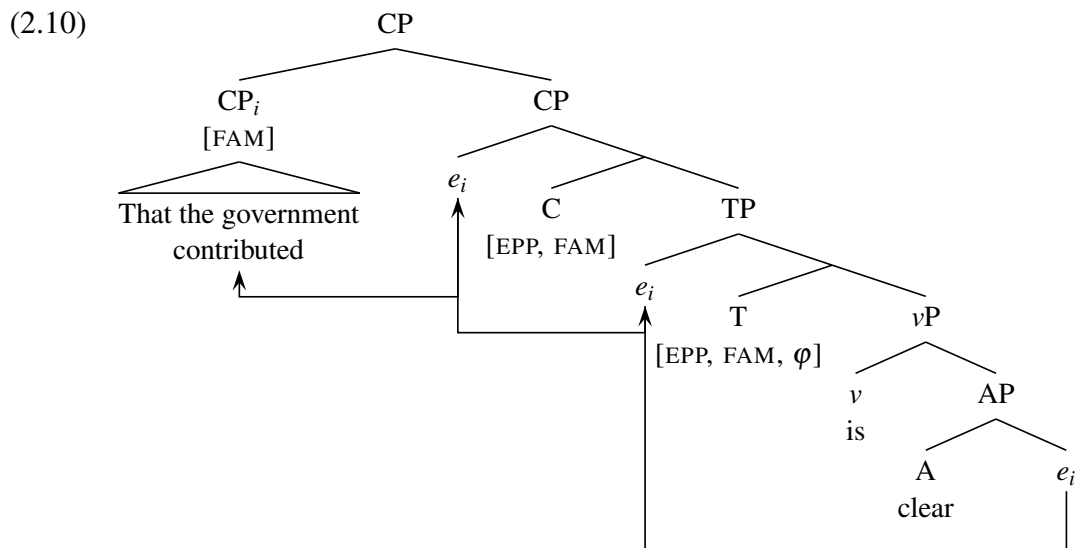
2.3 A minimalist analysis of participle preposing

The syntax of participle preposing has received little attention in the literature since Emonds's (1976) work. In this section, I develop an analysis of the construction in which a participial vP undergoes an A-movement to SpecTP, followed by an A′-movement to SpecCP. Section 2.3.1 presents evidence for the sequence of movements and for the size of the moved constituent; specific examples are derived in Section 2.3.2. In Section 2.4, I return to the question of the motivation for the sequence of movement involved in participle preposing.

### 2.3.1 Syntactic properties of participle preposing

I begin from the assumption that passive *be* is an instance of *v*, and that progressive *be* and perfect *have* are instantiations of an Asp head. Further, I assume that all *v*s are phase heads (Legate, 2003). Given this, two pieces of evidence point to the fact that the preposed participle is the structurally highest (*i.e.*, largest) available *v*P. The first of these pieces of evidence comes from examples in which passive and progressive *be* co-occur. As mentioned in 3.1, both progressive and passive participles can be preposed alone. An example of a preposed passive participle is given in (2.11).

(2.11)   <u>Tried separately from Koike</u> were *Nomura and three former executives*

When passive *be* co-occurs with a progressive *be*, however, only the progressive participle may be preposed. This pattern is illustrated in (2.12), where the only grammatical alternative involves preposing of the phrase *being tried separately from Koike*, as in (2.12a). It is not possible to prepose only the passive participle *tried separately from Koike*: (2.12b) has *being* stranded between the passive participle and the canonical subject, while (2.12c) strands it after the canonical subject.

(2.12) a. <u>Being tried separately from Koike</u> are *Nomura and three former executives*.

  b. * <u>Tried separately from Koike</u> are being *Nomura and three former executives*.

  c. * <u>Tried separately from Koike</u> are *Nomura and three former executives* being.

The fact that the word orders in (2.12b–c) are not possible suggests that the larger, progressive participle moves as a unit. This unit is the size of *v*P if we adopt a structure like that schematized in (2.13). We will see below that at least one additional projection is required in the clausal-*v*P spine; the important point here is that the participle that undergoes preposing is the only phasal verbal constituent.

(2.13)
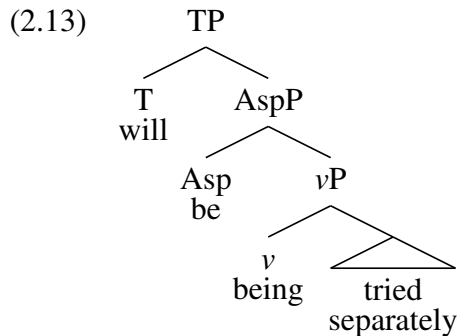
  Further evidence for the size of the preposed constituent comes from the fact that all verbal arguments and modifiers must be preposed along with the verbal participle. This includes direct objects (2.14a), locative modifiers (2.14b), and temporal modifiers (2.14c), each bolded in the examples in (2.14).

(2.14) a. <u>Topping **the list for the least affordable communities**</u> were *Laredo, Texas; Salinas and Santa Cruz, California; and Honolulu, Hawaii*.

  b. <u>Sitting **next to him**</u> was *the strongest reminder of the elite Olympic world he left behind*.

  c. <u>Leading the charge **this time around**</u> is *Atlanta*.

  Passive *by*-phrases must also be preposed along with the participial phrase, as illustrated in (2.15), meaning that the preposed phrase necessarily contains the verb (including passive *be*), any objects, and, if applicable, the passive *by*-phrase. The simplest

account of this fact is that the *by*-phrase is adjoined to *v*P (perhaps because of its close relationship with the passive *be v* head); these adjuncts are then preposed as part of the *v*P constituent.

(2.15) a. <u>Being tried separately by prosecutors</u> are *Nomura and three former executives*.

  b. * <u>Being tried separately</u> are by prosecutors *Nomura and three former executives*.

  c. * <u>Being tried separately</u> are *Nomura and three former executives* by prosecutors.

These data point to the conclusion that the preposed participle is the largest available *v*P. The question of the landing site of the moved *v*P, however, remains open. In the remainder of this subsection, I discuss three pieces of evidence pointing to the fact that the preposed participle undergoes A-movement to SpecTP.

Linear order The first of these pieces of evidence comes from the linear order of constituents in a participle preposing construction. It is not possible to have both a preverbal canonical subject and a preverbal participle. The orders participle–subject–*be* and canonical subject–participle–*be* are illustrated in (2.16a) and (2.16b), respectively; neither is grammatical. This suggests that the two constituents "compete" for the same position, either directly or indirectly.

(2.16) a. * <u>Undermining Abbey's confidence</u> *the decline in value of Lloyds' shares* was.

  b. * *The decline in value of Lloyds' shares* <u>undermining Abbey's confidence</u> was.

Further, the fact that it is not possible for both the canonical subject and the participle to appear after *be* (2.17) suggests that the position that the two constituents are competing for is the normal preverbal subject position—SpecTP.

(2.17) a. * Was <u>leading the losers</u> *Ayala Land Inc.*

b. * Was *Ayala Land Inc.* <u>leading the losers</u>.

Raising   Second, the preposed participle can appear in the matrix clause in the context of raising predicates. In these cases, the participle must originate in the embedded nonfinite clause and raise into the matrix clause. Because DP subjects are assumed to undergo raising to SpecTP, it is reasonable to assume that raising of a participial *v*P also targets SpecTP. Examples of raising the canonical subject and a participial *v*P are given in (2.18a) and (2.18b), respectively; in each case, the preverbal constituent appears in SpecTP.

(2.18)   a. *The decline in value of Lloyds' shares* seemed to be <u>undermining Abbey's confidence</u>.
     b. <u>Undermining Abbey's confidence</u> seemed to be *the decline in value of Lloyds' shares*.

Tag questions   In the canonical word order, tag questions are sensitive to the definiteness of the subject. When the subject is definite, the subject of the tag question is a pronoun which is co-referent with that definite subject. An example is given in (2.19a), where *he* in the tag refers to Yang. On the other hand, tag questions are not possible with indefinite subjects. The pronoun *he* cannot co-refer with *a former president* in (2.19b). Nor is it possible for a tag containing *there* to follow a sentence with an indefinite subject, a fact that is illustrated in (2.19c).

(2.19)   a. **Former president Yang Shangkun** was standing in the front row, wasn't **he**?
     b. * **A former president** was standing in the front row, wasn't **he**?[5]
     c. * **A former president** was standing in the front row, wasn't **there**?

However, tag questions are compatible with indefinite canonical subjects just in case the indefinite does not appear in subject position. In particular, *there*-tags are

---

[5]Some speakers find tag questions to be possible with specific indefinite subjects. With non-specific indefnintes, tag questions like this are ruled out for these speakers.

possible with locative inversion anchors. (Bresnan, 1994). The locative PP is arguably in SpecTP; *there*-tags can be seen as a rescue strategy for tag-question formation when the constituent in SpecTP is not a DP (or a CP), as illustrated in (2.20).

(2.20)   **In the garden** is a beautiful statue, isn't **there**?   (Bresnan, 1994, (67))

Notice, too, that the postverbal DP of a locative inversion construction cannot serve as the antecedent for a pronoun in the tag:

(2.21)   * In a garden is **that rusty old statue of Lincoln**, isn't **it**?

The same pattern can be seen in participle preposing constructions: The subjects of tag questions show no sensitivity to properties of the canonical subject. Instead, the tag question appears in a default *there* form, as in locative inversion.[6] The example in (2.22) shows that tag questions with pronominal subjects are not possible, even when the canonical subject is definite. By contrast, the sentence in (2.23) is grammatical for many speakers despite the fact that the canonical subject is indefinite.

(2.22)   * <u>Surrounding the stricken president</u> are *the power brokers*, aren't they?
(2.23)   % <u>Working against Cape Town</u> is *a high crime rate*, isn't there?

These two examples show that the postverbal DP in a participle preposing construction does not count as the subject for the purposes of tag question formation. The form of the pronoun of the tag depends on properties of the element in SpecTP (the EPP-satisfying element). If that element has φ-features, they must match the φ-features of the pronoun in the tag. If the phrase in SpecTP lacks φ-features, on the other hand,

---

[6]Many speakers (nine of 23 in an informal poll) do not accept tag questions with participle preposing constructions at all. Others (nine of 23) find a contrast between stative preposed participles, which can support *there*-tags, and non-stative participles, which cannot. (A further three speakers report that a stative participle does not support a *there*-tag, while a non-stative participle does.) While explaining this split between speakers goes beyond the scope of the current work, it should not, however, detract from the observation that, where tag questions are possible at all, they must be formed with *there*-tags. Tag questions with definite pronouns are universally rejected.

there is the pronoun used in the tag. In that absence of φ-features, a certain amount of ambivalence results (Ross, 1973).

Taken together, the evidence from linear order, raising, and tag questions suggests that the preposed participle undergoes A-movement to SpecTP. And the fact that verbal arguments and modifiers must prepose along with the participial verb indicates that the moved constituent is the structurally highest vP. In the remainder of this section, therefore, I propose an analysis in which vP undergoes A-movement to SpecTP.

This A-movement analysis, however, cannot be the whole story; another set of facts poses a strong challenge for such an analysis, and I take them to indicate that the preposed participle undergoes an additional A$'$-movement from SpecTP to SpecCP.

As the examples in (2.24) show, participle preposing is incompatible with A$'$-movements to the clause edge.[7] These include constituent questions (2.24a) and topicalization (2.24b). Participle preposing is also incompatible with polar questions (2.25). If the participle is in a clause-peripheral position, we have an immediate explanation for the fact that it is incompatible with other constructions that involve movement to SpecCP. The observations of (2.24) and (2.25) are reminiscent of observations about subject clauses which have led Koster (1978) and others to propose that they appear in an IP-external A$'$-position. Given the similarity of the two patterns, the fact that participial vPs cannot be preposed in clauses that involve A$'$ movements suggests that participle preposing is itself an A$'$ construction, with the preposed participle in SpecCP. The *wh*-phrase or topicalized constituent appears in SpecCP, and the examples in (2.24) show that it is not possible for a preposed participle to appear in the usual subject position.

(2.24)   a.   * When$_i$ were <u>leading the group down</u> *Bombardier Inc. shares* t_i?
         b.   * *Jeff Maggert$_i$*, <u>leading the way</u> is t_i.

---

[7](2.24b) is, of course, only an argument in favor of A$'$-movement if it is assumed that the topicalized DP *Jeff Maggert* either moves to the clause edge or is base generated in a specifier position.

(2.25)   * Was <u>softening the blow</u> *the fact that Mirror Group's cable television account was one of the four pieces of business*?

Further evidence for the participle's appearance in SpecCP comes from the fact that participle preposing bears the hallmarks of an embedded root phenomenon (Heycock, 2005). In particular, it bears a striking distributional similarity to V2 in Mainland Scandinavian languages. Like participle preposing in English, V2 word orders in Danish and Frisian are restricted to main clauses and complements of bridge verbs (3.14).

(2.26)   a. Pyt sei dat <u>hy</u> hie my sjoen.
              Pyt said that he had me seen.
              'Pyt said that he had seen me.' (Frisian; de Haan and Weerman 1985, 84)
          b. Peter troede   at   <u>den film</u> havde Marie også set.
              Peter thought that that film had   Mary also seen
              'Peter thought that Mary had also seen that film.'
                                                (Danish; Iatridou and Kroch 1992, (22))

(2.27)   a. Peter said that <u>joining Baraka in condemning the arrests</u> were *his father and Kadir Muhammad*.
          b. Peter thought that <u>speeding the decline in Hong Kong</u> was *a surge in local interest rates*.

And neither participle preposing nor V2 word orders are possible in irrealis (a) or factive (b) verbal complements.

(2.28)   a. * John ville   ønske at   <u>igår</u>   havde Peter snakket med chef-en.
              John would wish that yesterday had   Peter talked   with boss-the
              'John wished that Peter had talked to the boss yesterday.'
                                                (Danish; Iatridou and Kroch 1992, (26b))
          b. * Peter beklagede at   <u>den film</u> havde Maria set.
              Peter regretted   that this film had   Maria seen
              'Peter regretted that Marie had seen this film.'
                                                (Danish; Iatridou and Kroch 1992, (23c))

(2.29)   a. * John wished that <u>tying Santa Fe for 10th place</u> was *Washington, D.C.*
          b. * Peter regretted that <u>offsetting the increases</u> was *a 0.5% drop in the beverages and tobacco sub-index*.

Finally, neither construction is possible in sentential subjects (a) or in clausal adjuncts (b).

(2.30) a. * Dat <u>jo</u>   wolle dizze film net sjen, fernuvert my.
            That you want this   film not see, surprises me.
            'That you don't want to see this film surprises me.

                                    (Frisian; Iatridou and Kroch 1992, (19b))

        b. * Jeg går hjem hvis <u>denne</u> <u>film</u> vil   han ikke se.
            I   go home if   this   film will he   not   see
            'I will go home if he will not see this film.'

                                    (Danish; Iatridou and Kroch 1992, (29b))

(2.31) a. * That <u>compounding their problems</u> are *declines in public spending* surprises me.

        b. * I will go home if <u>adding to the concerns</u> are *reports that the union is planning to strike*.

Because V2 word orders are standardly assumed to be derived via movement of the preverbal constituent to SpecCP, embedded V2 orders in which the preverbal constituent follows an overt complementizer pose an analytic challenge. I assume, following Iatridou and Kroch (1992), that embedded V2 reflects a structure involving CP-recursion, and that participle preposing in verbal complements can be derived via the same mechanism. More concretely, Iatridou and Kroch (1992) propose that only certain, semantically bleached verbs can select (the Scandinavian equivalent of) *that*-CPs that allow for recursion by selecting their own CP complement headed by a null C. I propose that participle preposing, based on its distributional similarities to Mainland Scandinavian embedded V2, is similar in that the Cs that head verbal complements do not themselves license participle preposing. Instead, those *that*-CPs have their own CP complements that license the *v*P movement to SpecCP. This CP-recursion accounts for the attested word order in which the overt complementizer precedes the preposed participle. Regardless of the particular analytic mechanism, what is important for present purposes is that the sensitivity of the V2 structure to the embedding environment is

a reflection of the activity of the C-layer in its representation. If participle preposing shows a similar sensitivity, one should conclude that it too involves the C-layer, and movement to the edge of that layer.

We have, however, seen evidence that the preposed participle undergoes A-movement to SpecTP. To resolve this apparent contradiction in syntactic properties, I propose that the preposed participle undergoes an initial A-movement to SpecTP (satisfying the EPP property of T), followed by a second, A′, movement to SpecCP. The first movement derives the A-movement-like properties of the construction (linear order, raising, and tag questions); the second derives its A′-movement-like properties (incompatibility with other A′-movement constructions and V2). This type of analysis has precedent in Rezac's (2006) analysis of locative inversion. Building on work by Bresnan (1994) and Culicover and Levine (2001), Rezac argues that locative inversion is derived via an A-movement of a locative PP to SpecTP followed by an A′-movement from SpecTP to SpecCP.[8] In the next subsection, I illustrate how such a two-step analysis accounts for passive and progressive participle preposing.

2.3.2 The derivation of participle preposing

In this section, I discuss the details of the A- and A′-movement analysis of participle preposing. Before delving into the analysis itself, it is necessary to discuss the structure of the clauses that support participle preposing. I assume that both progressive *be* and passive *be* take small clause complements (following, ultimately, Stowell (1981)). These are maximal projections whose head (Pred) bears an EPP feature.[9] The existence

---

[8]As discussed in Section 2.2, locative inversion has a distribution and a sensitivity to discourse considerations that are reminiscent of the distribution of participle preposing. These distributional similarities lend plausibility to the similarity of the analyses.

[9]The EPP property means that Pred acts as a probe, with the consequence that the element in its specifier has subject-like properties. I call this head Pred and its projection PredP, but I recognize that the properties I attribute to this head are different from those attributed by Bowers (1993) to the head of the same name.

of an EPP-bearing functional head is independently motivated by instances of partial raising. In passive expletive constructions, the subject raises to a position above its thematic object position and immediately following the first instance of *be* (Milsark, 1974). In (2.32a), *a top executive* has raised to a position immediately after following *be*; in (2.32b), *a long list of prospects* has raised to a position immediately following progressive *be*. These expletive constructions indicate that there is an intermediate position for canonical subjects between *be* and the main verb in expletive constructions;[10] the analysis of participle preposing makes use of such a position in clauses that do not contain an expletive.

(2.32) a. There was *a top executive* examined today.[11]
         b. There is *a long list of prospects* being discussed.

Patterns of quantifier float also support this analysis. In both progressive (2.33a) and passive (2.33b) sentences, quantifiers can be stranded in a position immediately following *be*, a fact that indicates that the canonical subject has moved through that position on its way to SpecTP (especially given the logic of the approach to quantifier float initiated by Sportiche (1988)).
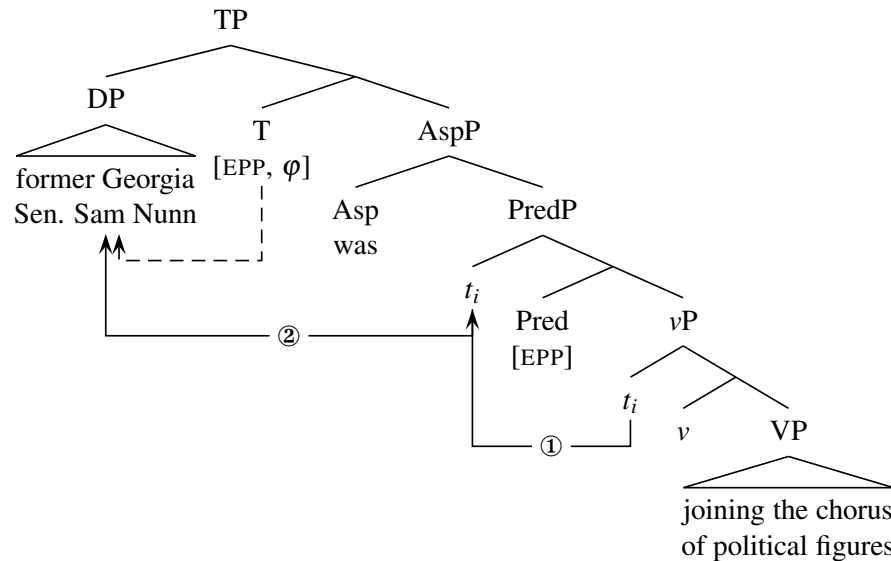
(2.33) a. They are [all ___] supporting the New York York Yacht Club in the event.
         b. They were [all ___] limited ___ by adverse growing conditions.

In contrast to participle preposing, in which the participial *v*P appears in subject position, the derivation of the canonical word order, then, involves two movements of the canonical subject—the first to SpecPredP to satisfy the EPP property associated with Pred, and the second to SpecTP. Agreement, of course, is with the canonical subject in SpecTP. This derivation is illustrated in (2.34).

---

[10] See Bruening (2011) and Sobin (2012) for analyses involving movement of the canonical subject to positions essentially equivalent to [Spec,Pred]—[Spec,Voi] and [Spec,*v*], respectively.

[11] This example (and others involving preposing of passive participles) is adapted from Emonds 1976.
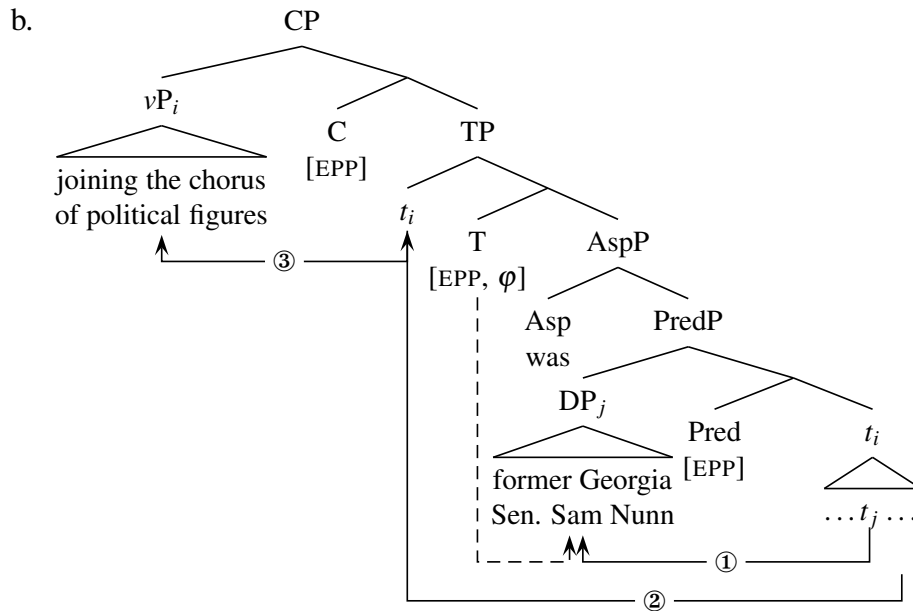
(2.34)   a. *Former Georgia Sen. Sam Nunn* was <u>joining the chorus of political figures</u>.

         b.

    The derivation of the participle preposing word order begins from a similar starting point. Indeed, the initial movement of the canonical subject to SpecPredP is identical in the two word orders. In each, Pred's EPP property is satisfied by the canonical subject in its specifier. The derivation of the participle preposing word order diverges from the derivation of the canonical word order at the step labeled ② in (2.35). At that point, it is not the canonical subject, but rather the *v*P complement of the Pred head that moves to SpecTP. That *v*P then undergoes an A′-movement to SpecCP, as illustrated in (2.35). This movement is reminiscent of predicative DP movement in the inversion analysis of specificational clauses.

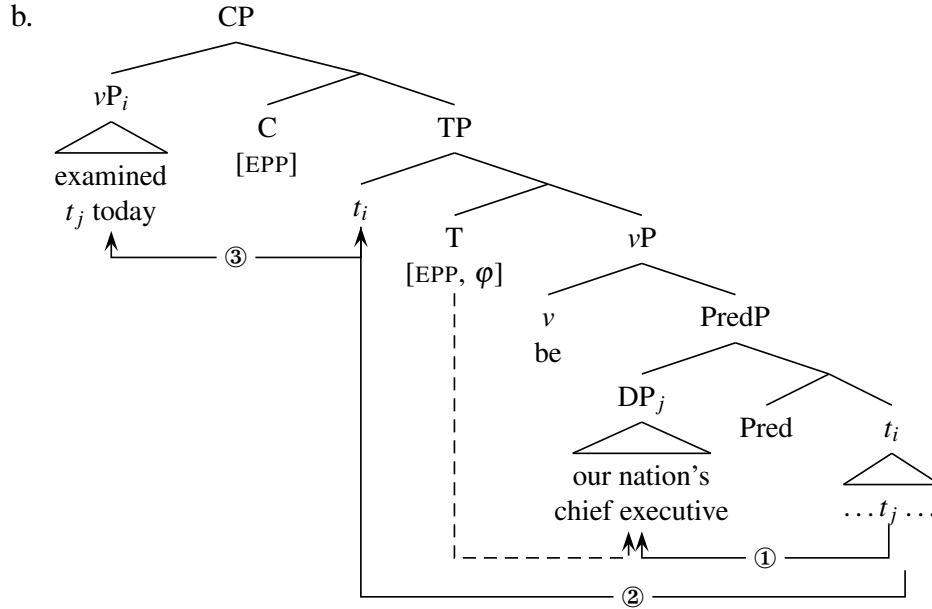(2.35)   a. <u>Joining the chorus of political figures</u> was *former Georgia Sen. Sam Nunn*.

b.

```
                        CP
          _____/    _____
        vP_i              /           \
       /    \            C            TP
joining the chorus    [EPP]        /    \
of political figures            t_i     /    \
        ↑        ③ ───────  ↑    T       AspP
                                [EPP, φ]  /    \
                                        Asp    PredP
                                        was   /    \
                                           DP_j    /    \
                                          /   \  Pred    t_i
                                  former Georgia [EPP]  /  \
                                  Sen. Sam Nunn      ...t_j...
                                        ⋀⋀
                                   ① 
                                 ②
```

In participle preposing, unlike in the canonical word order, T Agrees with the canonical subject in SpecPredP, even though the subject never raises to the specifier of T. This Agreement relation is manifested in an obligatorily morphologically plural verb where there is a plural canonical subject:

(2.36) a. Joining the chorus of political figures **were** *five former Georgia senators*.

  b. * Joining the chorus of political figures **was** *five former Georgia senators*.

I attribute this pattern to the fact that the EPP property associated with T is bundled with T's uninterpretable φ-features in the canonical word order but not in the preposed word order. See Section 2.4.3 for discussion of the featural properties of T.

The same analysis extends straightforwardly to the preposing of passive participles: The canonical subject—in this case, the object of the verb *examine*—moves to SpecPredP. The *v*P complement of the Pred again moves to SpecTP and SpecCP. And again, Agreement is with the canonical subject in SpecPredP.
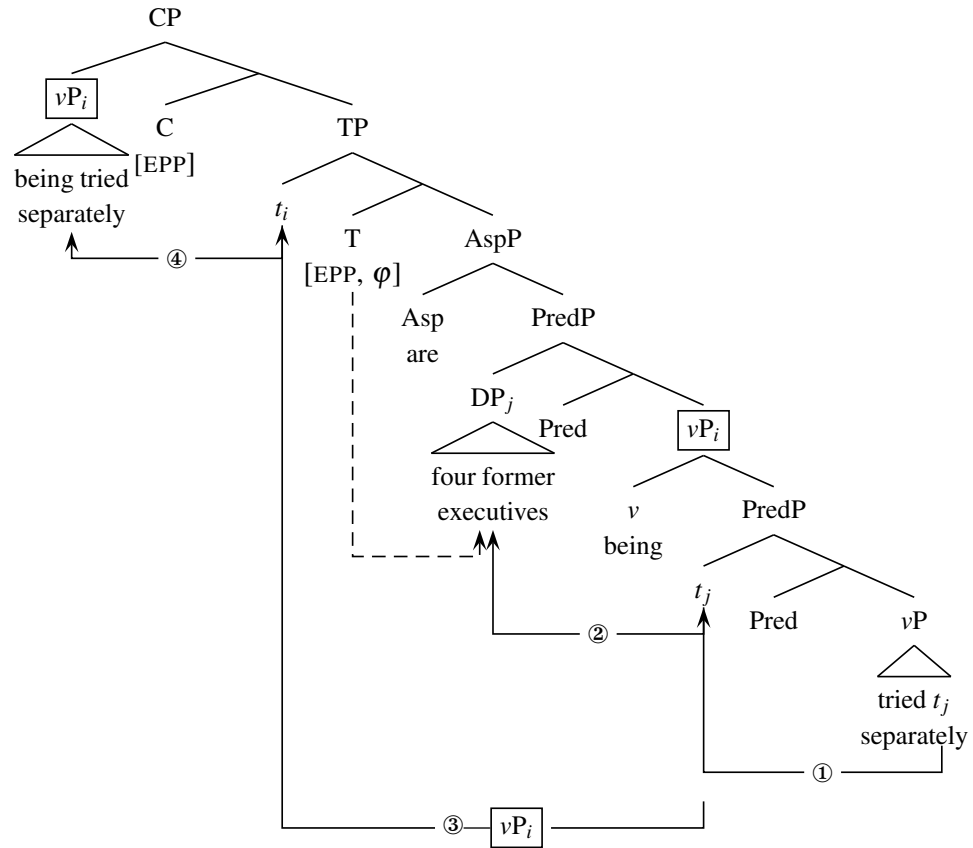
(2.37) a. Examined today was *our nation's chief executive*.

57

b.

CP

vP_i
examined
t_j today

C
[EPP]

TP

t_i

T
[EPP, φ]

vP

v
be

PredP

DP_j
our nation's
chief executive

Pred

t_i
$\ldots t_j \ldots$

③

①

②

Finally, the analysis allows us to understand examples in which passive and progressive *be* co-occur in a participle preposing construction. In these cases, there are two instances of *be*, each with its own small-clause complement. As in (2.37), the object of the main verb moves to the lower SpecPredP position to satisfy the EPP property associated with that head. That phrase, the canonical subject, then moves again to the higher SpecPredP position. The *v*P complement of that Pred head undergoes A-movement to SpecTP, followed by A′-movement to SpecCP. The assumption that this higher *v*P is a phase[12] means that its internal contents are invisible to higher probes and thus the lower *v*P may not itself raise to SpecTP. Once again, agreement is with the canonical subject in SpecPredP. The derivation is illustrated in (2.38).

(2.38)   <u>Being tried separately</u> are *four former executives*.

---

[12]I assume that all *v*Ps, whether active or passive, are phasal constituents. See Legate (2003) for evidence that active and passive verbal constituents have the same properties with respect to phasehood and Harwood (2015) for discussion of the exact size of the relevant verbal phases.

CP

vPᵢ
being tried
separately

C
[EPP]

TP

tᵢ

T
[EPP, φ]

AspP

Asp
are

PredP

DPⱼ
four former
executives

Pred

vPᵢ

v
being

PredP

tⱼ

Pred

vP

tried tⱼ
separately

④

②

①

③— vPᵢ

In this subsection, I have discussed the mechanics of the derivation in terms of the order and destination of the moved constituents. More important, of course, is an understanding of the mechanisms and principles which allow these derivations (and disallow imaginable but impossible alternatives). In particular, there remains a question of why the preposed vP moves past the structurally higher canonical subject, apparently in violation of the Minimal Link Condition (Chomsky, 1995). I turn to those questions in the following section. For now, note that the possibilities in (2.39) represent different derivational paths from similar starting points. The differences between the constructions center on the presence (b) or absence (a, c) of an expletive in the numeration and on the featural properties of the matrix T (something that will become clear in the next section).

(2.39)   a. *A new fund managed by James D. Oberweis* is sitting atop the list.
         b. There was *a new fund managed by James D. Oberweis* sitting atop the

list.

   c. Sitting atop the list is *a new fund managed by James D. Oberweis*.

2.4 Featural motivation for participle preposing

In this section, I turn to the central question of what principles and mechanisms shape the course of the derivations just described. The participle preposing construction plays a very particular role in negotiating discourse dynamics, and it is this property that is crucial in shaping its very particular syntax. I now turn to those discourse properties.

2.4.1 Discourse properties of participle preposing

Participle preposing is possible only when certain pragmatic conditions are met. More specifically, the availability of the construction is sensitive to discourse familiarity (in the sense of Prince (1981b)). The generalization that emerges from the work of Birner (1996, 1994) is given in (2.40); it states that, in a participle preposing construction, the information represented by the canonical subject may not be more discourse-familiar than the information represented by the preposed participle.[13] In the case of a tie in discourse-familiarity, the more recently mentioned material is taken to be more salient and therefore more familiar. In such a case, the more salient material is predicted to occur in the preposed participle.

(2.40) *Birner's generalization*
      The material in the preposed *v*P must be at least as discourse-familiar as the
      material in the canonical subject.

    The effects of this generalization are illustrated in (2.41). The example of participle preposing in (2.41a) obeys Birner's generalization because *the talks*, which are coref-

---

[13]The canonical subject, once raised out of *v*P to SpecPredP is treated as distinct from the rest of the *v*P for the purposes of discourse-familiarity. I assume that this is related to the existence of PredP and its role as an (initial) landing site for the canonical subject.

erent with *negotiations* in the previous sentence, represents familiar information. Cliff Fletcher, on the other hand, is discourse new. The example of participle preposing in (2.41b) differs minimally from the previous example, but it is not felicitous in the discourse because there is discourse-familiar information (*Mr. Fletcher*) in the canonical subject but no discourse-familiar information in the preposed participle.

(2.41) a. **Negotiations** resumed in Boston Thursday between the two sides in the seven-week-old labor dispute.
Joining **the talks** on behalf of management was *Cliff Fletcher, the president and general manager of the Toronto Maple Leafs.*

   b. **Cliff Fletcher** is the president and general manager of the Toronto Maple Leafs.
#Joining a negotiating session Thursday was *Mr. Fletcher, who argued on behalf of management.*
(*cf.* Mr. Fletcher, who argued on behalf of management, joined a negotiating session Thursday.)

In Section 2.4.2, I discuss the results of a corpus study that supports Birner's generalization and sheds new light on it. The study not only replicates Birner's results; it does so using a systematically collected set of examples. I conclude that participle preposing is used most often in contexts in which the preposed verbal object is discourse-familiar but the canonical subject is not. A second use of participle preposing presents itself in a minority of cases; when the sentence contains no discourse-familiar material, participle preposing can be used to signal a topic shift in the direction of the canonical subject.

2.4.2 Marking topics in participle preposing: Evidence from a corpus study

The corpus used was the *New York Times* subcorpus of the English Gigaword (Graff and Cieri, 2003) corpus, which consists of 910 million words of Clinton-era newspaper articles. A search of this corpus yielded 3,560 examples of progressive participle

preposing.[14] A similar search for passive participles yielded 3,457 results; many of these, however, were false positives and therefore not instances of participle preposing. Of the genuine progressive and passive participle preposings, the 675 most recent (by date) examples were selected for further analysis. The date cutoff was arbitrary, but the sample was thought to be large enough to reflect any relevant generalizations. The subject and the object in each of those examples was classified as familiar if the relevant phrase or a coreferent one was included in the preceding four sentences. The annotation scheme is therefore consistent with Prince's taxonomy of familiarity and jibes with Birner's work.

The results of the investigation, which are compatible with Birner's generalization and support a familiarity-based analysis, are summarized in Table 2.1. In most cases (342, 51%), there was familiar material in the preposed participle, but no familiar material in the canonical subject. 224 (33%)[15] examples contained no familiar material at all.[16] Only eight examples (1%) contained familiar material in the canonical subject but not in the object. In four cases, both the subject and the object were discourse-familiar. And 96 examples were intransitive, meaning that only the subject could be evaluated for familiarity.

In three of the four examples with familiar material in both constituents, the familiar material in the preposed participle had been mentioned more recently; an example of this is given in (2.42), where the crowd and the president are both discourse-familiar but the more-recently-mentioned crowd appears in the preposed participle. In only three cases did the more recently mentioned material appear in the canonical subject. (The

---

[14]The search query used to obtain these examples is given in (2.1). It was designed to capture all instances of an inverted sentence beginning with a VP that contains a verb in its progressive form.

(2.1) ``SINV «, (VP < VBG)''

[15]See Chapter 5 for speculation that these have a presentational discourse function.

[16]Of course, it is possible that this material was discourse-familiar but had not been mentioned recently enough to appear in the contexts that were collected.

	Familiar subject	Unfamiliar subject
Familiar object	4	342
Unfamiliar object	8	224
No object	4	92

Object more salient	Subject more salient
3	1

Table 2.1: Relative familiarity in 675 participle preposings

determination was impossible to make in the remaining ten sentences, either because the same familiar material was included in both constituents or because some of the familiar material had not been overtly mentioned.) While Birner emphasizes the importance of relative familiarity in her work and claims that, where absolute discourse-familiarity cannot be compared, a relative notion of familiarity figures into the calculation of discourse felicity for participle preposing, the results of this corpus investigation indicate that such situations are in fact quite rare.

(2.42)   **The president** was clearly nervous about the opposition protest. Presidential staff and election officials were sent home early Tuesday, and soldiers circled the Parliament building. Up the street, hundreds of police officers and soldiers guarded the presidential palace as **more than 10,000 demonstrators** chanted in the street.
Surveying **the crowd** from the presidential palace was ***Ter-Petrossian's interior minister, Vano Sirideghyan*** [. . .]. , an official cited by the opposition and foreign diplomats as being a symbol of the corruption and repression that have helped damage Ter-Petrossian's support.

The results of this corpus investigation support the conclusion that the use of participle preposing is intertwined with discourse factors. The question, then, is one of how we can capture this interdependence and integrate it into the syntactic analysis of the construction. In Section 2.4.3, I argue that the relationship between discourse considerations and formal syntax is best analyzed with formal features that play a role in the syntax but which have complex use conditions associated with them. Specifically,

I advocate an uninterpretable FAM(ILIARITY) feature associated with T that attracts a phrase bearing a FAM feature to SpecTP. (This idea has precedent in Mikkelsen's (2005) analysis of specificational copular clauses, which similarly makes use of a TOP feature.)

2.4.3 Implementation

Unlike most instances of A′-movement, participle preposing involves an initial A-movement of the preposed constituent. Because the preposed participle moves initially to SpecTP, it must initially be the properties of T that determine whether or not participle preposing is possible. Recent work (Chomsky, 2008) assumes that T's uninterpretable features are inherited from the phase head C, and I follow that line of work here. Specifically, I assume that in a participle preposing construction C bears an information-structurally distinguished FAM feature (*cf.* Mikkelsen's (2015) *u*TOP feature). C shares this FAM feature with T; as a result, T may attract a FAM-marked phrase to its specifier.[17] *v*P-movement to SpecTP is the result of two conditions: (a) the presence of a FAM feature on both T and the *v*P, and (b) bundling of FAM with the EPP property associated with T (Zubizarreta 1998; Mikkelsen 2005 for specificational clauses). If FAM is bundled with EPP, a phrase bearing FAM must move to SpecTP. If such bundling does not occur, the FAM features associated with T (and C) may Agree with an *in situ* FAM-bearing element. The latter is the situation that obtains when there is relatively familiar material in the *v*P but participle preposing does not occur.

The second movement of the preposed participle to SpecCP is motivated by the concomitant presence of FAM and EPP on C. Notice that this conception of feature

---

[17]Here, I assume that the canonical subject is not an active, visible goal for the purposes of FAM-Agreement. This means that the canonical subject does not intervent (Chomsky, 2000) between T and the participial *v*P when it lacks a FAM feature (See Broekhuis (2007) for arguments against defective intervention generally and Mikkelsen (2005) for arguments against it in topic-driven movement.).

inheritance requires that a copy of the inherited feature be retained by the head on which the feature originates. This understanding of inheritance is plausible when we consider complementizer agreement. There, C agrees in φ-features with the subject of its clause, but this complementizer agreement does not rule out normal subject-verb agreement via T, which also appears (Hoeksema, 1986; Zwart, 1993; Watanabe, 2000; Carstens, 2003; Diercks, 2010).[18] One way to interpret this pattern is that T inherits a set of φ-features from C, but C also retains that set of φ-features, resulting in two instances of agreement. The evidence from this domain, then, suggests that features can be passed from C to T in a way that allows those features to remain associated with both heads.[19] The existence of these phenomena is, of course, compatible with the existence of other phenomena in which features are passed from C to T without being preserved on C.

The full analysis, which incorporates inheritance of the FAM feature from C by T, is illustrated in (2.43). It is clear from this derivation that the combination of C and T conspires to induce the full raising that is the defining characteristic of participle preposing.

(2.43) a. <u>Adding to the debate</u> was *a statement by a top Justice Department official.*

---

[18]Complementizer agreement is a diverse phenomenon that is instantiated differently across languages and language families, but the core generalization that it does not supplant subject-verb agreement holds.

[19]See Haegeman and van Koppen (2012) for arguments against such an approach to West Flemish complementizer agreement.

b.

```
                          CP
              vP_i              
              [FAM]       C          TP
              adding to   [FAM, EPP]
              the debate            t_i      
                          ③        T          AspP
                                   [FAM, EPP, φ]
                                             Asp        PredP
                                             was
                                                   DP_j        Pred      t_i
                                                   a statement [EPP]
                                                               ... t_j ...
                                                        ①
                                   ②
```
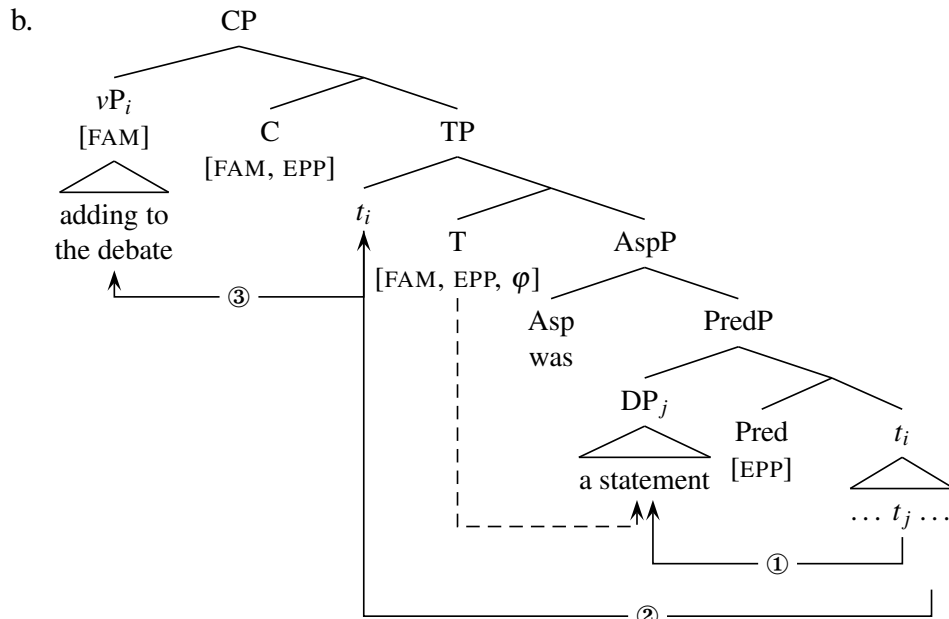
The analysis also provides a natural account of the impossibility of preposing in ECM constructions. While participle preposing is possible in finite complements of bridge verbs (2.44a), it is not possible in non-finite complements of the same verbs (2.44b). This fact is surprising in that it cannot be attributed to a more general prohibition on overt material in the embedded SpecTP position, as illustrated for the expletive *there* in (2.44c).

(2.44)   a.   I believe that <u>adding to Mrs. Whitman's woes</u> was the Supreme Court's decision.
         b.   * I believe <u>adding to Mrs. Whitman's woes</u> to be the Supreme Court's decision.
         c.   I believe **there** to be a Supreme Court case <u>adding to Mrs. Whitman's woes</u>.

The discrepancy between expletives and preposed participles in this context is, under the analysis presented here, attributed to the fact that the embedded clause has no C layer. This lack of structure means that T cannot bear a FAM feature inherited from C, and so movement to the embedded SpecTP position cannot be motivated by the presence of a FAM feature on the vP. Instead, movement to SpecTP is restricted to the structurally highest available argument—in this case, the (partially raised) canonical

subject. For similar reasons, other types of inversion, such as specificational copular claues, are possible in ECM contexts since they do not make use of the missing C layer.

The possibility of participle preposing in raising constructions is accounted for similarly. The embedded T cannot inherit a FAM feature from T because of the lack of left-peripheral structure in the nonfinite clause. The matrix T, on the other hand, may inherit such a feature and may attract a TOP-marked vP to its specifier.[20] This movement, then, is directly analogous to movement of the canonical subject to the matrix SpecTP position in raising constructions with the canonical word order. The difference is that a preposed vP undergoes an additional A′-movement step to SpecCP after moving to SpecTP. Examples of the two possible word orders in raising constructions are given in (2.18).

(2.45) a. *Lewis* happened to be <u>keeping pace with him on the streets</u>.
       b. <u>Keeping pace with him on the streets</u> happened to be *Lewis*.

The analysis presented in this section, then, allows us to understand the impossibility of movement of distinct phrases to SpecTP and SpecCP. Movement of the participial vP to SpecTP is dependent on the presence of a FAM feature on T. That feature is borne by T only when it has been inherited from C, meaning that C also bears a FAM feature and must inherit the structurally highest FAM-bearing phrase to its specifier. The highest such phrase will always be in SpecTP, thus preventing a preposed participle from appearing in SpecTP alongside a canonical subject in SpecCP or *vice versa* and accounting for the ungrammaticality of the examples in (2.16).

---

[20]This analysis assumes that the embedded SpecTP position in raising constructions is not a stopping-off point for cyclic A-movement, and the movement in (2.45) is a long A-movement. See (Castillo et al., 1999; Boeckx and Grohmann, 2007, *i.a.*).

2.5 Predictions

In this section, I show that the analysis presented here, while designed to account for the distributional patterns of participle preposing , makes the correct predictions about the clause-internal syntax of the construction. These confirmed predictions lend further credibility to the A- then A$'$-movement analysis.

2.5.1 Which phrases can and cannot move

The analysis presented in the previous section combined with certain theoretical commitments makes a number of predictions concerning which phrases are eligible for movement to SpecTP and which phrases are not. The first, and most obvious, of these predictions is that phrases bearing a [FAM] feature can only move to SpecTP when T also bears a FAM feature. When T does not bear the relevant feature, the structurally highest phrase—the DP canonical subject—must move to SpecTP to satisfy the EPP property associated with T.

Another prediction of the analysis is that the participial vP and the DP canonical subject are in fact the only phrases that can be moved to SpecTP. Consider again the structure of a participle preposing construction, repeated in (2.46) below. The AspP headed by *was* is ineligible for movement to SpecTP because it is not a phase and only phases can move (Chomsky, 2000, 2001, 2008; Holmberg, 2001; Fowlie, 2010; Roberts, 2010). PredP, too, is not a phase and therefore cannot undergo movement to SpecTP. And any subconstituent of vP is too deeply embedded within the vP phase to be accessible to T *via* an Agree relation. On the other hand, I assume that DP and vP are phases (Legate 2003; Svenonius 2004; Hiraiwa 2005[21] may also suggest that they are vPs in which the external argument originates. While I do not pursue this idea here,

---

[21]See Harwood 2015 and Sailor 2012 for evidence that (the equivalent of) progressive vPs are spell-out domains that are capable of undergoing movement. The movability of *-ing*-participles

it would allow us to keep the contrast between progressive and perfect participles, but in a slightly different implementation.). In the example in (2.46), the participial *v*P *adding to the debate* and the DP canonical subject *a statement by a top justice official* are in the same phase as T but are not subject to antilocality restrictions. With the right featural makeup, either of them can undergo A-movement to SpecTP.

(2.46) a. <u>Adding to the debate</u> was *a statement by a top Justice Department official*.
    b.
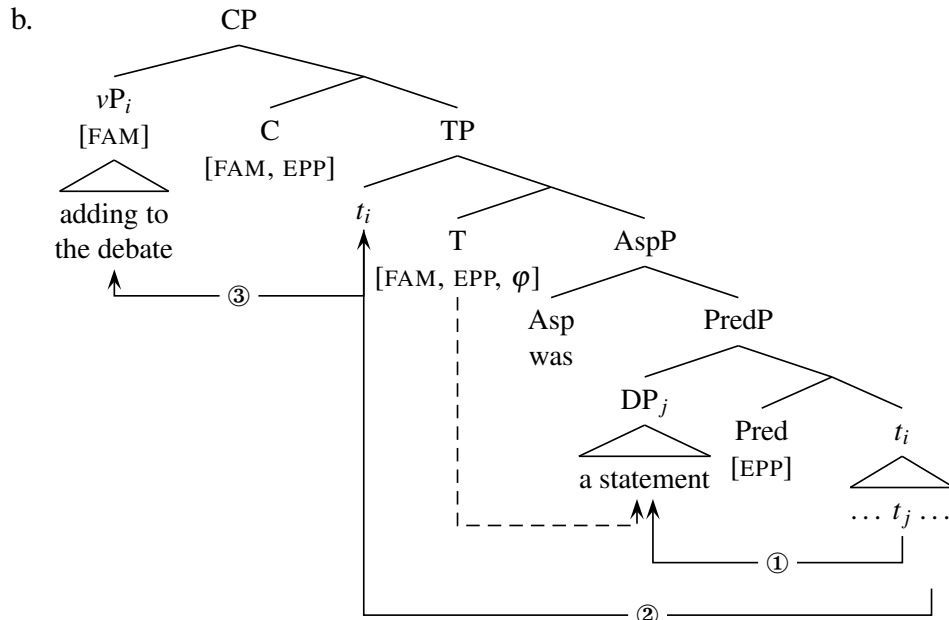
Finally, note that the constituent that moves to SpecPredP to satisfy the EPP property associated with Pred is restricted to the DP canonical subject. The participial *v*P cannot move to that position given antilocality considerations:[22] As the complement of Pred, it is too local to Pred to undergo movement to SpecPredP (Bošković, 1994, 1997; Abels, 2003; Grohmann, 2003). Similar arguments can be made about examples of preposing of passive participles, where it is also the most prominent argument of the verb that is attracted to SpecPredP.[23]

---

[22]This also rules out raising of AspP.

[23]In this case, movement to SpecPredP must proceed through Spec*v*P. If it did not, the canonical subject would be too deeply embedded within the *v*P phase to be accessible to Pred.

2.5.2 *Be* versus *have*

In his initial discussion, Emonds included participle preposing in a category of "preposing around *be*". The analysis presented in the previous section also accounts for the fact that participle preposing is possible when the preposed constituent is a participial complement of *be* but is ungrammatical when the preposed constituent is a participial complement of *have*. This crucial distinction refleces for us a difference in the selectional properties of *have* and *be*. The presence of this EPP-bearing functional projection creates a position between *be* and the main verb in which the canonical subject can appear. *Have* does not take this kind of EPP-bearing functional projection and therefore lacks a position for the canonical subject to move to outside of *v*P. This is illustrated in (2.47); the participle preposing word order is impossible because the preposed *v*P would have to contain the canonical subject.

(2.47) a. * <u>Helped to push prices higher</u> had *speculation*.
        b.
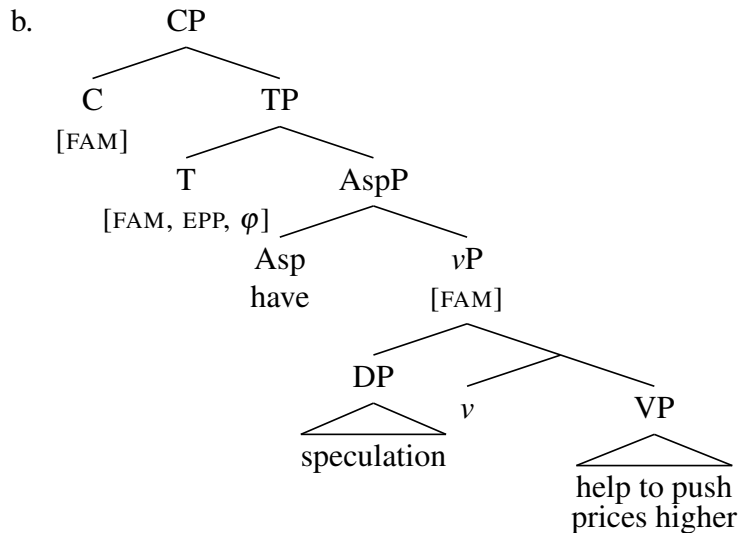
But the word order in which the *v*P complement of *have* moves to SpecTP is also ruled out, as illustrated in (2.48):

(2.48)   * *Speculation* <u>helped to push prices higher</u> had.

We would expect the sentence in (2.48) to be grammatical if it were possible for T

70

to Agree in φ-features with the canonical subject in Spec*v*P before T Agrees with the FAM feature of the *v*P, attracting it to SpecTP. The stark ungrammaticality of sentences of this type, however, indicates that such a derivation is impossible. This possibility is ruled out by Case-licensing considerations—if the *v*P moves to SpecTP, the canonical subject is contained within an element in SpecTP and no longer in the c-command domain of the φ probe on T.[24]

The impossibility of preposing of perfect participles, then, is a consequence of the type of complement selected by *have*. This lack of an EPP-bearing complement is also manifested in the impossibility of partial raising in expletive constructions with *have*. Unlike *be*, *have* does not allow expletive constructions in which the canonical subject appears between the auxiliary and the main verb. The ungrammaticality of sentences like (2.49) under this analysis can be attributed to the absence of PredP in the complement of *have*.

(2.49)　　* There has *a report that the economy created 2,000 non-farm jobs* offset those advances.

To conclude this section, we have seen that the differential behavior of *have* and *be* is a result of the different complements selected by the two verbs. We have also seen that the feature-driven analysis proposed in the previous section correctly predicts that either the canonical subject or a preposed participle—but no other constituent—can move to SpecTP. Before concluding, I compare the distribution of participle preposing to that of locative inversion and sentential subjects in English and to embedded V2

---

[24]Notice that this explanation requires FAM-Agreement to take place before φ-Agreement. There are two possible resons for this. One is that the FAM feature has something of a privileged status which allows it to probe first in any configuration. A second alternative is that any feature which happens to be bundled with T's EPP property probes first, triggering Agreement and movement to the specifier of the probing head. This would mean that the EPP-FAM bundle in a participle preposing construction would act as a probe for Agreement before T's φ-features. In the canonical word order, by contrast, the EPP property associated with T is bundled with its φ features, thereby attracting the canonical subject to SpecTP before any FAM feature an trigger an Agree relation. I leave the exact mechanism underlying this feature geometry (see Cowper (2005)) to future work.

word orders in Danish.

2.6 Conclusion: Movement and information structure

The combination of the syntactic and discourse properties of participle preposing provides evidence that restrictions on the felicitous use of participle preposing must be encoded in the syntax (*contra* Chomsky (2008) and Fanselow and Lenertová (2011)). In the analysis presented in the previous sections, there is a direct relationship between movement of the preposed participle to SpecTP and SpecCP: Because T only bears a FAM feature when C does as well, participle movement to SpecTP is possible only when there is further movement to SpecCP. We would not expect this relationship to hold if movement of topics to SpecCP were free—instead, we would expect the participial vP to be able to appear in SpecCP when the canonical subject is in SpecTP, and *vice versa*. It is also the presence of the FAM feature on T and on the preposed participle that allows raising of the structurally lower participial vP across the canonical subject.

The ultimate conclusion is that vP movement to SpecTP must be motivated by information-structural properties. This in turn means that information-structure sensitive features must be visible to the syntactic derivation. It is important to note, however, that these information-structure-sensitive features behave slightly differently from other features (*e.g*, φ-features). In participle preposing, whenever a FAM feature is inherited by T, it is bundled with T's EPP property.[25] But it is not bundled with φ-features, which function independently in that they Agree with the DP canonical subject.

Finally, the scope of analyses like the one I have presented here is not limited to participle preposing. Locative inversion (Bresnan, 1994; Rezac, 2006), sentential subjects (Alrenga, 2005; Miller, 2001), and specificational subjects (Mikkelsen, 2005) in

---

[25]In the canonical word order, FAM can Agree with an in-situ vP.

English display a similar sensitivity to discourse context and have been analyzed as involving movement of a preverbal constituent from SpecTP to SpecCP. And V2 word orders in Germanic languages (see Mikkelsen 2015 for Danish) are sensitive to discourse context and have been analyzed by means of an information-structure-sensitive feature associated with C.

2.6.1 The content of the FAM feature

We have seen, then, that discourse features play a role in driving derivations. But we cannot take a simplistic view of what these features do. It is not the case that the preposed *v*P itself is a topic or represents given information. Instead, participle preposing signals that the *v*P contains some material that is relatively familiar. Notice that this notion is a comparative one—no sub-constituent of the preposed *v*P must necessarily be familiar in an absolute sense; rather, some subconstituent must be at least as familiar as the information denoted by the canonical subject.

One way of thinking about the dynamic, comparative nature of this feature is to assume that the feature has a use condition associated with it. Such a use condition would be analogous to the condition associated with the [E] feature that licenses ellipsis (Merchant, 2001). Both the [FAM] feature an the [E] feature have sophisticated access to the dynamics of the discourse. Ellipsis can be licensed whenever there is an antecedent for the elided phrase; there is, however, a pragmatic component to the appropriateness of its use. Participle preposing is similar in that it is syntactically licensed whenever some sub-constituent of the preposed *v*P is relatively familiar. The condition on participle preposing seems more complex than the identity condition on ellipsis because the information status of a constituent outside of the *v*P must be factored into the calculation as well. But pragmatic factors ultimately determine when the construction is actually used—in scene-setting, where the subject is particularly long (Phil Corbett,

p.c.), or where the preposed participle provides a connection to the preceding discourse. One way of assimilating FAM more closely to E (which does not compare parts of the sentence to one another, but rather simply looks at its sister), then, would be to claim that FAM-marking originates on the verb. Syntactically, the feature percolates up to vP. On the interpretive side, it signals that its sister[26] meets some threshold of discourse-familiarity. Typically, this threshold would involve exceeding the discourse-familiarity of the canonical subject; in presentational participle preposings, it would instead correspond to how familiar the speaker intends for the object to be.

2.6.2 The typology of inversion

Consider finally how the system developed here might let us understand the typology of inversions in English. The core of the (syntactic) proposal is that phrases should be eligible for inversion if they are themselves phasal but are not trapped within a phase. Objects of the verb, then, which are embedded within the vP phase, are correctly predicted not to undergo preposing. But verbal adjuncts—locative modifiers, for example—are predicted to participate in preposing constructions, assuming that they are themselves phasal and that their status as adjuncts places them at the phase edge. Predicates—here, complements of the Pred head—may also undergo preposing, as we have seen in the case of participle preposing. In general, preposing should be limited to those constituents that are not embedded within a phase, and (b) are themselves phasal.

If we extend this analysis to specificational inversion, the fact that DP is a phase while AP is not provides a new perspective on why AP inversion of the form *Short is Sophie* is not possible: Since AP is not a phase, it is not eligible for the kind of discourse-sensitive-feature-driven movement discussed above for participle preposing.

---

[26]In the case of verbs that have direct objects; preposed intransitive participles must be marked for the discourse status of the verb itself.

There is a sense, then, in which locative inversion in clauses containing *be* and participle preposing are two variants of the same construction in that a subconstituent of the small-clause complement of *be* moves to SpecTP and then to SpecCP. Assuming a similar featural motivation for the two categories of preposing allows us to understand the behavioral similarities between them and brings us a step closer to a derivational typology of inversion in English.

Chapter 3

VPP and verum focus

3.1 Introduction

Verb-phrase preposing (VPP)[1] is a construction in which a finite verb appears to the

left of the subject. Any arguments of the verb come between the sentence-initial verb

and the subject. In the canonical case, an auxiliary appears stranded at the end of the

sentence. This stranded element is often dummy *do* (3.1), but it may also be another

auxiliary (3.2) or modal (3.3).[2] In all cases, the fronted verb appears in its base form.[3]

(3.1) Mertz isn't the only person who heads a workplace where employees know
they're valued. Fortunately, there are other great places to work. But this
is Mertz's story about attracting and **keeping workers at the promotional
products supply company that has about 140 employees**.
And keep them he does. TradeNet's annual turnover rate is about 5 percent—
far below the manufacturing and printing industry standard of 10 percent to
15 percent. Hardly anyone leaves by choice. Most of the few departees are

---

[1]The literature also refers to this construction as "VP topicalization" or "VP fronting". I have chosen
the term "VP preposing" for the sake of consistency with Ward's (1990) careful pragmatic work, but this
choice of terminology is not intended to have any ideological or theoretical implications.

[2]Unless otherwise indicated, all examples are taken from the *New York Times* portion of the *English
Gigaword* corpus (Graff and Cieri, 2003). The preposed VP is underlined in all examples, and the
antecedent clause (see below) for that VP appears in bold text.

[3]This is true even when it would appear in a past participial form in the uninverted word order, as in
(3.2). See Sailor (2012); Harwood (2015) for some discussion.

asked to leave because they fail to measure up to performance standards. There's also a waiting list of people who want to work there.

(3.2) You expect television to turn grandeur into grandiosity, and it does. But a kind of triumphalism thrives at Yankee Stadium, too, where the World Series pre-game soundtrack included the theme from "Star Wars" and the "1812 Overture." But that mood is met for the fans, not the players. There is a difference between destiny and opportunity, and the 1999 Yankees know it. **They will take opportunity every time**, and, in this Series, <u>take it</u> they have. It is easy, in the high-wattage glare of a Series game, to lose sight of the fact that baseball, even at Yankee Stadium, can still have a pleasantly small-town feel to it. Kofi Annan, mayor of the world if not the city, throws out the first pitch in New York, which bounces halfway to the plate. Marching bands from South Jersey assemble on the warning track—the outfield grass remaining inviolate—and play "Give Some Lovin'" and "Louie, Louie." The notes of all the instruments, except the bass drums, gust away into the evening, just as they would at a local homecoming game.

(3.3) Quitting now? In the middle of the season? Quitting while still a prime player and passer? "Steve would want **to retire on his own terms** and even then it would be difficult for him," 49ers receiver Jerry Rice said.
But really, <u>retire</u> he must. After 169 games and 4,149 passes and 358 sacks and countless other hits, it is time. Four concussions is a lot. Not only that, but this season he also has been battered. In one game, Sept. 19 against New Orleans, Young was hit 21 times.

In general, an overt linguistic antecedent for the preposed verb phrase is required. The example in (3.4) shows that VPP is impossible in out-of-the-blue contexts. Note that this infelicity is independent of the pronominal subject in (3.4); in (3.5), the subject (Vin Scully) has been introduced in the discourse context, but the VPP remains infelicitous.

(3.4) Guess what?
  # <u>Happen</u> ["Morning Edition's" success] did. [It] has the most listeners of any program on NPR. And, in large part, this is because of the nondescript guy with the floppy hair and the voice now familiar to the show's roughly 8 million listeners. His calm, wry tones have guided us through tragedy and chaos: "That's my job, to be calm, or to sound that way when there's chaos going on amongst the staff, trying to bring in a last-minute report and people are running around, cussing each other out, tripping and falling, and I've got the microphone. I'm just 'Bob.'"
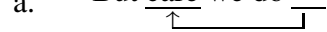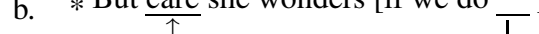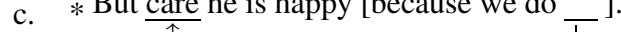
(3.5)   "For Love of the Game" has its share of tears, too, but not when Scully is on the screen. Scully plays himself, naturally ("It's about as much of an acting stretch as I'm capable of," he says with a wink), broadcasting a perfect game being thrown by an aging Detroit Tigers pitcher, Billy Chapel, portrayed by Costner.

And <u>improvise</u> he did. "He came up with 80 percent of his lines," Raimi says. "I thought the screenwriter (Dana Stevens) might be upset, but she thought it was fantastic." Indeed, Scully delivers the best line in the movie, an end-of-the-game description so vivid and so perfect that long-time listeners will realize that it could only have come from him. Scully, modest to a fault, owns up to the authorship, but says "it wasn't much."

The striking contrast in felicity between contexts that provide an appropriate linguistic antecedent for the preposed VP and those that do not will be the subject of later discussion. I will argue later in this chapter that the VPP-sentence addresses a polar question that arises in the discourse under certain conditions. For now, it is important only to note that a linguistic correlate of the preposed phrase appears to be a necessary condition for the felicitous use of VPP.

In this chapter, I discuss the syntax of VPP and its semantic interpretation. I begin by showing that VPP involves A′-movement of a vP-sized constituent to a left-peripheral position. I discuss existing proposals for the syntax of VPP, most of which are concerned with the possibility of stranding material to the right of the auxiliary. I then argue that VPP expresses verum focus (Höhle, 1992) that results from syntactic focus-marking of a polarity head, focus-marking that is realized on the stranded auxiliary. This approach to the semantics of VPP avoids some of the problems of previous analyses, while straightforwardly accounting for the fact that VPP, like canonical-order verum focus constructions, requires a discourse antecedent.

3.2 The syntax of VPP

VPP bears the hallmarks of A′-movement (Chomsky, 1986; Lasnik and Saito, 1992; Huang, 1993; Pesetsky, 1995; Baltin, 2006, *i.a.*): the distance between the preposed VP and its base position is apparently unbounded (3.6) but island-sensitive (3.7).

(3.6) "People want the opportunity to talk."
And talk I see [they did __].

(3.7) "This is way more than I expected it to be. I wasn't expecting such a turnout and a warm response. I didn't think people cared about us anymore."
   a.   But care we do __ .
   b. * But care she wonders [if we do __].
   c. * But care he is happy [because we do __].

Further, it is not possible to extract from the preposed constituent (3.8).[4]

(3.8) A few blocks away, Messinger, standing next to a glum David Dinkins in the ballroom of the Grand Hayatt, presented the outcome as just a small setback. "Well, friends, they never said this would be easy," she commented. There was a scattering of boos when she said that there would probably be a runoff. "We're going to have to win this the hard way," she said.
   a.   I wonder if win a close election they will.
   b. * I wonder how close an election [win __] they will.

The constituent that undergoes this movement is a *v*P. It must be large enough to contain the lexical verb, and, if necessary, the progressive form of the verb *be* (See Harwood (2015) for arguments that progressive *be* is part of the smallest phase that contains the lexical verb and its arguments.):

(3.9) If Darth Vader says that Han Solo was being frozen in carbonite, then…
   a.   [**being** frozen in carbonite] he was.
   b. * [frozen in carbonite] he was **being**.   (Harwood, 2015, (56))

---

[4]Extraction from the subject is not possible, either. This is unsurprising since extraction from subjects is not generally possible (and, indeed, is impossible in the canonical-order counterparts of VPP-sentences).

Other than the progressive *be*, other auxiliaries remain stranded after the subject. This fact is illustrated for auxiliary *have* in (3.10):

(3.10)   Others praised the paintings for their energy and lyrical quality. "We wanted to tell the whole story, warts and all," Eastman said. "Our feeling was to get the work out there and let **the punters decide if these works were any good**."
    a.   <u>Decide</u> they have.
    b. * <u>Have decided</u> they will.

While preposings containing adverbs are uncommon in naturally occurring text, it is possible to prepose a VP-level adverb along with the verb and its arguments. The example in (3.11) contains the adverb *quickly*; similar examples can be constructed with adverbs like *completely* and *easily*:

(3.11)   The decision by Ronald Reagan's regulators to permit credit unions to agglomerate may have been the last sensible change ordered before the savings and loan industry went over the waterfall in 1983. To that point, credit union membership had been restricted to narrowly defined groups sharing a common bond, usually employees of a particular company. Suddenly, **credit unions were free go grow**, to switch their charters from occupationally-based to community-based.
And <u>quickly grow</u> they did.

Together with the assumption that only phases move (Chomsky, 2001), the evidence presented above suggests that the moved constituent is *v*P. Before the *v*P preposes, the subject moves out of the *v*P to its canonical position in SpecTP.

Evidence for the exact structural positions of the subject and the preposed *v*P is difficult to come by. Note, however, that sentential adverbs may appear in their customary position between the subject and the finite verb:

(3.12)   The pattern is likely to be repeated next week, when a laundry list of major banks, computer companies and oil companies report on their profits for the third quarter, investors say. The reason: A euphoric mood among investors pushed prices higher than justified by the outlook for earnings and interest rates, money managers say. "With a market this high, they need to be a lit-

80

tle better than good numbers right now; they need to be great," said Warren Simpson, a managing director at Stephens Capital Management Inc. in Little Rock, Arkansas. "People are looking for an excuse to sell."

Sell they certainly did.

The damage was heaviest in the computer-dominated Nasdaq Composite Index, which lost 4.2 percent, falling 72.18 to 1666.85 for its biggest weekly loss since July 12, 1996. The Dow Jones Industrial Average slumped 198.18 points, or 2.4 percent, to 7847.03—finishing the week below 8000 for the first time in three weeks.

Such adverbs may also appear clause-initially or after the finite verb, as expected, though they are set off by parenthetical intonation in these positions. The adverbs do not, however, sound natural when placed between the preposed *v*P and the subject:

(3.13)   Almost overnight, unit investment trusts with catchy names like Diamonds and Spiders and Webs have become Wall Street's hottest products. A sort of hybrid between a mutual fund and a stock, a unit investment trust holds a fixed portfolio of bonds or stocks for a defined time. The most popular trusts trade like stocks on the American Stock Exchange, where they are single-handedly responsible for an increase of about 25 percent in daily trading volume in the last three years. Investors like unit trusts because they are easy to understand; stock brokers like them because they are even easier to sell and because of the fat commissions many offer, compared with similar mutual funds.

   # And sell apparently they have.

While these adverbs may appear immediately before the subject in the canonical word order (e.g., *Apparently they have sold*), their inability to appear in (3.13) is unsurprising. Pre-subject adverbs are generally not compatible with topicalized phrases, and it is reasonable to assume that they are themselves topicalized.[5]

The evidence from adverbs provides no reason to suggest that the subject of a VPP-sentence appears anywhere other than its canonical position in SpecTP. Nor does it provide any reason to suggest that the preposed VP is not topicalized to a postion higher than the subject.

---

[5]Note that in V2 languages like German, it is not generally possible for both an adverb and the subject to precede the verb; sentence-initial adverbs fill the preverbal slot. See Haeberli (2012) for extensive discussion of preverbal constituents in the Germanic languages.

The preposed *v*P, then, must move to a position above TP. This position must also be below the embedding complementizer, since VPP may be embedded under bridge verbs:[6]
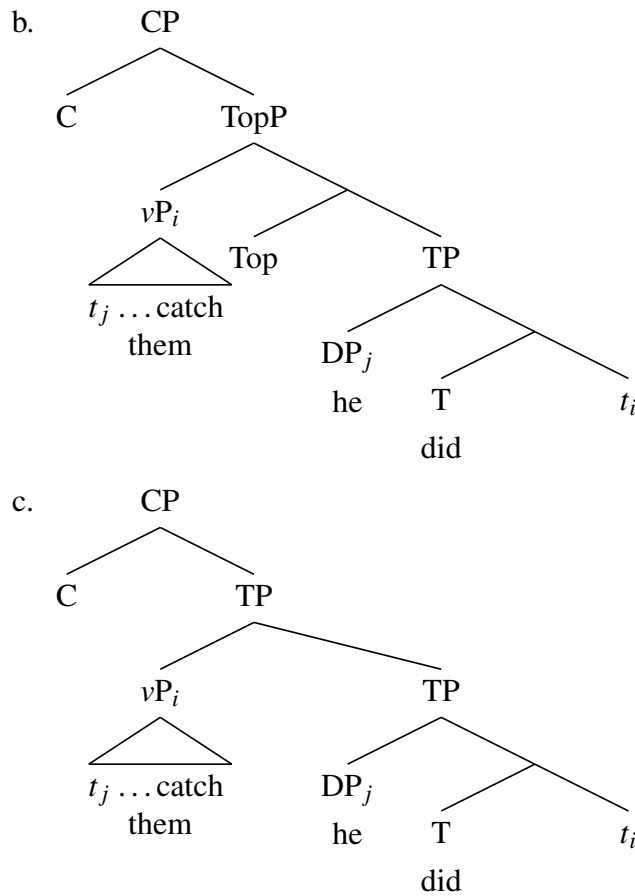
(3.14) Frank and Suzanne Chandler had a beautiful wedding that went off so perfectly, it was impossible to imagine **the disasters that would follow**.
But we now know that <u>follow</u> they did.
The wedding from heaven spawned the aftermath from hell. Photographs went missing. Presents were destroyed. A precious ring was lost.

There are therefore two logically possible positions for the landing site of the moved *v*P. It is possible that the *v*P moves to SpecCP, given the assumption that certain bridge verbs select recursive CPs (Iatridou and Kroch, 1992). Alternatively, the *v*P could move to a dedicated topic position in the specifier of TopP (Rizzi, 1997) or left-adjoin to TP. These three possibilities are illustrated by the trees in (3.15a–3.15c), respectively.

(3.15) <u>Catch them</u> he did.

a.

---
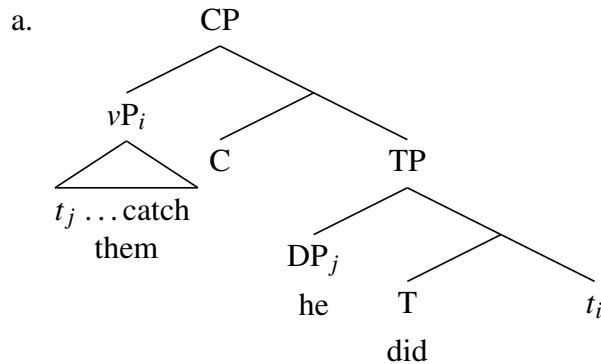
[6]Like participle preposing, VPP exhibits the behavior of a root phenomenon (Heycock, 2005).

82

b.

```
              CP
            /    \
           C     TopP
                /    \
             vP_i     \
            /   \      \
           /     \    Top      TP
        t_j …catch           /    \
          them            DP_j      \
                          /    \     \
                        he      T     t_i
                               did
```

c.

```
              CP
            /    \
           C      TP
                /    \
             vP_i     \
            /   \      TP
           /     \    /    \
        t_j …catch  DP_j    \
          them      /   \    \
                  he     T    t_i
                        did
```

I assume an analysis in which movement is driven to SpecCP by an information-structure-sensitive EPP feature on C, as in Mikkelsen (2015). The crucial point is that the movement must be sensitive to topicality. Evidence for a topicalization analysis includes the fact that VPP cannot occur with other types of topicalization. In particular, it cannot cooccur with topicalization of a DP:

(3.16)   a.   <u>Try him</u> they did.
         b.   Him, they tried.
         c.   * Him, <u>try</u> they did.
         d.   * <u>Try</u>, him, they did.

The pattern illustrated in (3.16) rules out the adjunction analysis in (3.15c). Assuming that DP-topicalization involves movement to SpecCP[7], we would expect a TP-adjunct

---

[7]Or, indeed, to SpecTopP

to be able to surface to the right of the topicalized DP. The fact that (3.16c) is ungrammatical shows us that this cannot be the case.

The analysis has precedent in other, unrelated instances of VP fronting; Vicente (2007), for example, proposes a similar structure for *v*P-movement in Spanish.[8]

(3.17) Leer,   Juan ha leído el libro
        read.INF Juan has read the book
        "As for reading, Juan has read the book"   (Vicente, 2007, pp. 62)

Because VPP generally requires a syntactic antecedent for the preposed *v*P (and because the subject of the discourse antecedent almost always corresponds to the subject of the VPP-sentence)[9], the preposed constituent roughly corresponds to the discourse antecedent. In other words, the material in the fronted *v*P, including the trace of the subject, is given in the discourse. Givenness is often assumed to be a criterion for topicality in that sentence topics tend to have been previously mentioned (see, for example, Gundel (1988)).[10]

The syntactic picture that emerges if a preposed *v*P undergoes feature-driven movement to SpecCP is schematized in (3.18):
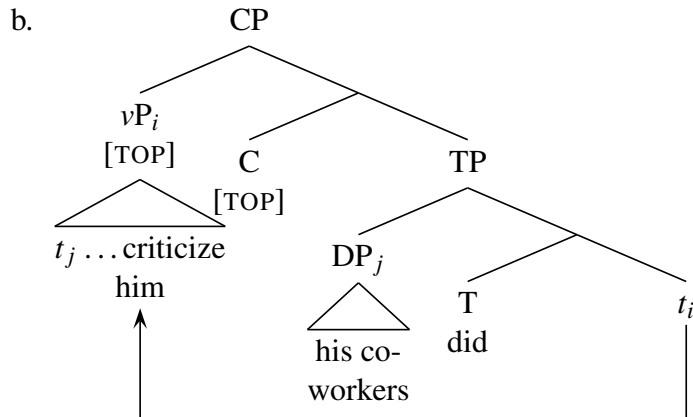
(3.18)   a. <u>Criticize him</u> his co-workers did.

---

[8]This construction, like VPP, receives a verum focus interpretation.

[9]The *NYT* corpus contains 95 VPP-sentences that have identifiable antecedents. In 91% of these cases, the subject of the VPP-sentence is coreferent with the subject of the antecedent.

[10]Most of the literature on topicality focuses on DP topics. Referential DPs can be made given under a relatively wide variety of circumstances, including bridging inferences and overt mention of coreferential expressions. Not all of these options are available, at least in an intuitive sense, for larger constituents. I assume for present purposes that a *v*P is given if it has been mentioned overtly; see the next chapter for discussion of the accommodation of discourse antecedents for the preposed *v*P.

b.

```
                        CP
                       /  \
                      /    \
                   vP_i     \
                  [TOP]      \
                   /\    C    TP
                  /  \  [TOP]  /\
                 /    \       /  \
            t_j ...criticize DP_j  \
                 him        /\  T   t_i
                           /  \ did
                       his co-
                       workers
```

While it is clear that the preposed *v*P must bear some information-structural relation to the previous discourse, the particular notion of topicality involved requires further elaboration. I turn to this in the next section.
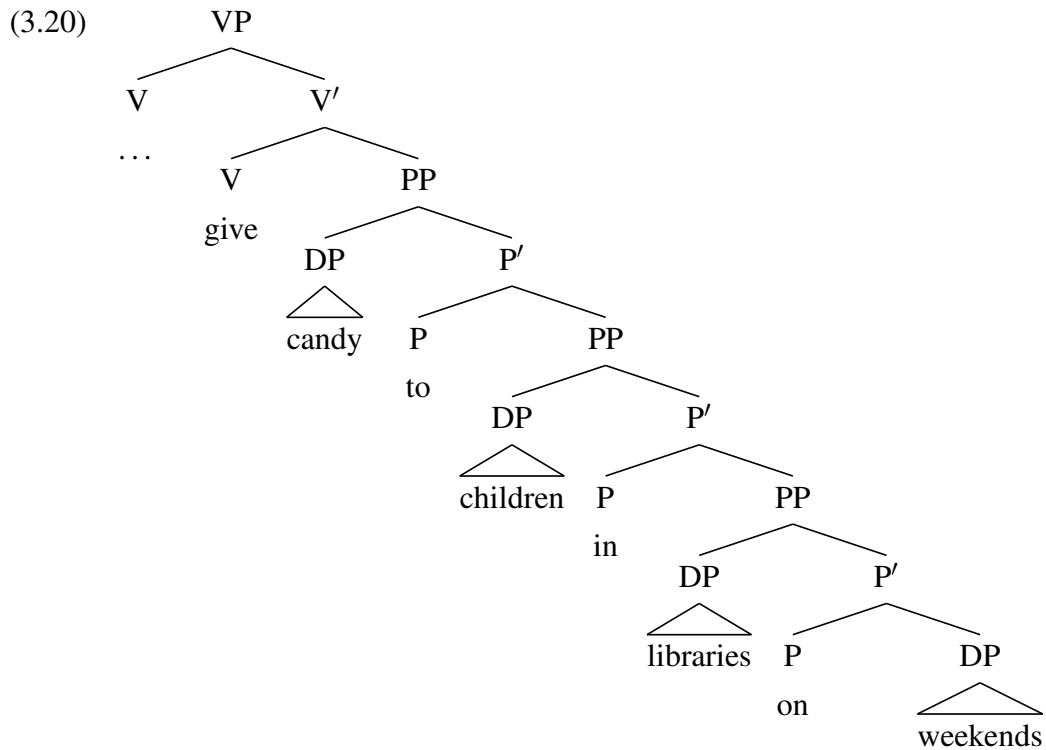
3.2.1 Previous approaches

The literature contains a number of proposals for the syntax of VPP, most of which are concerned with stranded material to the right of the auxiliary (Pesetsky, 1995; Lechner, 2003; Phillips, 2003; Landau, 2007):
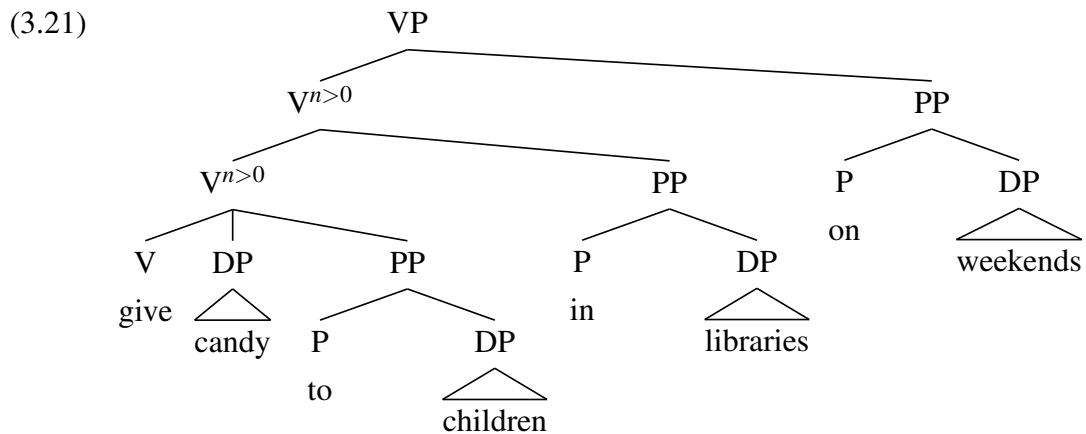
(3.19) **John intended to give candy to children in libraries on weekends**, and
    a. ...<u>give candy to children in libraries on weekends</u> he did.
    b. ...<u>give candy to children in libraries</u> he did on weekends.
    c. ...<u>give candy to children</u> he did in libraries on weekends.   (Lechner, 2003, (4))

3.2.1.1 Pesetsky (1995)

Pesetsky (1995) uses VPP to motivate the existence of two distinct, parallel structural representations for the VP. The first of these, which is responsible for the distribution of reciprocals, negative polarity items, and bound variables, is the *Cascade Syntax*. This is a binary-branching representation like the one illustrated in (3.20) (see (Pesetsky, 1995, (568))):

(3.20)

```
                    VP
          ┌─────────┴─────────┐
          V                   V′
          ⋮           ┌───────┴───────┐
                      V               PP
                    give      ┌────────┴────────┐
                              DP               P′
                              △        ┌───────┴───────┐
                            candy      P              PP
                                       to     ┌────────┴────────┐
                                              DP               P′
                                              △        ┌────────┴────────┐
                                          children      P               PP
                                                        in      ┌────────┴────────┐
                                                                DP               P′
                                                                △        ┌───────┴───────┐
                                                            libraries     P            DP
                                                                          on            △
                                                                                    weekends
```

The second type of structure is the *Layered Syntax*. Pieces of the structure that are eligible for movement are constituents in the layered structure, which is not necessarily binary branching (see (Pesetsky, 1995, (569))):

(3.21)

```
                              VP
                   ┌──────────┴─────────────────────┐
               $V^{n>0}$                            PP
          ┌───────┴─────────────┐              ┌────┴────┐
      $V^{n>0}$                 PP             P         DP
    ┌────┼────────┐         ┌───┴───┐         on         △
    V    DP      PP         P      DP                 weekends
  give   △    ┌───┴───┐     in      △
       candy  P      DP         libraries
              to      △
                  children
```

Pesetsky's approach says little about the landing site of the preposed VP or the licensing conditions on VPP; indeed, the analysis is designed to account only for mis-matches between the binding and movement properties of this construction (as well as

others). While his approach is unorthodox, the paradox he identified has had a great influence on subsequent analyses of VPP.

3.2.1.2 Lechner (2003)

One of these subsequent analyses is that of Lechner (2003), who proposes a remnant movement account of VPP. The stranded PPs Lechner is concerned with originate inside the topicalized VP, but undergo extraposition before topicalization occurs. This movement is schematized in (3.22) (based on (Lechner, 2003, (23))):
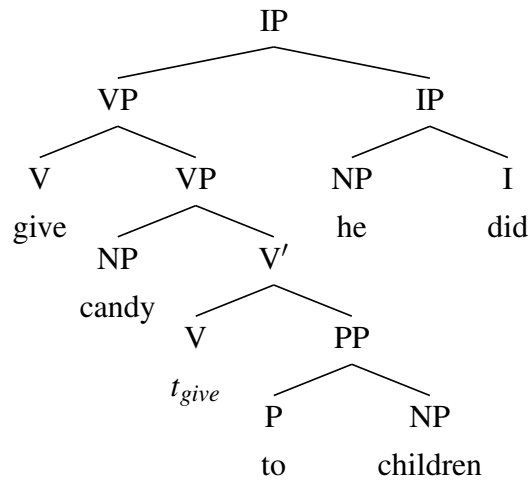
(3.22)
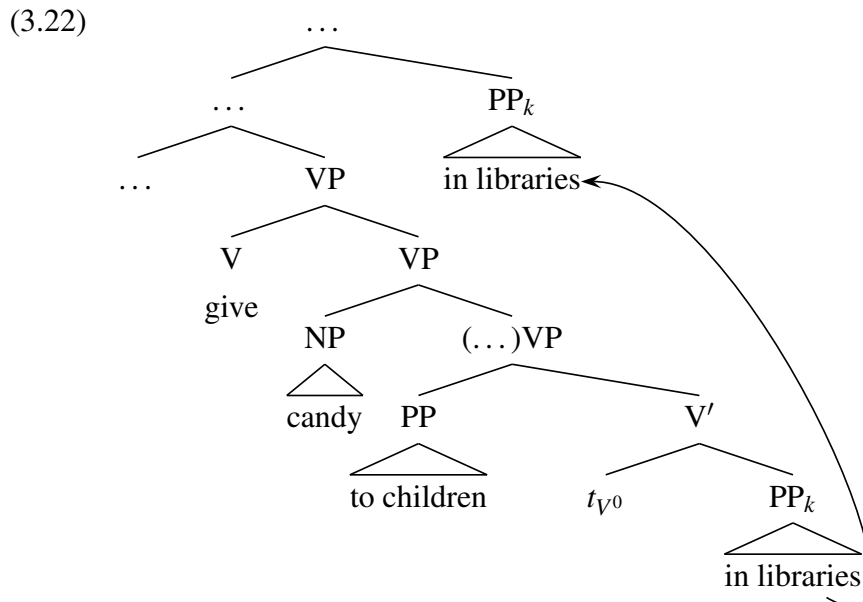
Lechner, too, is not concerned wiht the topicalization itself—either with the landing postiion of the topicalized VP or with the conditions under which it may be topicalized.

3.2.1.3 Phillips (2003)

Phillips (2003) similarly focuses on the linear order and the possibility of sentence-final stranded constituents in VPP. He propsoes a theory of incremental structure-building in which, at any given point of the derivation, syntactic processes can make reference only to the parts of the structure that have been built to that point. Unusually, this structure-
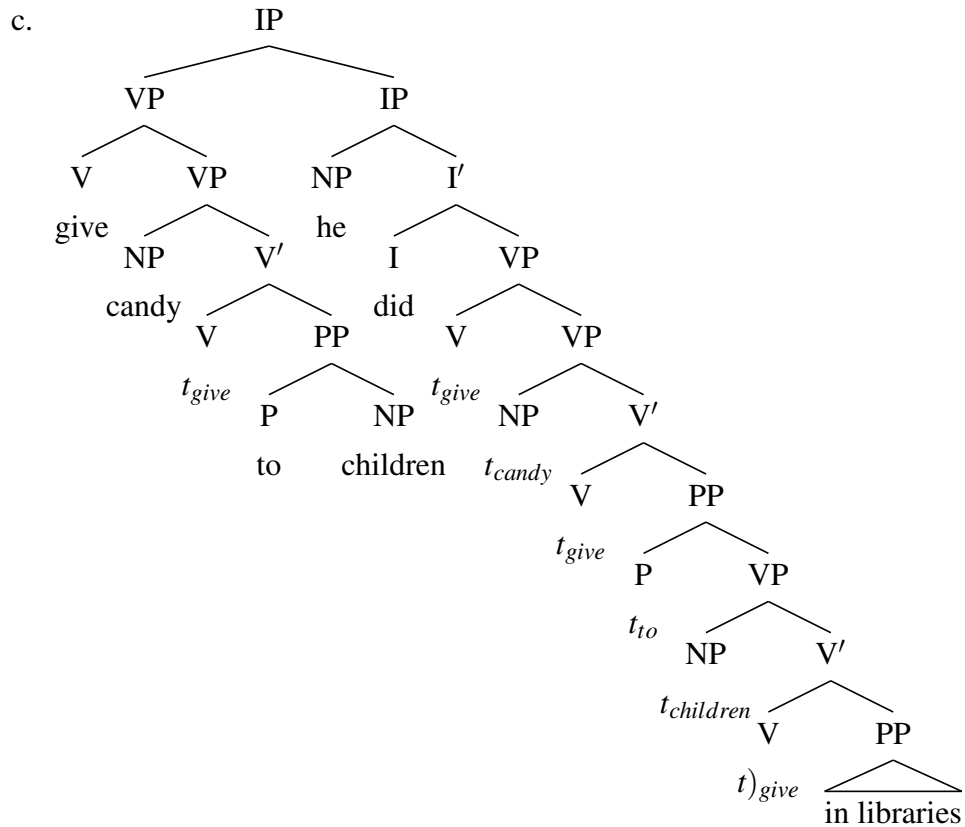
building proceeds from left to right. The structure in (3.23a), based on Phillips's (2003) (30), shows the structure at *give candy to children he did*. The VP is copied to is underlying position in (b) so that θ-roles may be assigned. (c) shows the structure at the point when the stranded PP is incoporated. Because the VP-movement was licensed at an earlier stage of the derivation, no harm is casued by incorporating this PP into the VP constituent:
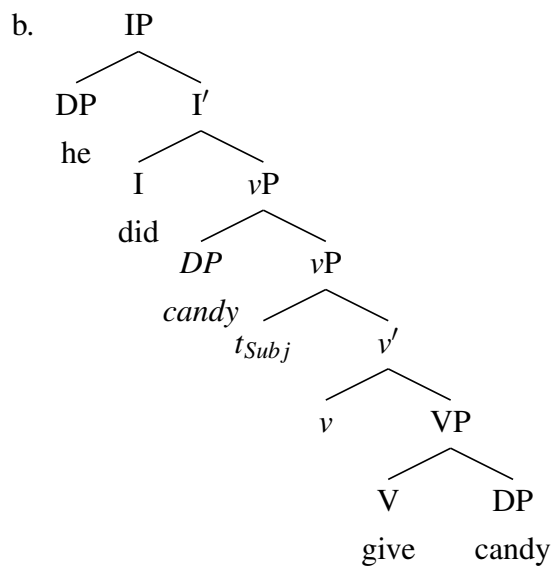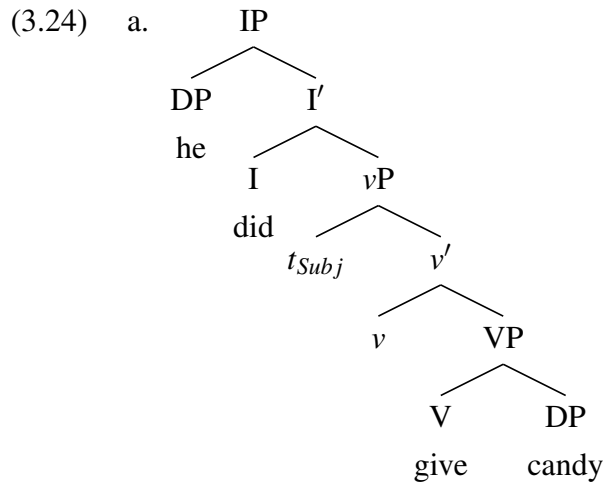
(3.23) a.

```
                    IP
            _____|_____
          VP                 IP
        __|__              __|__
       V     VP          NP      I
     give   _|_          he     did
           NP   V'
         candy _|_
              V    PP
            t_give _|_
                  P    NP
                  to  children
```

b.

```
                    IP
            _____|_____
          VP                 IP
        __|__              __|__
       V     VP          NP      I'
     give   _|_          he    __|__
           NP   V'             I    VP
         candy _|_            did  _|_
              V    PP             V    VP
            t_give _|_          t_give _|_
                  P    NP          NP    V'
                  to children   t_candy _|_
                                       V    PP
                                     t_give _|_
                                           P    NP
                                          t_to t_children
```

c.

```
                        IP
              ┌──────────┴──────────┐
             VP                     IP
          ┌───┴───┐            ┌─────┴─────┐
          V       VP          NP           I′
         give  ┌───┴───┐       he     ┌─────┴─────┐
              NP       V′            I            VP
            candy   ┌──┴──┐         did       ┌────┴────┐
                    V     PP                  V         VP
                  t_give ┌─┴──┐             t_give   ┌───┴───┐
                         P    NP                    NP       V′
                         to  children            t_candy  ┌──┴──┐
                                                          V      PP
                                                       t_give  ┌──┴──┐
                                                               P      VP
                                                             t_to  ┌───┴───┐
                                                                  NP       V′
                                                              t_children ┌─┴──┐
                                                                         V    PP
                                                                      t)_give  in libraries
```
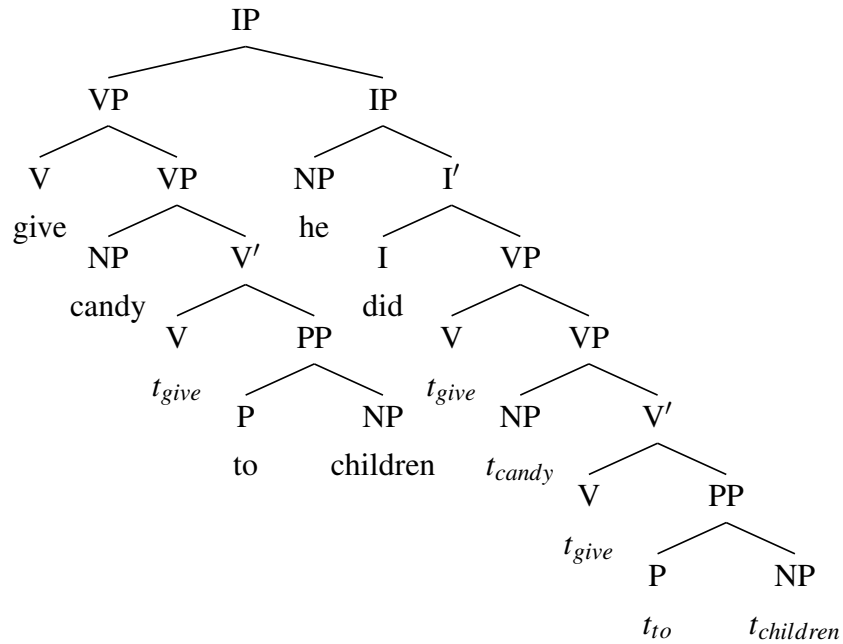
Once again, Phillips's analysis is not concerned with the topicalization itself but rather with how the hearer constructs a representation for the VPP-sentence and resolves the constituency conflict between its binding and movement properties.

3.2.1.4 Landau (2007)

Landau (2007) is the only one of these syntactically oriented authors to mention the discourse function of VPP. He claims that in Hebrew, which he takes to be parallel to English, the fronted VP expresses either focus or contrastive topic and must, in either case represent familiar material. In the analysis he presents of English VPP, the fronted constituent is moved to an A′ topic position. In order to account for the possibility of sentence-final stranded constituents, Landau's derivations include two extra steps. First, as illustrated in (3.24b), he assumes covert movement of the object to a position

that eventually c-commands the stranded adjunct. After topicalization of the *v*P (c), the stranded material is late-adjoined. The derivation below is based on Landau's (42).

(3.24)   a.

```
              IP
          ┌────┴────┐
         DP         I′
         he     ┌────┴────┐
                I        vP
               did   ┌────┴────┐
                   t_Subj     v′
                          ┌────┴────┐
                          v        VP
                               ┌────┴────┐
                               V        DP
                              give     candy
```

b.

```
            IP
        ┌────┴────┐
       DP         I′
       he     ┌────┴────┐
              I        vP
             did   ┌────┴────┐
                  DP        vP
                candy   ┌────┴────┐
                     t_Subj      v′
                            ┌────┴────┐
                            v        VP
                                ┌────┴────┐
                                V        DP
                               give     candy
```

90

c.

```
                        TopP
            ┌────────────┴────────────┐
           vP                       Top′
      ┌─────┴─────┐           ┌───────┴───────┐
     DP          vP          Top             IP
   candy     ┌────┴────┐              ┌────────┴────────┐
          tSubj       v′            DP                 I′
                   ┌───┴───┐        he          ┌───────┴───────┐
                  v       VP                    I              vP
                      ┌────┴────┐              did      ┌───────┴───────┐
                     V         DP                      DP              vP
                   give      candy                   candy      ┌──────┴──────┐
                                                            tSubj           v′
                                                                       ┌─────┴─────┐
                                                                      v          VP
                                                                            ┌─────┴─────┐
                                                                           V          DP
                                                                         give       candy
```

d.

```
                        TopP
            ┌────────────┴────────────┐
           vP                       Top′
      ┌─────┴─────┐           ┌───────┴───────┐
     DP          vP          Top             IP
   candy     ┌────┴────┐              ┌────────┴────────┐
          tSubj       v′            DP                 I′
                   ┌───┴───┐        he          ┌───────┴───────┐
                  v       VP                    I              vP
                      ┌────┴────┐              did      ┌───────┴───────┐
                     V         DP                      DP              vP
                   give      candy                   candy      ┌──────┴──────┐
                                                            tSubj           v′
                                                                       ┌─────┴─────┐
                                                                      v          VP
                                                                            ┌─────┴─────┐
                                                                           VP          PP
                                                                       ┌────┴────┐   ┌──┴──┐
                                                                      V         DP  DP libraries
                                                                    give      candy
```
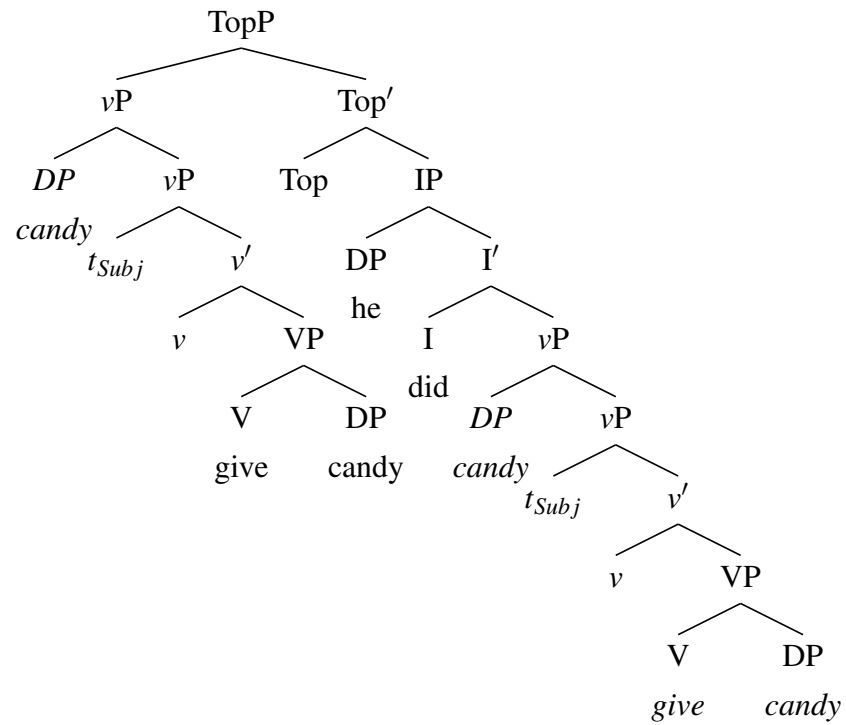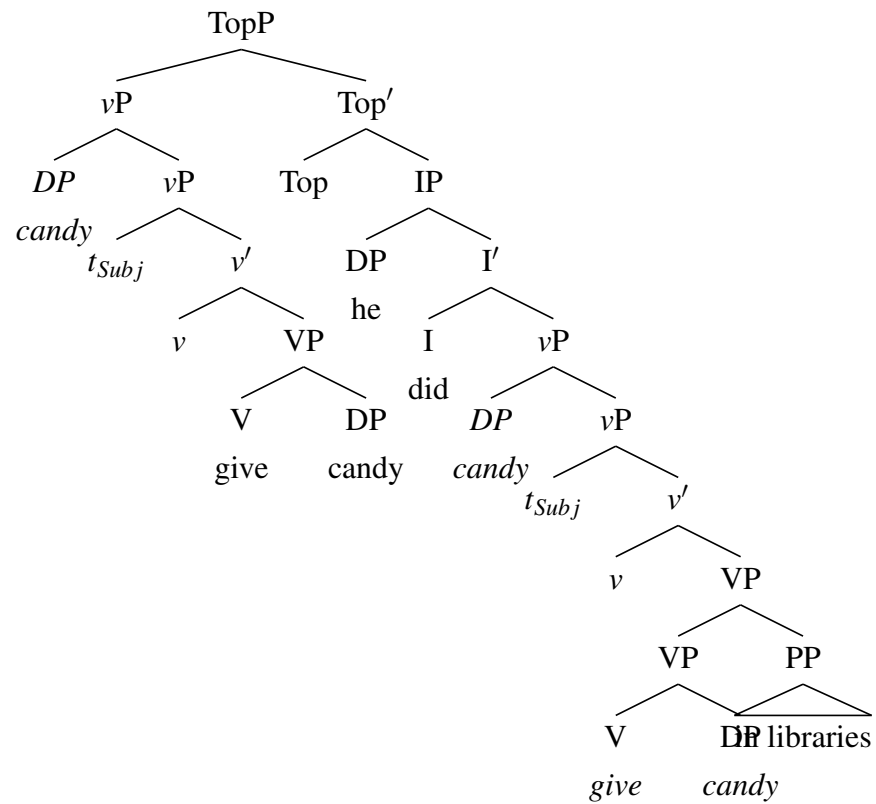
I remain agnostic as to which of these syntactic approaches best accounts for sentence-final stranded material. Such examples occur rarely in the corpus, and analyzing them

91

is not my primary task in this chapter. But the approaches in this section are worth mentioning because they illustrate the disconnect in the literature between serious consideration of the syntax of VPP and serious consideration of the pragmatics of VPP. It is my aim here to provide a syntactic analysis in which syntactic and pragmatic aspects of the phenomenon are well integrated.

3.3 Antecedence condition on VPP

Ward (1990) characterizes the antecedence condition on VPP in terms of affirmation of an explicitly evoked proposition. Some proposition must be evoked by means of overt mention in the discourse; the function of the VPP-sentence is to affirm that proposition. In Ward's "independent proposition affirmation", this antecedent proposition is mentioned in the discourse but not entailed or presupposed by the discourse context. In his "concessive affirmation", the proposition is affirmed despite countervailing evidence that it should not be true.[11]

Ward's work on these matters is important and I take it as my starting point. My goal, though, is in the first place to integrate his proposals and observations into a larger and more articulated theory of the syntax-pragmatics interaction, and, in the second place, to introduce certain important corrections and refinements into the empirical record. As it is stated, Ward's characterization faces at least two shortcomings. First, the VPP-sentence does not necessarily affirm its antecedent proposition. It is also possible for the antecedent to be negated by the VPP-sentence, as in (3.25).[12]

(3.25)   [The Republicans'] obstructionism, now concealed behind more-or-less believable policy arguments, would be out in the open. It would be their respon-

---

[11]For discussion of Ward's "scalar affirmation", see the next chapter.

[12]Below, I argue that the antecedent is actually polar question raised by the evoked material. Once we accept the question-as-antecedent view, the distinction between affirmation and negation of the antecedent becomes irrelevant.

sibility **to produce**, not simply oppose.

And produce they could not.

In the CBS-NYT poll, the recent partisan warfare has given Sen. Dole a more negative image, just as it has undercut the president. A year ago, Dole was viewed favorably by 28 percent and unfavorably by only 17 percent. Now 27 percent view him favorably and 27 percent have an unfavorable view. Two years of divided government would certainly air the issues of the coming presidential election.

A more serious problem for Ward's account is that the explicitly evoked material need not be a proposition. A noun that is morphologically related to the preposed verb is sufficient to serve as an antecedent. While such nouns are most often either deverbal nouns or gerunds, it is not the case that their content is propositional.[13] Examples of non-propositional VPP antecedent are given in (3.26).

(3.26) a. Many people thought [Elway] would be getting out just ahead of the posse. To be standing in front of the assembled media, many of whom had written at length about him being the second-best quarterback in the game, had to be a powerful feeling. "This is why I came back," he said. "This is why I put in all the **work**."

And work he does.

Elway's biggest fans are inside that Denver locker room. Asked last week what athletes he admires, Denver offensive guard Mark Schlereth, he of the 22 surgical procedures (with No. 23 scheduled for next week), said, "I like the stars who don't act like prima donnas when they have earned the right to be, guys like John Elway. He earned the right long ago to skip drills and get out of practices, and he never does."

b. The sale price was boosted, from $442,000 to $518,000, and a Hong Kong trader who initiated the deal was cut out in return for a commission. The change would mean $10,000 more profit, Welch said. In July 1996, Welch, on behalf of Elatec, applied to the Commerce Department for an export license modification to reflect these changes. That, he and Kovacs believe, set off an entirely new review under new rules, which took effect in August, that gave **veto** powers to the Department of Defense, the Department of Energy, and several intelligence agencies.

And veto they did.

Kovacs and Welch say they weren't told exactly who was responsible for

---

[13]Ward (1990) does not provide a definition of "evoked proposition," but uses it consistently to remain agnostic about the speaker's commitment to clause-sized pieces of linguistic material. It is certainly possible that these nouns evoke a proposition in some informal sense

> the blackball. One hint came, though, in a December 1996 letter warning the license was being voided. It was from the Bureau of Export Administration's office of nuclear and missile technology controls. The final order, dated last Feb 4., declared: "The Department of Commerce has concluded that this export would be detrimental to US foreign policy interest."

Instead, the relevant condition appears to be that something more-or-less morphologically corresponding to the preposed verb (phrase) must appear in the discourse. The nouns that can serve as antecedents are generally either deverbal nouns or gerunds. Similar cases to these have been sporadically observed and discussed in the literature on antecedence in VP ellipsis. See Hardt (1993); Kehler (2000).[14]

3.3.1 The role of topicality

The definition of "topic" is not settled in the literature. Reinhart (1981), for example, uses a system that "resembles the subject catalogue" in a library, in which "[t]he propositions admitted into the context set are classified into subsets of propositions, which are stored under defining entries. At least some such entries are determined by NP-interpretations. NP sentence-topics, then, will be referential entries under which we classify propositions in the context set and the propositions under such entries in the context set represent what we know about them in this set" (Reinhart, 1981, pp.80). In slightly more formal terms:

> To say that a sentence S uttered in a context C is about a_i, i.e. that the pair $\langle a_i, \phi \rangle$ of [the set of Possible Pragmatic Assertions of S] is selected in C, is to say, first, that, if possible, the proposition ϕ expressed in S wil be assessed by the hearer in C with respect to the subset of propositions already listed in the context set under a_i, and, second, that if ϕ is not rejected

---

[14]Note, however, that a morphologically related antecedent is not strictly required for VPP. See below for discussion.

it will be added to the context set under the entry a_i.

<div align="right">(Reinhart, 1981, pp. 81)</div>

Reinhart's analysis is characteristic of what the literature describes as an *aboutness topic*. Even in this realm, however, there is no broad agreement about the formal (or informal) definition. Definitions are framed in terms of topic-comment, theme-rheme, or focus-background. (See McNally (1998) for an overview of conceptions of topics as discourse referents and as questions.) Other authors conflate topicality with givenness. Givón (1983), for example, measures topicality on a scale consisting of different types of definite and referring expressions.

A further open question concerns how topicality would apply to a constituent larger than DP. Most of the topicality literature concerns DP topics, both for reasons of simplicity and because most topics are referring expressions. Intuitively, a sentence can be "about" the referent of a DP, but it is more difficult to imagine how it might be "about" a *v*P-sized constituent. Reinhart claims that "other constituents can serve as topics as well" but that "their formal analysis is more complicated." It is not at all clear how a preposed *v*P could be the thing that the rest of the sentence (the subject and the stranded auxiliary) is about. While the preposed *v*P is discourse-familiar, it should not be said that it is an aboutness topic in the sense of Reinhart (1981).

But contrastive topic is not the relevant notion, either. The preposed *v*P certainly does not contrast with some other *v*P in (or recoverable from) the discourse. Instead, the opposite is true: The preposed *v*P recapitulates the content of some other *v*P in the discourse or inferable from the discourse. Further, Büring (2003) argues that contrastive topics in English bear a characteristic fall-rise B accent (Jackendoff, 1972), as in (3.27a). No such accent is associated with VPP (3.27b).[15]

---

[15]Though see 4.4 for discussion of the intonational pattern associated with VPP.

(3.27)   a.   FRED$_{CT}$ ate the BEANS$_F$

          b.   * [EAT THE BEANS]$_{CT}$ he DID$_F$

If the preposed vP is neither an aboutness topic nor a contrastive topic, we might ask whether it is really a topic at all. To address this question, first note that the preposed vP does not behave as though it is focused. The antecedence condition effectively prevents the vP from expressing new information. No focus accent falls at the right edge of the preposed vP as one would expect if the fronted constituent were focused.

VPP is also impossible in certain cases in which a topicalized vP might be expected to be felicitous. It cannot be used, for example, in answers to polar questions:

(3.28)   Did the panel clarify the pros and cons of privatization?

          a.   (Yes,) they did clarify the pros and cons of privatization.

          b.   # (Yes,) <u>clarify (the pros and cons of privatization)</u> they did.

Even though the discourse-familiar information—in this case, the clarification of the pros and cons of privatization—is topicalized, the VPP-sentence is infelicitous. Similarly, VPP cannot be used to contradict a previously uttered assertion:

(3.29)   A: This was way more than I expected it to be. I wasn't expecting such a turnout and a warm response. People don't care about us anymore.

          B: No, we (do) care.

          B′:   # (No,) <u>care</u> we do.

In such cases, the material in the preposed vP is given; furthermore, the discourse-old information precedes the discourse-new information (*do*), as is preferred.[16] Again, we would expect VPP to felicitously express contradictions, a function it is not in fact suited to. As a final clarification of this point, consider the example in (3.30).

(3.30)   It was, he tried to convince the tribe, a win-win situation. "The trouble with the Native Americans," Wager said, "is they were so mistreated that they

---

[16]See Birner (1996); Birner and Ward (1998) for arguments that the old-before-new preference holds in both canonical and non-canonical word orders.

don't trust us at all. They'll say that to your face. I had a hard time getting them to warm up to me."

    a.   But <u>warm up</u> they did, and after a local election gave him the go-ahead, Wager signed a deal in 1995 with tribal leader Larry Snake.

    b.   # And <u>have a hard time</u> he did. Even after a local election gave him the go-ahead, Wager wasn't able to reach a deal with tribal leader Larry Snake.

The attested felicitous VPP-sentence in (3.30a) addresses the embedded clause of the speakers final sentence—namely, whether or not he was actually able to get the tribe to warm up to him. The infelicitous (b) example addresses the main clause of that sentence—the difficulty Wager encountered in getting them to warm up.

I take the main vs. embedded clause distinction to be a rough indication of salience, with main clauses being more salient than embedded clauses in that they represent answers to the most salient question under discussion (QUD; Roberts 1996).[17] Given that assumption, the generalization appears to be that VPP cannot address the most salient QUD.[18] In the case of polar questions, the question is an overt instantiation of the QUD and cannot be answered by using VPP. Contradictions similarly address the most salient QUD by rejecting the interlocutor's proposal to add the propositional content of her utterance to the common ground (Stalnaker, 1978; Farkas and Bruce, 2010).

The conversational function of VPP is instead to redirect the hearer's attention to a less salient but still discourse-familiar QUD. Intuitively, the preposed VP serves as a pointer to a question that has been raised in the discourse but has not been addressed. Reusing the same linguistic material signals that the speaker is returning to a previously passed-over discourse question and eliminates any ambiguity about the identity of that

---

[17]Though see Clifton and Frazier (2012) for experimental evidence that the embedded question is in fact the more salient one in such contexts.

[18]The infelicity in (3.30 is not due to the fact that the issue of whether he had a hard time has already been settled by the preceding clause. The emphatic interpretation (discussed in detail in Chapter 4), which can more easily be used to revisit a settled question, is not felicitous here, either.

question. Contexts like the complements of intensional verbs and *if*-clauses are particularly fertile ground for raising such questions because they are embedded in such a way that they (a) do not address the most salient QUD and (b) naturally open the door to potential future discourse that decides the truth of their propositional content. And indeed, these contexts are the most common discourse antecedents for VPP.

This means that VPP represents a strategy for topic shift to a previously mentioned topic. That is, it steers the discourse away from answering the most salient QUD and in favor of a (sub)question that had gone unanswered in the previous discourse, replacing the salient QUD with a new one.

This analysis of the discourse function of VPP is incompatible with stack-based implementations of QUD structure. Many interpretations of QUD structure, beginning with Roberts (1996), operate under the assumption that QUDs must be answered on a last-in, first-out basis. Roberts' summarizes her implementation as follows:

> The set of questions under discussion at a given point in a discourse is modelled using a push-down store, which I call the **QUD stack**. Intuitively, QUD yields the ordered set of all as-yet unanswered but answerable, accepted questions Q at the time of utterance of *q*. When we accept a question, we add it to the top of the stack. Its relationship to any question previously on top will be guaranteed by a combination of Relevance, entailing a commitment to answering prior questions, and logical constraints on the way that the stack is composed. If we decide to persue an accepted question by asking a sub-question, we may add the sub-question to the stack, so that the stack reflects (part of) a strategy of questions. When a question is answered or determined to be practically unanswerable, it is popped off the stack, revealing any below it. At any point in discourse, the question on top of the stack is the (immediate) question under discussion.

In more formal terms:

(3.31) **QUD**, the questions-under-discussion stack, is a function from M (the moves in the discourse) to ordered subsets of Q∩Acc such that for all m∈M:
   a. for all q ∈ Q∩Acc, q ∈ QUD(m) iff

i. q < m (i.e., neither m nor any subsequent questions are included), and

ii. CG(m) fails to entail an answer to q and q has not been determined to be practically unanswerable.

b. QUD(m) is totally ordered by <.

c. for all q, q' ∈ QUD(m), if q < q', then the complete answer to q' contextually entails a partial answer to q.

In this system, only the topmost (sub)question on the stack is accessible, and the only possible relevant conversational moves are those that address that accessible question. It is not possible to address a buried question directly[19]. Ginzburg (1996) proposes a slightly less restrictive system in which the QUD is represented by means of a partially ordered set. But for him, too, permissible conversational moves are those that react to the latest move, and it is not possible for speakers to dig down into the QUD set to find a less immediately salient question. It is clear, however, that VPP-sentences do exactly that—the preposed *v*P recalls a previously unanswered polar QUD and answers it either affirmatively or negatively.

For this reason, I assume a QUD structure along the lines of that proposed in Büring (2003). Büring represents discourse moves in a hierarchical structure[20] of the form in (3.32):

(3.32)

---
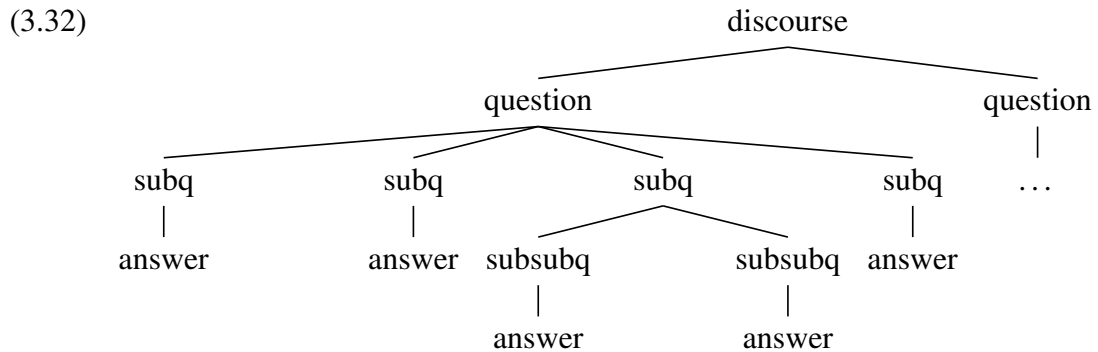
[19]Such questions may be addressed indirectly in that a set of sub-questions may constitue a strategy for answering an overarching question.

[20]Though, of course, the strategies used by discourse participants can always be revised; the illustration in (3.32) is meant to be a snapshot of the moves already made in a conversation, not a roadmap for where that conversation is headed.

Each node in the discourse tree corresponds to a conversational move. Büring imposes two conditions on the structure of such trees: Informativity and Relevance. Informativity requires that each utterance in the tree provide or ask for new information; Relevance is defined with respect to a QUD. The QUD for a given conversational move is the move that immediately dominates it in the discourse tree. Relevance is then defined as follows:

(3.33) Relevance:
  a. an assertion A is relevant in a d-tree DT iff A is an answer to the QUD for A in DT
  b. a question Q is relevant in a d-tree DT iff at least one answer to Q is an answer to the QUD for Q in DT   (Büring, 2003, (8))

For Büring, too, then, the only way for a conversational move to meet the Relevance condition is for it to "answer or at least address" the immediate QUD. I argue that the difference between a d-tree and a QUD stack is that the d-tree structure allows QUDs other than the most salient one to remain accessible. The d-tree is a record of the discourse and its organization, not a deterministic algorithm for addressing the QUD.

I propose that the topicalization involved in VPP is a topic shift in the sense that it addresses any QUD *other* than the immediately salient one. In a d-tree representation, a VPP-sentence is a conversational move that satisfies Relevance by addressing a (polar) question that has been raised in the previous discourse—a conversational move that attaches higher in the tree than the default position. As illustration, consider the examples in (3.34–3.35). In terms of its structure—if not its content—(3.34) is a fairly normal discourse.

(3.34) What goes on in the weird and wonderful world of the sex, drugs and rock 'n' roll President, the willy-waving leader of the free world? Obviously not sex, drugs and rock 'n' roll as we know it, captain. For here is a man who can

take drugs and not inhale, have some kind of physical contact but not call it sex—Monica did not inhale—and seriously pretend that rock 'n' roll means the reformation of Fleetwood Mac. **We are expected to swallow all this** and carry on grooving away because good ol' Bill is not such a bad boy really, and the good ol' American economy is still doing OK.
And <u>swallow it we do</u>.

The weird and wonderful world of the
sex, drugs and rock 'n' roll President

What goes on
in this world?

What's the public reaction
to what goes on?

Sex?   Drugs?   Rock?

Are we expected
to swallow it?

Do we
swallow it?

(No,) he has contact   (No,) he takes drugs   (No,) just
without calling it sex.   without inhaling.   Fleetwood Mac   (Yes,) Bill isn't   (Yes,) the   Yes.
a bad boy.   economy is OK.
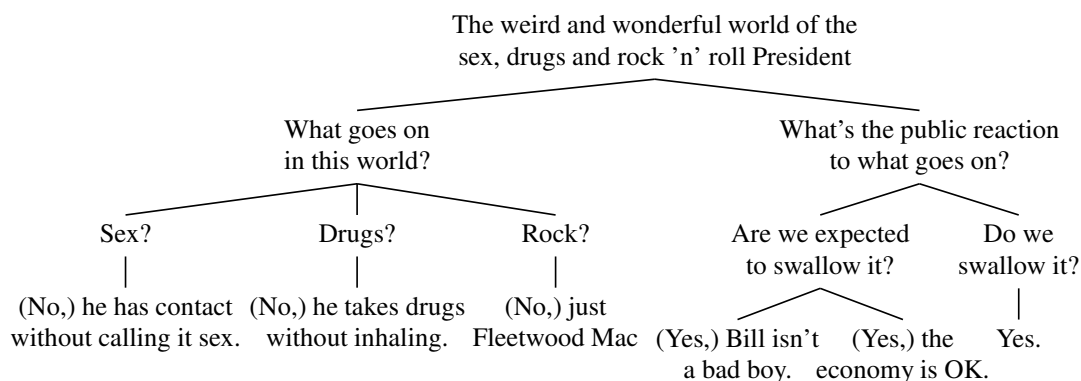
At the broadest level, the discourse is about the world of President Clinton. The speaker asks what happens in this world, then answers subquestions about whether sex, drugs, and/or rock 'n' roll are involved. With the question of what happens answered, he moves on to discuss how the American public should respond to having such a president. He gives some reasons why we are expected to live with the situation. The VPP-sentence comes at a time in the discourse when the question of whether we are expected to tolerate Clinton's behavior has been answered. At this point, the immediate QUD is something like "Are we expected to swallow all this?". Since that question has been answered, we expect the speaker to continue by addressing the next highest QUD: "How does the public react to what goes on?" The VPP-sentence in fact addresses a subquestion of this QUD: Whether we actually tolerate all that we're expected to. This question has been raised by the intensional verb *expect* earlier in the discourse, but it has gone unanswered.

(3.35)   The decision by Ronald Reagan's regulators to permit credit unions to agglomerate may have been the last sensible change ordered before the savings and loan industry went over the waterfall in 1983. To that point, credit

union membership had been restricted to narrowly defined groups sharing a common bond, usually employees of a particular company. Suddenly credit unions were free **to grow**, to switch their charters from occupationally-based to community-based.

What happened to credit unions?

Were they able to grow? — Were they able to switch their charters?

Did they grow? — Did they switch?

Yes.
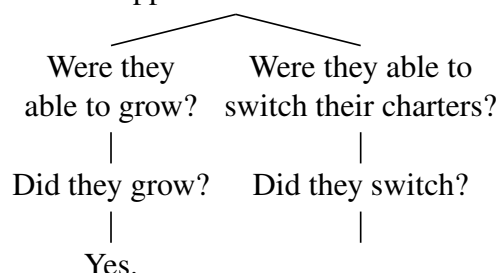
3.35, in which only the relevant portion of the d-tree is reporoduced, illustrates a different relation between the VPP-sentence and its context. In this case, the clause *Suddenly credit unions were free to go, to switch their charters from occupationally-based to community-based* relates to several questions. It first answers the question of whether the credit uions were free to grow, then whether they were able to change their charters. The embedded portions of each of these raises the question of whether the credit unions actually grew and actually changed their charters, respectively. The speaker's strategy is one in which the most recent (and most salient) QUD is related to the switching of charters. Again, the VPP-sentnece does not address the most salient unanswerd QUD (whether the charters changed), but rather bypasses it in favor of the previous unanswered question of whether the unions grew. In this case, the corresponding canonical-order sentence is off; a much more natural continuation is to talk about the kinds of charter changes that resulted from the new legislation.

This topic-shift strategy is reminiscent of DP topicalization with *as for*.[21] *As-for* topicalization is infelicitous in the same range of circumstances as VPP: it is not possible in answers to polar questions (3.36) or constituent questions (3.37) or in contradic-

---

[21]The syntax of *as for*-topicalization is obviously quite different from the syntax of VPP. In calling it topicalization I do not mean to suggest that it involves movement; it is not, for example, island-sensitive in the way that VPP is.

tions (3.38):

(3.36)　A: Did the panel clarify the pros and cons of privatization?

　　　　B:　# (Yes,) as for the panel, they clarified the pros and cons of privatization.

　　　　B′　# (Yes,) as for the pros and cons of privatization, the panel clarified them.

(3.37)　A: What did the panel clarify?

　　　　B:　# As for the panel, they clarified the pros and cons of privatization.

(3.38)　A: The audience didn't laugh when, on the day the Starr report was released, one character in the opera announced, "I admit my mistake if you forgive me."

　　　　B:　# (No,) as for the audience, they laughed.

Nor can the topicalized DP refer to the most salient topic in the discourse:

(3.39)　It was, he tried to convince the tribe, a win-win situation. "The trouble with the Native Americans," Wager said, "is that they were so mistreated that that they don't trust us at all. They'll say that to your face. I had a hard time getting them to warm up to me."

　　　a.　# As for Wager, he signed a deal in 1995 with tribal leader Larry Snake.

　　　b.　As for tribal leader Larry Snake, he signed a deal in 1995.

Instead, *as for*-topicalization requires a less salient but discourse-familiar DP in much the same way as VPP requires a less salient but discourse-familiar *v*P. The attested example in (3.40a)[22] is felicitous because the topicalized DP refers to a person who is discourse-familiar but not the most salient actor in the preceding sentence. The infelicitous example in (b) involves the illicit topicalization of an unfamiliar DP.

(3.40)　Manhattan state Supreme Court Justice Shirley Kornreich fined Silberkleit $500, saying she had violated the court's order from last fall to limit her contact with staffers. Kornreich has yet to rule on Goldwater's bid to boot Silberkleit as co-CEO, which courts can do under a state corporation law. But the judge ordered her this month to stay away from the Archie comic offices in the meantime, though Silberkleit can continue to work from home and continue to draw her more than $125,000 a-year salary. Goldwater, the company, and their lawyer declined to comment on the case.

---

[22]This example is from COCA (Davies, 2008–).

a. As for Silberkleit, "the only concern she has, and has always had, is the financial well-being of Archie comics," said her lawyer, Howard D. Simmons.

b. # As for Bale, "the only concern she has, and has always had, is the financial well-being of Archie comics," said her lawyer, Howard D. Simmons.

To conclude, the movement operation involved in VPP is a type of topicalization that has very specific discourse restrictions on its occurrence. The preposed *v*P represents a topic shift similar to the topic shift that accompanies *as for*-topicalization. Unlike aboutness or contrastive topics, the shifted topic may not address the most salient QUD and instead changes the direction of the discourse to address a less salient, unanswered discourse-familiar QUD. Future work is needed to develop an independent test for salience to confirm this intuition and give it teeth.

3.4   (Verum) focus marking

In this section, I argue that VPP is a verum focus (VF; Höhle 1992) construction. I begin with a discussion of what verum focus is and—perhaps more importantly—what it is not. I then give an overview of previous approaches to VF phenomena. Most of these approaches, I argue, are complicated by two confounding factors: they conflate verum focus with some other phenomenon, and/or they treat verum focus differently from other types of focus. Before turning my attention back to VPP, I show that VF can (and should) be implemented in a standard alternative semantics (Rooth, 1985, 1992) framework.

I go on to argue that VPP has the characteristic properties of VF. While previous analyses have come close to capturing this intuition, I make the stronger claims that (a) all VPP-sentences express VF, and (b) the difference in discourse felicity conditions between VPP and the canonical-order instantiation of VF are due to the topic-shift

property of VPP discussed above. I conclude by illustrating the alternative semantic analysis of verum focus for VPP and arguing against alternative accounts of the origin of the VF interpretation.

3.4.1 What *is* verum focus?

The overarching question that this section addresses is the question of what we mean when we say "verum focus" and how we implement the intended intuition in formal terms. A narrower preliminary question is why linguists have traditionally treated VF differently from other types of focus, in particular focus on lexical categories. Is VF actually special?

I argue that it is not and that VF is an instance of the same focus assignment procedure and the same focus semantics that we use for focus on, for example, nouns and adjectives. VF involves the focus-marking of a syntactic polarity head (Σ; Laka 1990). This results in a focus on the polarity ($\approx$ truth value) of an utterance. In English, VF manifests itself as focus on the auxiliary or on negation. The canonical cases involve *do* support; in the absence of an auxiliary or negation, *do* is the only possible bearer of pronounced positive polarity.[23,24]

(3.41) Both cried on parting, and they promised to keep in touch.
    a. They DID keep in touch, through awkward telephone calls at first [...].[25]
    b. They did NOT keep in touch, not even through awkward telephone calls.

In such examples, there is no intonational focus elsewhere in the utterance. That is,

---

[23]Though see Becker (2006) for evidence of a dialect split: Some speakers are able to pronounce positive polarity on the main verb and therefore do not have to resort to *do*-support in such contexts.

[24]Focus may alternatively fall on overt markers of positive polarity like *so* or *too*. I do not discuss such cases here, but I am confident that their alternative semantics is equivalent to that of the focused auxiliary.

[25]Unless otherwise noted, all examples of canonical-order verum focus are taken from the Corpus of Contemporary American English (Davies, 2008–), directly or with modification. Of course, the focus structure of the examples is inferred from the context.

sentences with VF—in the absence of any other information-structural properties—have a single focus accent, and that accent appears on an auxiliary verb or on *not*. The focus on Σ represents the only new information in the sentence; the rest of the content must be given (and unaccented in the sense of Schwarzschild (1999)). This in turn means that an overt linguistic antecedent is required in order to render the propositional content familiar to the hearer.[26] VF is infelicitous in out-of-the-blue contexts.

(3.42)   # Guess what? The case DID fall apart.

(3.43)   A: The case seemed to fall apart.
         B: It seemed? It DID fall apart.

These are the constructions I refer to as "verum focus". In particular, I abstract away from two complicating factors. First, I abstract away from second-occurrence focus (Büring, 2008; Selkirk, 2008; Howell, 2009); I do not consider cases in which a second-occurrence focus occurs with VF or those in which VF is itself the second-occurrence focus. Second, I avoid the contrastive-topic VF sentences discussed in Wilder (2013) and illustrated in (3.27).[27] These simplifications are made for clarity—I believe that the analysis presented below extends to such cases, though a full exploration of the facts is beyond the scope of this work.

(3.44)   a. A: Is he a good doctor?
         b. B: Well, he DOES \ have a lot of PATIENTS. /   (Wilder, 2013, (11))

3.4.2   Historical background

In this subsection, I discuss the evolution of the VF literature. I concentrate on two works in particular: Höhle (1992) and Romero and Han (2004). These represent by far the most influential discussions of VF, though the empirical phenomena they aim to

---

[26]This observation is apparently due to Richter (1993), though I cannot confirm this attribution because I do not have access to the manuscript.

[27]The slashes indicate the fall-rise intonation characteristic of contrastive topics in English.

explain are quite different. Further, the analyses presented in these papers have not been widely adopted; in fact, there is to my knowledge no widely accepted analysis of VF. I conclude the subsection by discussing other approaches. The discussion serves two purposes. First, it elucidates the sheer variety of constructions that have been discussed under the label of VF. Second, it touches on the range of theoretical machinery used to derive verum focus. All of the existing approaches treat VF as "special" in that the analysis of VF is not necessarily intended to extend to other types of focus.

3.4.2.1 Höhle (1992)

VF was first identified as such in Höhle (1992). Höhle describes VF as arising when the verb is assigned a semantic element VERUM. Stressing the verb then highlights this element, resulting in emphasis on the truth of the utterance.

In German, such emphasis on the truth value occurs when the element in C is stressed. In V2 clauses, stress falls on the finite verb (which moves to C to produce the verb-second order), even in negated clauses:[28]

(3.45) A: ich habe Hanna gefragt, was Karl grade macht, und sie hat die alberne
            I   have Hanna asked   what Karl now   does   and she has the silly
            Behauptung aufgestellt, dass er ein DREHbuch schreibt
            assertion   made   that he a   screenplay writes
            I asked Hanna what Karl's doing now, and she made the silly claim that
            he's writing a SCREENplay.

        B: (das stimmt) Karl SCHREIBT ein Drehbuch
            that is right Karl writes   a   screenplay
            (That's right,) Karl IS writing a screenplay.   (Höhle, 1992, (2))

(3.46) A: Karl hat BESTIMMT nicht gelogen
            Karl has certainly   not   lied
            Karl CERTAINLY didn't lie.

---

[28]In Höhle's examples, speaker A provides the necessary discourse antecedent for VF; VF itself is expressed in speaker B's utterance. The glosses and translations are my own. Where necessary, I have moved the stress in the translation to its most natural location in the English sentence.

B: (nein) Karl HAT nicht gelogen
   no   Karl has not lied
   (No,) Karl did NOT lie.   (*ibid.*, (4))

In embedded clauses, the VF stress falls on the embedding complementizer (contrary to the English pattern, where stress remains on the auxiliary).

(3.47) A: ich weiß nicht, OB sie in Rom war (aber WENN das der Fall ist, muss
           I know not if she in Rome was but if   that the case is must
           es vor kurzer ZEIT gewesen sein)
           it recently   been   was
           I don't know if she WAS in Rome (but IF that's the case, it must have been
           RECENTLY).
        B: ich bin sicher, DASS sie mal in Rom war (aber ob das KÜRZLICH
           I am sure   that she once in Rome was but   if that recently
           war, weiß ich nicht)
           was I   know not
           I'm sure that she WAS once in Rome (but I don't know if that was RE-
           CENTLY).
                                                              (*ibid.*, (48))

Höhle presents two logically possible analyses of VF.[29] He first considers an analysis in which VERUM is an illocution-type operator, and later settles on an analysis that instead treats VERUM as a predicate.

Höhle quickly rejects the illocution-type analysis based on the fact that it makes incorrect predictions about scope, given the assumption that an illocutionary operator should always scope over negation.[30] In fact, negation always scopes over VERUM, as illustrated by the paraphrases in (3.48):

(3.48) A: ich hoffe, das Karl ihr   ZUhört
           I hope that Karl to her listens
           I hope that Karl LISTENS to her.

---

[29]The following discussion draws also from the interpretation of Höhle's work presented in Lohnstein (2012).

[30]This assumption is likely unfounded. See, for example, Krifka (2001) for cases where illocutionary force does not necessarily take highest scope in German.

B: aber Hanna denkt, er HÖRT ihr   nicht zu
       but   Hanna thinks he listens to her not

       But Hanna thinks he doesn't LISTEN to her.
       Paraphrase: Hanna thinks that it's not true that he listens to her.

B′:   # aber Hanna denkt, DASS er ihr   nicht zuhört
        but   Hanna thinks that   he to her not   listens

       But Hanna thinks he does NOT listen to her.
       Paraphrase: Hanna thinks that it's true that he doesn't listen to her.

                                          (*ibid.*, (55–56))

Höhle gives the predicate analysis of VERUM more attention. The basic idea is that VERUM is a truth-predicate over propositions, as defined in (3.49). Effectively, this first definition amounts to C bearing a [+VER] feature.

(3.49)   [+VER] in Φ

    a. At the periphery of a German clause, there is a functional category Φ. Φ always combines with a constituent Π and projects an X-bar structure.

    b. Φ can be unified with (the feature specifications of) complementizers.

    c. Φ can be unified with (the feature specifications of) finite verbs that bind a trace.

    d. The head features of all levels of projection of Φ are determined by unification of the free head features of Φ with the occupant of Φ (complementizer, finite verb).

    e. A feature M of an expression α is 'free' in the sense of (d) if α does not bind a trace bearing the feature M.

    f. Φ may carry the feature specification [+VER].   (*ibid.*, (76))

But Höhle rejects the segmental localization of [+VER]. The evidence for this rejection comes from cases where the element in the specifier of Φ (= C) may express VF. In such cases, the specifier bears the focal stress, while the element in C remains unstressed. An example is given in (3.50):

(3.50)   du hast mir   erzählt, wen du NICHT reingelegt hast. jetzt möchte   ich
        you have to me told   who you not   fooled   have. now would like I
        wissen, WEN du   reingelegt hast
        know   who you fooled   have

> You've told me who you did NOT fool. Now I want to know who you DID
> fool. (*ibid.*, (83))

The ultimate analysis involves VERUM as a truth-predicate that is not segmentally localized. Instead, it is introduced at the semantic level. The procedure for introducing it is as follows:

(3.51) A syntactic form (a) has the LF (b), where K_j is:

- a complementizer
- a relative or WH-pronoun
- a finite verb

(3.52) a.
```
          K_k
         /   \
       K_j    K_i
```
  b.
```
          ⟦K_k⟧
         /     \
      ⟦K_j⟧     \
             /      \
          VERUM    ⟦K_i⟧
```

<div align="right">(ibid., (97))</div>
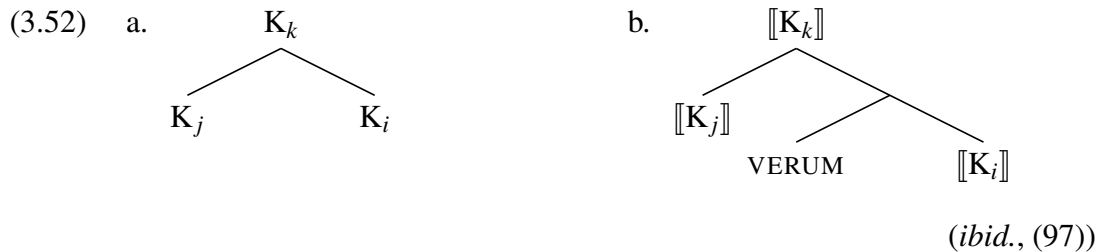
In both the segmental and non-segmental versions of the analysis, VERUM represents a predicate of propositions. The meaning of this predicate is something like "is true". While Höhle's discussion of the facts is amazingly perceptive, the analysis makes use of a great deal of special technology. In itself, the introduction of a predicate is not special, but the fact that it is a predicate devoid of truth-conditional meaning that is not used in the analysis of any other phenomenon points to the possibility of a more parsimonious solution. The ideal analysis would integrate verum focus with other, independently motivated principles of the focus system.

3.4.2.2 Romero and Han (2004)

Romero and Han (2004) discuss VERUM in the context of polar questions. Specifically, they argue the negative preposing in polar questions contributes VERUM, which they analyze as an epistemic operator.

The argument begins from the observation that the pragmatic effect of negative preposing (3.53) is very similar to the effect of the epistemic adverb *really* (3.54):

(3.53)　Doesn't John drink?　　　　　　　　　　　(Romero and Han, 2004, (1))
　　　　Positive epistemic implicature: The speaker believes or at least expects that John drinks.

(3.54)　Does John really drink?
　　　　Negative epistemic implicature: The speaker believed or at least expected that John does not drink.　　　　　　　　　　　　　　　　　　　　(*ibid.*, (37))

The intuition that Romero and Han attempt to capture is that VERUM expresses speaker certainty. In particular, they claim that VERUM means that the speaker is certain that p should be added to the common ground (Stalnaker, 1978), even without her interlocutor's assent. Under this analysis, VERUM is a conversational epistemic operator. Romero and Han give the definition in (3.55):

(3.55)　$[\![\text{VERUM}_i]\!]^{gx/i} = [\![\text{really}_i]\!]^{gx/i} =$
　　　　$\lambda p_{\langle s,t \rangle} \lambda w. \forall w' \in \text{Epi}_x(w)[\forall w'' \in \text{Conv}_x(w')[p \in \text{CG}_{w''}]]$
　　　　$= \text{FOR-SURE-CG}_x$　　　　　　　　　　　　　　　　　(*ibid.*, (43))

Under this definition, VERUM sets up a partition between $\text{FOR-SURE-CG}_x p$ and $\neg\text{FOR-SURE-CG}_x p$. Such a partition is only relevant when (a) the speaker has a prior belief about the truth or falsity of p, and (b) that belief has been contradicted. If the speaker has no prior belief, she would not be sure that p should be added to the common ground. If nothing contradicts her prior belief, there is no need for her to emphasize her certainty. Therefore, VERUM is felicitously used only in contexts where the speaker faces some evidence against her extant belief. (3.53) is only felicitous in a context where the speaker believes that John drinks but her interlocutor has provided some evidence that John doesn't drink (or has indicated that he thinks John doesn't drink).

Romero and Han argue that this same epistemic bias holds in both assertions (3.56) and questions (3.57) with auxiliary focus. These more canonical instantiations of VERUM also implicate that the speaker believes or at least expects the propositional

111

content. In (3.56), S's utterance is only felicitous if (a) she has prior reason to believe that Kimiko went to the Himalayas, and (b) she takes A's utterance to question whether Peter's claims about Kimiko's adventures can be trusted. Similarly, S's utterance in (3.57) is felicitous only if S has prior reason to believe that Tom did not study for Ling106. If S believed or expected that Tom had studied, she would not have reason to question A's assertion.

(3.56) A: Peter claims Kimiko went to the Himalayas.
        S: She DID go to the Himalayas.   (*ibid.*, (52))

(3.57) A: After all the studying he did, Tom got an A in Ling106.
        S: DID he study for that class?   (*ibid.*, (58))

The implementation of VERUM in Romero and Han (2004) faces at least three empirical challenges. First, the positive epistemic implicature is obscured in non-interrogative contexts. When a cooperative speaker makes an assertion, the default assumption is that she has some reason to believe the propositional content of her utterance. It is not entirely clear, then, what the difference between S's utterance in (3.56) and the corresponding utterance without VERUM is. In both cases, we expect S to have some reason to believe that Kimiko went to the Himalayas.

Second, as noted by Romero (2005); AnderBois (2011); Gutzmann and Castroviejo Miró (2011), the analysis predicts that denials should be able to target the FOR-SURE-CG meaning component. This prediction is not borne out; contradictions of utterances containing VERUM target only the propositional content:

(3.58) A: Jorge DID bring a present.
        B: Yes (..., he did). ≠ Yes, you are sure he brought a present.
        B′: No (..., he didn't). ≠ No, you are not sure he brought a present.
                                            (adapted from (Romero, 2005, (31)))

Finally, the analysis does not account for the fact that VF cannot be used out of the blue. We would not expect a discourse antecedent to be necessary for any VF-

112

containing utterance if the requisite condition for VF is that the speaker has a prior belief that has been contradicted. While contextual evidence may be enough to license the kind of high negation polar question that Romero and Han are principally concerned with, a linguistic antecedent is required for the canonical auxiliary focus instantiation of VF.

(3.59) A: Ok, now that Stephan has come, we are all here. Let's go!
        S: Isn't Jane coming, too?   (Romero and Han, 2004, (6))
        S′: # Jane IS coming (too).

From a broader perspective, it is not clear that the semantic and pragmatic effects of questions with preposed negation are due to VF and only VF. Even if we allow that there is a connection between preposed negation and the VERUM operator, it remains to be explained why VERUM arises only when the negation is preposed.[31]. Moreover, it is unclear that there is a connection between the phenomena Romero and Han discuss and the phenomenon Höhle talks about. It seems likely that what is going on in such cases is VF *plus* the contribution of preposed negation. Much of the literature on VF shares this property; in the next subsection, I review work that touches on a number of different constructions, many of which would best be classified as VF *plus*.

---

[31]Parallel questions with low negation express some bias, but they do not convey the same strong epistemic implicature that we see with preposed negation:

(3.1) Scenario: The speaker is organizing a party and she is in charge of supplying all the non-alcoholic beverages for teetotalers. The speaker is going through a list of people that are invited. She has no previous belief or expectation about their drinking habits.
       A: Jane and Mary do not drink.
       S: OK. What about John? Does he not drink (either)?
       S′: # OK. What about John? Doesn't he drink (either)?   (Romero and Han, 2004, (3))

3.4.2.3 Other approaches

I present below several approaches to VF that have appeared in the literature. They are presented in chronological, rather than thematic order, as the goal of this subsection is to provide an overview of the range of constructions that have been discussed under the label of VF and the range of analyses that have been put forth to account for them.

Creswell (2000) Creswell (2000) presents an analysis of the discourse functions of VF (as instantiated by auxiliary focus) in WH-questions. Using a corpus of spoken WH-questions, she argues for two types of auxiliary focus. The first of these she terms *verum focus*. In this taxonomy, VF has several functions. It may signal that the speaker should know the answer to the question but doesn't (3.60). It may be used to repeat a salient question (3.61). It may signal that a previously raised question remains unanswered (3.62). Or it may be used to request the value of a missing property (3.63).

(3.60) A: There ain't nobody going to beat us then. Because look how good we did without a quarterback this year [laughter].
  B: I know. Who WAS the quarterback? (Creswell, 2000, (9))

(3.61) BS: How are we getting there?
  SS: I don't know. How ARE we getting there? (*ibid.*, (10))

(3.62) CC: We were sitting out in front of the library eating lunch, and he came up out of nowhere, and I was like, wow what are you doing on campus? *[further discussion of interaction with the unexpected person. . .]*
  AB: So what WAS he doing there? (*ibid.*, (12))

(3.63) A: Uh-huh. Uh, it just, it developed into sort of a business, uh, you know we breed them and all that, but, we didn't, you know, we didn't really start it for the money, it was just, they were fun to have around and we figured if we're going to have them we might as well have some purebreds and. And now it developed into going to cat shows and finding studs for them, and, you know, all this kind of stuff.
  B: Uh-huh. What kind of cats ARE they? (*ibid.*, (14))

Note that all of these functions are specific to questions. While most of them—the exception being the missing property in (3.63) tend to have a discourse antecedent of

some kind, it is not the case that the propositional content of the question must be discourse-familiar.

Creswell's second type of auxiliary focus, *dictum focus*, does require a discourse antecedent. She argues that dictum focus signals that the propositional content of the question is presupposed:

(3.64)   A: I was wondering how much food to buy for tonight. Who's coming to the party?
         B: Good question. Who IS coming to the party?   (*ibid.*, (17))

Creswell's dictum focus, then, has the properties of (what I have been referring to as) VF: it requires a discourse antecedent and is used in cases when the propositional content of the utterance is discourse-familiar.[32]

AnderBois (2011)   AnderBois (2011) presents an analysis of VF in the framework of inquisitive semantics (Ciardelli et al., 2013). While certain expressions, including indefinites and disjunctions, naturally raise subissues that project possible future discourses, VF prevents such subissues from projecting. AnderBois follows Romero and Han (2004) in assuming that questions with preposed negation express VF. The evidence for the projection suppression analysis, then, comes from the contrast between (3.65) and (3.66). The indefinite *a date* in (3.65) raises the subissue of who John's date is; B can address that subissue by answering the question and continuing on to identify the date. The VF question in (3.66) contains the same indefinite expression, but the VERUM operator does not allow the subissue of the identity of John's date to project. The conversational effect is that B's response is limited to answering the polar question; she cannot continue her answer by addressing the question of who John's date is.

---

[32]Creswell uses the term "presupposed" rather than "discourse-familiar". While the two terms are roughly equivalent for questions, they cannot be interchanged in the domain of assertions. VF is often used in contradictions, cases where we might plausibly say that the propositional content is discourse-familiar but where we would certainly not say that it is presupposed.

(3.65) A: Is John bringing a date to the party?

        B: Yeah, Mary.

(3.66) A: Isn't John bringing a date to the party?

        B: # Yeah, Mary.   (AnderBois, 2011, (353))

It is certainly true that questions with preposed negation do not allow for discussion of projected subissues. It is not, however, clear that this is a property of VF more generally:

(3.67) A: I thought John wasn't bringing a date to the party.

        B: No, he IS bringing a date to the party. He's coming with Mary.

Gutzmann and Castroviejo Miró (2011)   Gutzmann and Castroviejo Miró (2011) analyze VERUM as a use-conditional operator. They argue that it is not a semantic operator because it does not affect truth values. Instead, it is a use-conditional conversational operator whose effect is to downdate *?p* from the question under discussion:

(3.68) $[\![\text{VERUM(p)}]\!]^c \approx$ The speaker c_s wants to downdate *?p* from QUD.

(Gutzmann and Castroviejo Miró, 2011, (61))

Downdating the QUD, in turn is defined (following Engdahl 2006) as "removing all questions resolved by *a* from QUD" when an answer *a* is uttered. From these definitions, it is not clear how VF differs from any other answer in downdating *p* from the QUD: The intent behind any assertion that a speaker makes is to address and resolve *?p*, thus removing it from the QUD stack. Nor is it clear how the speaker's "want" to downdate *?p* ought to be implemented formally.

Lohnstein (2012)   Lohnstein (2012) presents a mood-based analysis of VF. For him, VF is focus on sentence mood, a syntactic head that sits above FinP. The possible moods are characterized in (3.69).

116

(3.69) Functional characterization:

sentence mood:		*function:*
declarative	⌢	believe p
y/n-interrogative	⌢	give a true answer (out of a 2-fold partition)
wh-interrogative	⌢	give a true answer (out of a n-fold partition)
imperative	⌢	make p a fact in @

(Lohnstein, 2012, (65))

Lohnstein's analysis faces two conceptual challenges. First, if Mood is a syntactic head above FinP that hosts the complementizer or the finite verb, it is not clear how it could be distinguished from C. The analysis would then be equivalent to Höhle's segmentally localized VERUM analysis (an approach that Lohnstein draws parallels to).

Second, Lohnstein intends for VF to be evaluated in standard alternative semantics terms. Under such an implementation, the focus alternatives to a given VF sentence would be those sentences that differ only in sentence mood. That is, the alternatives to a declarative sentence would be the corresponding y/n-interrogative, wh-interrogative, and imperative. This is not intuitively correct. The alternative to a given affirmative declarative with VF is the corresponding negative declarative, and *vice versa*.

3.4.2.4 Interim conclusion

In this subsection, we have seen various approaches to the semantics and pragmatics of VF. Of the analyses presented here, only Lohnstein's comes close to implementing VF in a manner parallel to other types of focus. And while analyses of German data (Höhle, 1992; Gutzmann and Castroviejo Miró, 2011; Lohnstein, 2012) address the canonical instantiation of VF as auxiliary focus, English-focused analyses tend to be concerned with questions. The default set of assumptions—that VF is simply focus and that auxiliary focus represents the clearest case of VF—has not so far been taken up to the best of my knowledge. In the next subsection, I outline such an analysis.

117

3.4.3 Implementing verum focus in alternative semantics

The null hypothesis for an analysis of VF is to treat it in the same way that we treat focus on lexical categories. In this section, I examine that hypothesis, sketching an alternative semantic (Rooth, 1985, 1992) account of VF.

The approach I argue for makes use of syntactic [F(OCUS)] marking (Jackendoff, 1972; Selkirk, 1984). In particular, I argue that the [F] feature is associated with polarity in the syntax. Overt polarity expressions are instantiations of Σ (Laka, 1990). I assume that the ΣP projection is present in the syntactic structure even in sentences that do not contain a pronounced reflex of polarity. In other words, the sentence polarity is always encoded in Σ as either affirmation or negation; negation is always pronounced (as *not*), but the expression of affirmative or positive polarity may be null.

Following Rooth, I take the focus semantic meaning of (focused) polarity to be an alternative set. Because of the nature of polarity, this set is quite small. Since the relevant alternatives are expressions of positive and negative polarity,[33] we have:

(3.70) $\{\text{AFF}, \neg, \varnothing\}$

The analysis rests on the assumption that Rooth's $\sim$ operator constrains the possible focus interpretations by requiring a contrasting set to exist in the discourse. The $\sim$ is adjoined to the syntactic structure at LF; its adjunction site determines its scope, which in turn determines the level at which focus is interpreted. The definition Rooth (1992) contains two clauses, one for sets and one for individuals (3.71).

(3.71) Set case: $\varphi \sim \Gamma$ presupposes that Γ is a subset of the focus semantic value for φ and contains both the ordinary semantic value of φ and an element distinct from the ordinary semantic value of φ

---

[33]Under an approach closer to Romero and Han's (2004) analysis, the relevant alternatives would instead be degrees of certainty or likelihood. It is not clear, however, that the epistemic component of Romero and Han's (2004) proposal is reflected in canonical-order VF, however.

Individual case: $\varphi \sim \gamma$ presupposes that γ is an element of the focus seman-
tic value for φ distinct from the ordinary semantic value of φ (Rooth,
1992, (40))

What is important here is that the expression Γ/γ be identical to φ except for the fo-
cused expression—the focus must be different so that Γ/γ contrasts with ϕ. For ex-
ample, in (3.72), AMERICAN *farmer* contrasts with CANADIAN *farmer*; the two ex-
pressions are otherwise identical, and each is able to serve as the antecedent for the
other.

(3.72) a. An AMERICAN farmer met a CANADIAN farmer.

b.
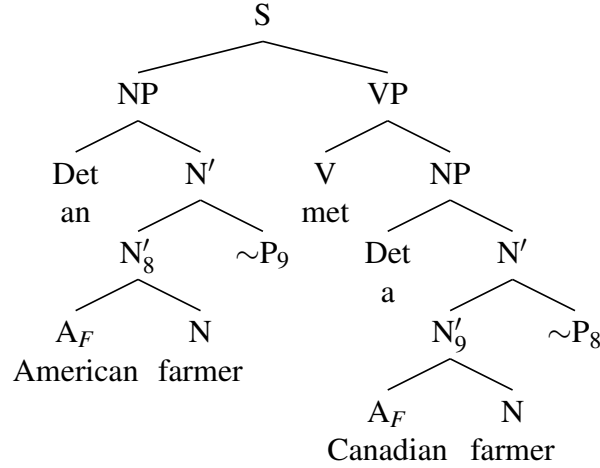
Because the $\sim$ operator is adjoined to N$'$, the requirement it imposes is that there be an
expression of the form "x farmer", where x contrasts with "American" in the subject
and with "Canadian" in the VP.

I further assume that Rooth's presuppositional $\sim$ operator adjoins at a propositional
level at LF. The propositional adjunction site ensures that focus is interpreted at a propo-
sitional level. The operator presupposes that there is an antecedent that differs from the
proposition it scopes over only in polarity. That is, the discourse conditions for a sen-
tences with focused Σ and a proposition-level $\sim$ are met only if there is an accessible
antecedent for that sentence that has the same propositional content with the exception

of polarity. Examples of VF sentences with such antecedents (underlined) are given in (3.73) and (3.74):

(3.73) He claimed that <u>he didn't raise taxes</u>, but, in fact, he DID raise taxes [...].

(3.74) A: [T]hey think <u>they've caught the guy</u>.
        B: They DID catch the guy.

The analysis therefore straightforwardly explains why VF cannot be used out of the blue: In discourse-initial contexts, there will be no suitable antecedent for the VF proposition. Although speakers are generally very good at accommodating an antecedent in out-of-the-blue contexts, the sheer amount of material that would have to be accommodated in the case of verum focus (an entire proposition) makes such accommodation extremely unlikely. Because the presupposition associated with the logical form is not met, the utterance will be infelicitous. A simplified (but representative) structure is given in (3.75):

(3.75) a. He claimed that <u>he didn't raise taxes</u>, but, in fact, he DID raise taxes.
        b.
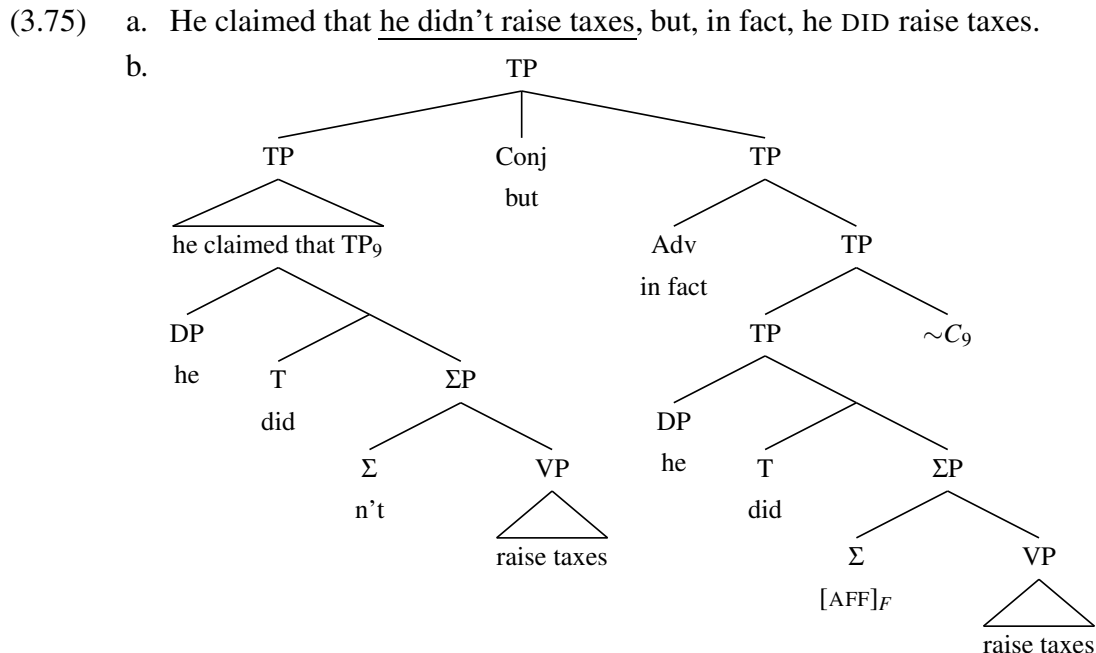
Several assumptions are necessary for the analysis of VF to accord with Rooth's analysis of focus. Rooth's (1992) analysis presupposes the existence of a contrasting

expression distinct from the focused element itself:

(3.76) $\phi \sim \gamma$ presupposes that γ is an element of the focus semantic value for ϕ distinct from the ordinary semantic value of ϕ.   (Rooth, 1992, (40))

This formulation ensures that when, for example, focus is interpreted for an expression like *an* AMERICAN *farmer*, it contrasts with something like *the Canadian farmer* rather than with another instance of *the American farmer*.

Applying this logic to VF, we are led to the conclusion that the presupposed antecedent for the focused polarity expression must have a different ordinary semantic value from the ordinary semantic value of that focused expression. That is, we would expect the focused polarity to genuinely contrast with its antecedent—an affirmative VF sentence could not be used to agree with a positive antecedent, and a negative VF sentence could not be used to respond to a negative assertion. The problem is that not every VF utterance is directly contradictory in this way (see, for example, (3.74)).

Nevertheless, two possible avenues for maintaining this expectation present themselves. First, one could argue that clauses that are not asserted, *i.e.*, not accepted into the common ground (or, more preceisely, not directly proposed to be added to the common ground (Farkas and Bruce, 2010)), do not have affirmative polarity. Such an analysis would build on the observation that the antecedents for VF sentences are often non-finite (*e.g.*, complements of intensional verbs) or modal. Those contexts would involve a Σ head distinct from AFF. The affirmative polarity in VF sentences would then contrast with this null polarity. Evidence for this type of analysis comes from the fact that VF cannot be used to confirm something that has already been asserted positively (3.78) or negatively (3.79):

(3.77) A: I wanted her to make nachos.
        B: She DID make nachos.
        B′: (But) she did NOT make nachos.
(3.78) A: She made nachos.

> B: # (Yes,) she DID make nachos.
>
> (3.79)   A: She didn't make nachos.
>
> B: # (No,) she did NOT make nachos.

This pattern can be explained by assuming that the AFF polarity in (3.77B) contrasts with the null polarity in (3.77A), but that the AFF polarity in (3.78B) does not contrast with the (unpronounced) AFF polarity in (3.78A). A potential problem for this analysis is that the AFF polarity would have to be absent in a wide variety of clauses (see again (3.74)). Furthermore, it is notoriously difficult to define which clauses are asserted and which are not.[34] For these reasons, it would be difficult to maintain that any clause whose propositional content is not added to the common ground does not have affirmative polarity.

Instead, I claim that the discourse antecedent for the VF clause does not necessarily correspond to the form of the linguistic antecedent. The antecedent is rather the *polar question* raised by the discourse context. VF is appropriate as a response to (3.77A) because A's assertion raises the question of whether she actually made nachos—a question that B answers. No such polar question is raised by A's assertion in (3.78A), however, and B cannot use VF in this case because there is no contextually available appropriate polar question corresponding to the propositional content of B's utterance. This idea will be important when we revisit the antecedence condition on VPP in the next chapter. For now, note that a sentence like "They think they've caught the guy" in (3.74) naturally raises the question of whether they did in fact catch the guy. The VF in B's response serves to answer that question even though it would be perfectly natural to continue the discourse by addressing "their" thoughts rather than the question of whether the guy was caught. The concomitant assumption is that polar questions have non-affirmative polarity. In other words, the instantiation of Σ in polar questions differs

---

[34]See Hooper and Thompson (1973); Farkas (2003) and many, many others.

from the instantiation of Σ in the corresponding affirmative sentences. This allows the affirmative declarative to contrast in polarity with the accommodated antecedent question. Because the antecedent for VF is always a (possibly implicit) polar question, we are not forced to make the assumption that non-asserted clauses have non-affirmative polarity.

A second assumption that must be supported by the analysis is that the focus accent is realized on T. Again, two analytical options present themselves: either there is syntactic Σ-to-T movement of polarity heads, or focus is simply realized on the structurally closest pronounceable morpheme. In the latter case, the focus accent falls on Σ if it has an overt reflex (*i.e.*, *not*) and otherwise is realized on an adjacent T. See Becker (2006); Sailor (2011) for discussion of the realization of polarity focus. Becker (2006) notes a dialect split in the possible realization of VF. While all English speakers can express VF *via* auxiliary focus (3.80a), a subset of them can also express VF *via* focus on a main verb (3.80b):

(3.80) a. John: I heard that Bill didn't come to the party.
           Mary: That's not true. Bill [did]$_{FOC}$ come to the party.
        b. John: I heard that Bill didn't come to the party.
           Mary: % That's not true. Bill [came]$_{FOC}$ to the party.

Becker attribiutes this difference to the existence of two grammars that differ in their constraints on the surface results of head movement. Speakers who reject Mary's utterance in (3.80b) do not allow main verbs to form a complex head with any Σ head. Speakers for whom this utterance is grammatical have only a more specific version of this constraint the prevents the main verb from forming a complex head only with *not*—heads containing the main verb and AFF are possible. While I do not share all of Becker's syntactic assumptions.[35], the head-movement approach to VF realization

---

[35]In particular, Becker seems to assume that tense is generated on (or near) the main verb and checked by an uninterpretable feature probe on T. I would prefer to maintain the (somewhat simplifying) assump-

helps us understand the space of possibilities when it comes to the focused pronunciation of a functional element that would normally be silent. Further, locating the source of dialect variation in minimally different constraints on head movement is appealing.[36]

3.4.3.1 Predictions

The alternative semantic analysis of VF makes predictions about the kind of behavior we would expect from VF. In particular, we expect VF to behave like other types of focus in participating in the same interactions that we find with focus on lexical categories. I discuss two such predictions below; this should not be taken as an exhaustive list, but rather as evidence that the alternative semantic approach to VF is at least possible and as suggestions for future investigation.

Association with focus   The analysis presented above involves an alernative set over polarity, just as focus on non-functional categories introduces a set of relevant alternatives. We therefore expect the interaction of semantic operators with VF to be the same as their interaction with other types of focus. The most obvious example of such an interaction is so-called association with focus: Focus-senstive adverbs like *only* and *even* may appear only in clauses that have an intonational focus, and their semantic contribution depends on the size and identity of the focused constituent. This contribution is illustrated in (3.81) below (examples from (Rooth, 1985, pp. 2)). The utterance in (3.81a) claims that Bill is the only person who I introduced to Sue; it is false in the given context. The utterance in (3.81b), on the other hand, is true in the same context because it claims that Sue is the only person I introuduced Bill to.

---

tion that tense and its morphological realization are generated on T. Becker also assumes that part of a complex head may undergo head movement, leaving the rest of the complex head behind. This, too, is an assumption I would prefer not to make. I have not worked out the details of a head-movement analysis under these preferred assumptions, but I expect it to be possible.

[36]The problem of verum focus realization—specifically, the problem of realizing focus that falls on unpronounced and unpronounceable functional elements—is part of a larger crosslinguistic pattern.

(3.81) *Context: I introduced Bill and Tom to Sue, and performed no other introductions.*

  a. # I only introduced BILL to Sue.

  b. I only introduced Bill to SUE.

Even behaves similarly in that it expresses the sense that the focus of the sentence is unlikely to participate in the situation conveyed by the utterance.

(3.82) *Context: I introduced Bill and Tom to Sue, and performed no other introductions. Additionally, everyone knows that Bill is shy and hates being introduced to new people.*

  a. I even introduced BILL to Sue.

  b. # I even introduced Bill to SUE.

While the utterance in (3.82) is not felicitous in the given context, it would be possible in a (different) situation in which Sue, not Bill, is shy and generally unwilling to have people introduced to her. Even though *only* and *even* appear in the same syntactic position in the (a) and (b) sentences, they make a different meaning contribution depending on the location of the sentential focus. The preverbal position illustrated in these examples is the canonical position for *only*; if it appears in another position, the focus must immediately follow it:

(3.83) *Context: I introduced Bill and Tom to Sue. John also introduced Tom to Sue, but no other introductions were performed.*

  a. Only I introduced Bill to Sue.

  b. * Only I introduced BILL to Sue.

Again, *even* behaves similarly. If it appears sentence-initially, it must associate with a focused subject:

(3.84) a. Even JOHN gave his daughter a new bicycle.

   b. * Even John GAVE his daughter a new bicycle.

   c. * Even John gave HIS daughter a new bicycle.

   d. * Even John gave his DAUGHTER a new bicycle.

   e. * Even John gave his daughter a NEW bicycle.

f.   * Even John gave his daughter a new BICYCLE.   (Jackendoff, 1972, (6.90))

Under the assumption that VF is no different from the sentential focus we see in the above examples, we would also expect these focus-sensitive adverbs to appear in clauses with VF. The word order facts are crucial to testing this prediction. Because the adverbs do not precede the auxiliary in their canonical preverbal position, they cannot associate with VF from that possition. We must therefore only consider examples in which the focus-sensitive adverb precedes the realization of verum focus. If this is possible, we predict sentences of the following form to be acceptable:

(3.85)   I only DID introduce Bill to Sue.

This prediction is unfortunately quite difficult to verify for two reasons. First, it is unclear what such a sentence with *only* would mean. If the alternative to focused affirmative polarity is negative polarity, the example above means something like "I only introduced Bill to Sue, I didn't not introduce him to her". This is at best an awkward use of *only*. The second problem has to do with the fact that no linear sequence of *only*+*do*+V occurs in a plausible VF contenxt in COCA. This could be for a semantic reason, but it is more likely that it is a syntactic problem. Even in the absence of VF, *only* does not easily appear between the subject and pronounced T (3.86a) or between a pronounced T and negation (3.86b).

(3.86)   a.   ?? I only will introduce Bill to Sue.
           b.   ?? I may only not introduce Bill to Sue.

If examples like this are ruled out for independent syntactic reasons, the failure of *only* to appear in VF sentences would not represent a problem for the analysis of VF. Instead it would be a side effect of that syntactic restriction.[37]

---

[37]Since VF can be realized on the pronounced material nearest to Σ's syntactic position, we might

Even might be a more promising test. Though they are relatively rare, examples like (3.87) are attested. (Note that this particular example requires a the possibility of non-permanent death to be accommodated.)

(3.87) "The last three or four or five times we've gone on errands for George's agency, we've nearly gotten killed," Ray protested. Rokey nodded. "I think I even DID get killed once or twice!"

Assuming that *even* picks out its associate as the least likely alternative on some scale Horn (1969), and assuming that not getting killed is more likely than getting killed, we achieve the expected result with VF. The final sentence in (3.87) presupposes that there were times when Rokey did not get killed, and asserts that he was in fact killed a couple of times.

While the predictions of association with focus should be tested with other focus-sensitive items like *also* and *always*, the possibility of *even* appearing in VF sentences is a promising suggestion that VF behaves in the same way as normal lexical focus.

Modal focus   Focus can, of course, be realized on other functional elements that appear in T besides polarity. Examples of this are given in (3.88) and (3.89):

(3.88) A: Health care reform cannot wait.
       B: (No,) it CAN wait!
(3.89) Health care reform CANnot wait, it MUST not wait, and it WILL not wait another year!

The possibility of focus in this position raises the question of whether it is VF or something else. I claim that the analysis presented above predicts that a sentence like *Health care reform* CAN*(not) wait* is ambiguous. Specifically, (3.88) is an example of

---

expect that a sentence like (i) below expresses VF. However, I have no intuitions about what such a sentence could mean without a second intonational focus in the VP.

(i) I ONLY introduced Bill to Sue.

VF: Σ bears focus, which is realized on the modal *can*. B's utterance behaves like other examples of VF in that it has a discourse antecedent (A's utterance) that differs from it only in polarity.

On the other hand (3.89) is not an example of verum focus. The focus is assigned to the modals themselves. The relevant alternatives, which in this example are overt, are other modals, not other expressions of polarity. This ambiguity of focused modals is particularly clear when we consider periphrastic paraphrases of modals, as in (3.90):

(3.90)   A: Grants of clemency are solely at the governor's discretion, and he is not obligated to give his reasoning.
         B: No, he IS obligated to give his reasoning. He has to provide a statement.
         B′: Yeah, he's OBLIGATED to give his reasoning. That doesn't mean he actually does.

In this example, VF can be separated from focus on the modal in a way that is not possible in (3.88): B's utterance is an example of VF because focus falls on the auxiliary portion of the periphrastic modal. B′'s utterance, on the other hand, is an instance of modal focus. Even though both possibilities exist, they are indistinguishable in the case of a single-word expression. It is possible, then, to have VF realized on a modal while maintaining its interpretation as focus on polarity. In (3.88), B's utterance is naturally interpreted as an instance of modal focus if it includes a continuation like *It* CAN *wait, but it won't*. But B's utterance can also be interpreted as verum focus, particularly in a situation where B is contradicting A's prior utterance. This possibility is particularly important when we return our attention to VPP in the next section. I argue that the ambiguity between modal focus and VF that we see in the canonical order does not persist in VPP and that all VPP-sentences involve VF, even when the sentence-final functional element is a modal.

3.4.3.2 Implications

A variety of disparate phenomena have been subsumed under the label "verum focus". An analysis along the lines of the one sketched here is often tacitly assumed in syntactic work, but it is important to spell out such an analysis explicitly. Doing so allows us to make predictions about verum focus and about the interaction of verum focus with other phenomena.

If the alternative semantic theory of verum focus is on the right track, it should extend to second-occurrence focus, sentences containing contrastive topics, and sentences with multiple foci. Ultimately, the analysis may also serve as the foundation for an analysis of other so-called verum focus phenomena, including high negation polar questions, the epistemic adverb *really*, and verum focus in constituent questions—phenomena which I suspect involve VF along with some other semantic, pragmatic, and/or syntactic component(s).

3.4.4 VPP expresses VF

In this subsection, I argue that VPP expresses VF. This argument forms the basis for extending the alternative semantic analysis of VF to VPP, which I do in the following subsection.

The first piece of evidence that VPP expresses VF is distributional: VPP can be used in the same contexts as auxiliary focus, which is the canonical instantiation of VF. In the three examples below, the given context is continued with either VPP (in the (a) examples) or auxiliary focus (in the (b) examples). Both constructions are pragmatically licensed. Both contribute the meaning that the propositional content is in fact true while drawing attention to the fact that the alternative, negative possibility is not true.[38]

---

[38]Note, though that the scalar interpretation we see with VPP is absent from the auxiliary focus

(3.91) Kenny Rogers had asked **his fans to bring cans to his concerts** to feed the hungry in the area.

    a. And <u>bring cans</u> they did.   (Ward 1990, (18))

    b. And they DID bring cans.

(3.92) The Yale Club in midtown Manhattan, where Old Blues hang out after bellying up to the bar and ordering tumblers of Johnnie Walker Black with the rocks on the side, had **but one Nathan Hale statue to lose**.

    a. <u>Lose it</u> it did, sometime between midnight and 6:50 a.m. last Saturday.

    b. It DID lose it, sometime between midnight and 6:50 a.m. last Saturday.

(3.93) If the scientists at Fermilab had not announced last week that **they had found the top quark**, then their next hope might have been a more powerful accelerator, like the Large Hadron Collider under construction in Geneva or the now forsaken Superconducting Supercollider. And if the top hadn't been found at the energies produced by those machines, there was always the possibility that the top quark was so massive that no conceivable accelerator, not even one as big as the solar system, could find it. And that would have created some huge credibility problems, not to mention philosophical conundrums, for the whole enterprise.

    a. But <u>find it</u> they did.

    b. But they DID find it.

Additionally, some previous analyses of VPP capture the intuition that VPP affirms the truth of a discourse-familiar proposition. Ward (1990) argues that the relationship of the VP-sentence to its antecedent determines the discourse function of that VPP-sentence. In this framework, VPP-sentence must correspond to the antecedent as either *independent proposition affirmation* or *concessive affirmation*.[39] As an instance of independent proposition affirmation, the VPP-sentence affirms an explicitly evoked proposition that is neither semantically entailed nor presupposed in the prior discourse. (3.94) is an example of independent proposition affirmation: the proposition corresponding to "(for me) to pass" is explicitly mentioned in the discourse, and the VPP-sentence "pass I did" affirms the truth of that proposition.

---

examples. See the next chapter.

[39]Ward's third discourse function, *scalar affirmation*, is not relevant for the discussion of VF. It will be discussed in the next chapter.

(3.94) At the end of the term I took my first schools; **it was necessary to pass**, if I was to stay at Oxford,
and <u>pass</u> I did, after a week in which I forbade Sebastian by rooms and sat up to a late hour, with iced black coffee and charcoal biscuits, cramming myself with the neglected texts.   (Ward, 1990, (1))

Concessive affirmation, defined as affirmation of "a proposition that stands in RHETOR-ICAL OPPOSITION to another proposition conceded in the prior discourse", is similar in that it also affirms an explicitly evoked proposition. As an instance of concessive affirmation, the VPP-sentence affirms the antecedent proposition in the context of come countervailing consideration conceded in the prior discourse. Concessive affirmation differs from independent proposition affirmation in that the antecedent proposition may be entailed or presupposed in the discourse. In (3.95), for example, the fact that the subject learned his mother's story is entailed by the fact that he learned about her from her, her papers and her tapes. The VPP-sentence affirms that that learning took place, even though we might expect the story to have been difficult to learn with only the papers and tapes as major sources of information.

(3.95) While he and his mother had often talked about writing her story, he went on, 'the mundane things we do with our lives' had prevented them. **It was ironic, he continued, that he eventually learned more from his mother's papers and tapes than he had directly from her**.
But <u>learn her story</u> he did, and the article is not only her story, about what she and other Jews endured, it is also his story, about the fragile process by which memory is kept alive.
                                                                      (Ward, 1990, (3b))

This entailment relationship (or presupposition relationship, which is not illustrated here) between the antecedent and the VPP-sentence is not necessary, though. (3.96) illustrates a case where the proposition expressed by the VPP-sentence (that Chicagoland taxpayers waited in line) is logically independent of the antecedent proposition that waiting in lines to pay high taxes is lunacy. The affirmation is still concessive, though,

because the context leads us to believe that the taxpayers might not stand in line because doing so would be crazy.

(3.96)   Waiting in long lines can be infuriating. Waiting in long lines to pay someone else money seems unconscionable. **Waiting in long lines to pay someone else more money than they seem to be entitled to is lunacy**.
But <u>wait in line</u> they did Monday in Chicago and the Cook County suburbs, partaking in the semi-annual ritual of settling up property taxes by the 6 p.m. deadline.   (*ibid.*, (3a))

Ward's analysis, then, captures the intuition that VPP emphasizes the truth of the proposition it expresses. The analysis presented in this chapter expands upon this intuition by assimilating the semantic contribution of VPP to that of VF. Doing so allows for an analysis in which VPP itself performs exactly one discourse function: that of VF.

Leonetti and Escandell-Vidal (2009) analyze a VF construction in Spanish, and suggest that their analysis can be extended to VPP (as indicated in the translations they provide). In Spanish, object preposing[40] may convey VF:

(3.97)   Dije   que terminaría   el libro, y   el libro he
         say.PST.1SG that finish.COND.1SG the book and the book have.PRS.1SG
         terminado.
         finished
         'I said that I would finish the book, and finish the book I did.'   (Leonetti and Escandell-Vidal, 2009, (5))

Leonetti and Escandell-Vidal term this construction *verum focus fronting*, and, like VF in English, it requires a discourse antecedent. Unlike VF in English, its VF properties are derived in a somewhat roundabout manner. The authors take the noncanonical word order to reflect noncanonical information structure. The fronted constituent, they argue, cannot be interpreted either as a topic or as a contrastive focus. Spanish has fronting operations that express these information-structural possibilities, and verum

---

[40]The construction is not limited to the preposing of DP objets, but a full discussion of the facts is beyond the scope of this work. See Leonetti and Escandell-Vidal (2009) for further details.

focus fronting differs from these other operations in both its intonation and its syntactic realization. (In other words, if the fronted constituent were a topic, it would undergo topicalization; if it were a constrative focus, it would undergo focus movement.) Because it is neither a topic nor a focus, the fronting does not set up an informational partition based on focushood or topicality. The lack of topic-focus partition does not result in a thetic interpretation (Erteschik-Shir, 2007), as we might expect. This, they argue, is again due to Spanish having another way to express the meaning in question—thetic interpretations are available in the less-marked SVO and VSO word orders without constituent fronting. Instead, the entire propositional content is treated as background. Focus therefore falls on polarity because there is no other viable candidate for focus.[41] The discourse effect is a strong affirmation of the expressed proposition and rejection of the opposite proposition.

Leonetti and Escandell-Vidal suggest that their analysis can be extended to VPP. While I do not agree with their suggestion (in particular, I find it difficult to believe that the fronted vP lacks any information-structural function), the interpretive similarities between the Spanish VF fronting and VPP are clear.

Finally, note that both canonical VF and VPP require an overt discourse antecedent. These similarities between the two constructions provide a strong indication that they are actually instantiations of the same phenomenon. In the next subsection, I demonstrate how the analysis of canonical VF can be straightforwardly extended to VPP.

3.4.5 Implementing VF in VPP

In this subsection, I argue that VPP expresses VF. The intuition behind the analysis is that the topicalized vP identifies an accessible, but unanswered polar question in

---

[41]The extent to which this "default" focus on polarity is equivalent to avoiding focus on discourse-given material remains unclear to me.

the discourse context. The VPP-sentence answers that question in the same way that canonical-order VF does.

As discussed above, both VPP and canonical-order VF sentences require linguistic antecedents. Neither can be used out of the blue (3.98) or in the absence of a suitable antecedent (3.99):

(3.98) Guess what?
   a. # We DO care.
   b. # Care we do.

(3.99) Many people thought [Elway] would be getting out just ahead of the posse. To be standing in front of the assembled media, man of whom had written at length about him being the second-best quarterback in the game, had to be a powerful feeling. "This is why I came back," he said.
   a. # And he DOES work.
   b. # And work he does.

Neither can be used to confirm information that has already been asserted:

(3.100) The decision by Ronald Regant's regulators to permit credit unions to ag-glomerate may have been the last sensible change ordered before the sav-ings and loan industry went over the waterfall in 1983. To that point, credit union membership had been restricted to narrowly defined groups sharing a common bond, usually employees of a particular company. Suddenly credit unions grew, switching their charters from occupationally-based to community-based.
   a. # They DID grow.
   b. # Grow they did.

The relevant generalization, I argue, is that both canonical-order VF and VPP must be used to answer a pragmatically accessible but unanswered polar question that has been raised in the prior discourse. Consider as an example (3.101):

(3.101) Quigley earned a spot in the tournament by winning the Monday qualifier. But he considered staying at his father's bedside, with his mother Dot, 83, and the rest of his family, after driving to Rhode Island late Wednesday night and seeing his father's deteriorating condition Thursday morning. His father urged **him to play**.

a. And he DID play.

b. And <u>play</u> he did.

With the victory, Quigley earns an exeption into every Senior PGA event for one year. It was the pressure of playing for that exemption, along with the $ 150,000 check, that had Quigley battling his nerves for 18 holes of the final round and then for three playoff holes. On the first of the playoff holes, Sigel bogeyed, opening the door for Quigley, who had a four-foot put. But Quigley missed.

In this example, the assertion that Quigley's dying father encouraged him to play in the tournament raises the question of whether Quigley actually listened to his father and played. The canonical-order VF sentence (3.101a) and the VPP-sentence (3.101b) both answer that question affirmatively.

The analysis remains identical when no *do* is inserted— a modal or auxiliary may bear stress in canonical-order VF and be stranded in VPP:

(3.102)   Dunham filed a grievance through the players association, saying the Devils acted in bad faith, but an arbitrator, John Sands, said the Devils had acted within the rules. Although he lost, Dunham said he does not harbor bitter feelings against the Devils or Coach Jacques Lemaire for inserting him in games with so little time on the clock. "I've put it all behind me," Dunham said last week. "All I want to do is **play as much as I can**."

a. And he WILL play, Lemaire said.

b. And <u>play</u> he will, Lemaire said.

"I want to use him a lot more this year," Lemaire said. "I think he deserves a change. I didn't use him as much as I wanted last year because we wanted to make sure we made the playoffs and Martin was playing well. " Lemaire was criticized for using Dunham at inappropriate times in several games.

(3.103)   Others praised the paintings for their energy and lyrical quality. "We wanted to tell the whole story, warts and all," Eastman said. "Our feeling was to get the work out there and let **the punters decide if these works were any good**."

a. They HAVE decided.

b. <u>Decide</u> they have.

"I think it's outrageous that MOMA has given these late works a housekeeping seal of approval," said Allan Stone, a Manhattan dealer. "They don't

have the spirit of de Kooning. They're stiff, rigid. I think a lot of them are unfinished. [. . .]"

The evidence presented in this chapter, then, involves two components, which are illustrated in the tree in (3.104). First, the vP is topicalized to SpecCP.[42] Second, the polarity head is syntactically F-marked. This focus is interpreted at the propositional level, as indicated by the adjoined $\sim$ operator. This operator presupposes an antecedent that differs from the propostition with focused polarity only in its polarity; I argue that this antecedent is a polar question raised in the prior discourse (and which is unspecified for polarity).

(3.104)　a.　When Hong Kong people get some time off, as they have this Monday, Tuesday, and Wednesday, they indulge in their favorite pasttime: shopping. So despite the historic moment and excitement surrounding Hong Kong's handover, for many people Monday was mainly an extra day **to go shopping**.
Did they (go) shop(ping)?
<u>Shop</u> they did.

　　　　　b.
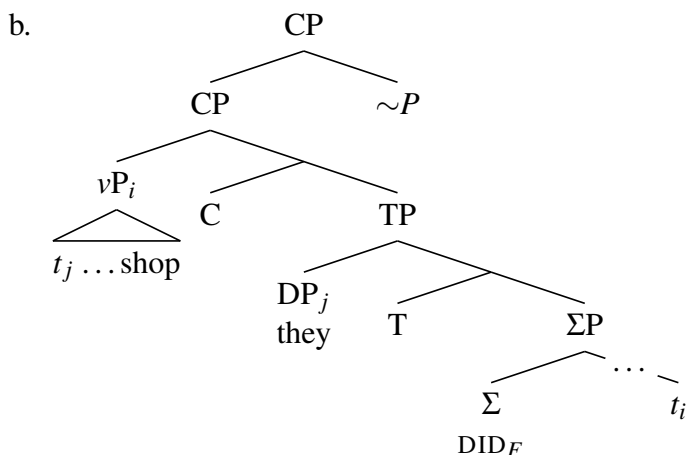
If the VPP-sentnece is negative, Σ is realized as *not* rather than as *do*:

(3.105)　a.　[The Republicans'] obstructionism, now concealed behind more-or-less believable policy arguments, wold be out in the open. It would be their responsibility **to produce**, not simply oppose.
Could they (actually) produce?
<u>Produce</u> they could not.

---

[42]See Chapter 5 for discussion of the featural motivation for this A′-movment.

b.

```
                            CP
                    ┌───────┴───────┐
                   CP              ~P
             ┌──────┴──────┐
           vPᵢ            C ─────────── TP
        ┌────┴────┐           ┌─────────┴─────────┐
      tⱼ ...produce          DPⱼ          ┌────────┴────────┐
                             they         T               ΣP
                                        could        ┌─────┴── ... ─┐
                                                     Σ              tᵢ
                                                    NOT_F
```
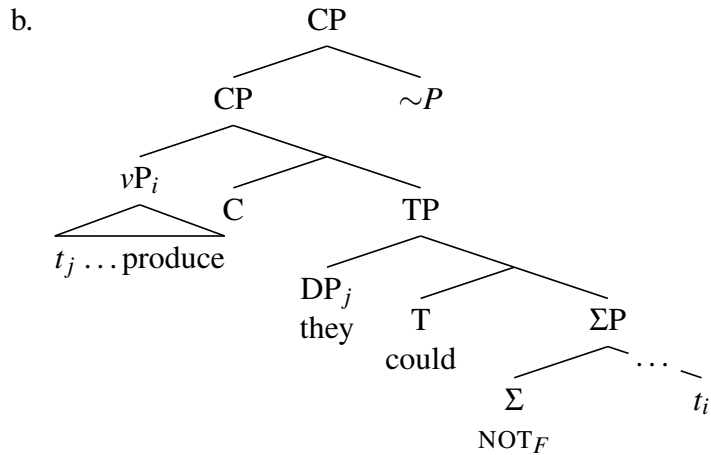
And again, the analysis has the same structure if the stranded element is an auxiliary
(3.106) or a modal (3.107)—the only difference is that focus is realized on that auxiliary
or modal as the closest pronounceable element to Σ.

(3.106)   a. For the first time in the brief history of space exploration, average individ-
uals have had almost instantaneous access to the images and information
pouring in. Not since television's minute-by-minute coverage of man's
first steps on the moon almost 28 years ago **have people been able to
follow a scientific odyssey so closely**.
Have they (actually) followed it?
<u>Follow it</u> they have.

b.

```
                            CP
                    ┌───────┴───────┐
                   CP              ~P
             ┌──────┴──────┐
           vPᵢ            C ─────────── TP
        ┌────┴────┐           ┌──────────┴──────────┐
      tⱼ ...follow it        DPⱼ        ┌────────────┴────────────┐
                             they       T                        ΣP
                                   ┌────┴────┐          ┌─────────┴─────────┐
                                   T       Aspₖ         Σ                 AspP
                                          HAVE       [AFF]_F        ┌───────┴── ... ─┐
                                                                    Asp              tᵢ
                                                                    tₖ
```
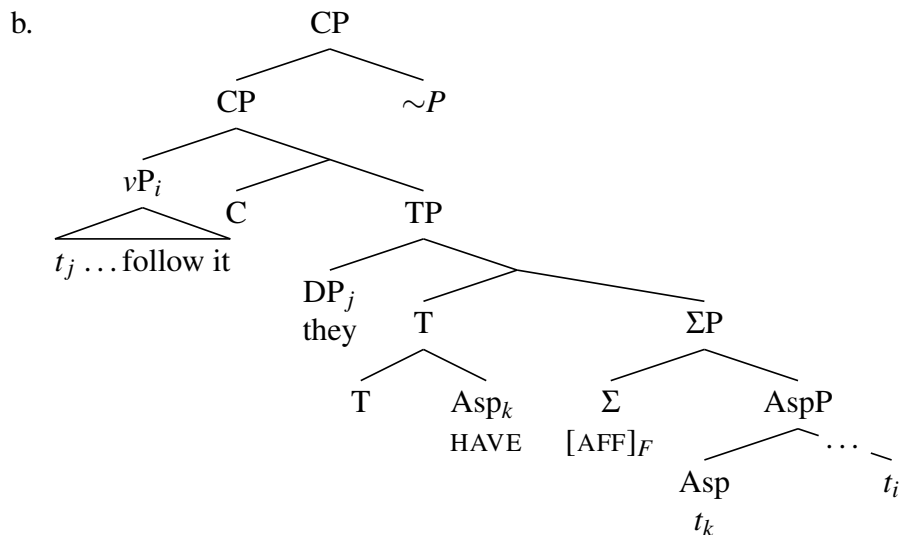
(3.107)   a. Now that Eddie The D and the D-Ettes (Carmen Policy, Willie Brown and
associate wizards) have played the ace, though, they really have no choice
but to oplay it all the way. If they win on June 3 (which no matter what
poll you might read is still a possibility), then the entire point is moot

137

The brilliant financial plan with the side order of blackmail will have done its work, ad the populi will have voxed. But if the 49ers lose (which no matter what newspaper story, television feature or radio chat fiend blatherama you notice is still more of a possibility), then **they should go**. They can cry, or shake their fists, or kick Jack Davis' part organizers down an elevator shaft,...

Despite all that, should they go?

but <u>go</u> they should.

b.

```
                          CP
                    ┌──────┴──────┐
                   CP            ~P
              ┌─────┴─────┐
            vP_i          │
            ╱╲            C          TP
         t_j ... go            ┌──────┴──────┐
                              DP_j           │
                              they   T       ΣP
                                   SHOULD  ┌───┴───┐
                                          Σ   ···  t_i
                                        AFF_F
```
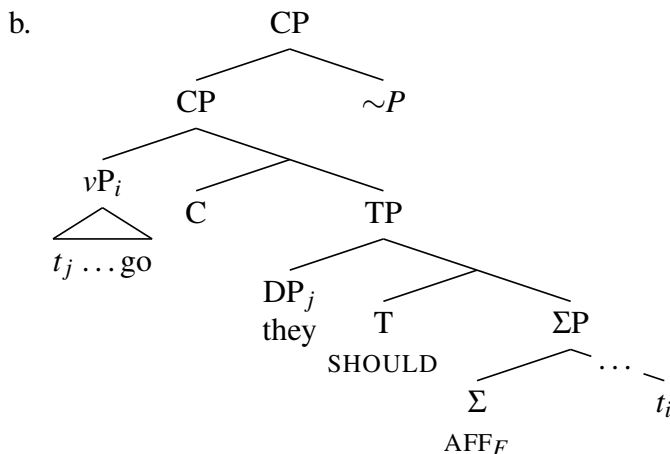
No part of this analysis prevents focus (or a second focus) from appearing elsewhere in the sentence. See Chapter 5 for discussion of why Σ must be F-marked. Since none of the corpus examples discussed in this dissertation are naturally interpreted with a second focus, whether such a focus structure is possible remains an open—but empirical—question that should be addressed in future work.

To summarize the discussion to this point, the analysis of VF presented in the previous section extends to VPP—the only difference is that VPP additionally involves topicalization. Canonical-order VF and VPP can be used in the same contexts, and both serve to answer a polar question that has been raised in the prior discourse.

There are, however, contexts that permit canonical-order VF but not VPP; these include answers to (overt) polar questions (3.108) and contradictions (3.109. It is in these contexts that the topicalization component of VPP becomes relevant. Because the topicalization signals a shift in topic, VPP cannot be used to address the most salient QUD. Because VF has a polar question that shares the VF's propositional content as its

antecedent, there is no congruent question other than the overt one in (3.108) that can be the antecedent for the VPP-sentence. Canonical-order VF, which does not have the topic-shift requirement, faces no such pragmatic restrictions.

(3.108)   Did he go?
     a.   (Yes,) he DID go.
     b. # (Yes,) go he did.

(3.109)   People didn't use the internet to get news and exchange views about the election.
     a.   (No/yes,) they DID use it.
     b. # (No/yes,) use it they did.

The claim is that the VPP examples are infelicitous because the topicalization cannot be interpreted as signaling a shift in topic. While both auxiliary focus and VPP realize VF, the distribution of VPP is limited by this additional contstraint introduced by topicalization.

3.4.6   Against prosodic and pragmatic accounts of verum focus

While the analysis presented above is a purely semantic one, it is possible to imagine alternative accounts of the VF interpretation of VPP. In this subsection, I consider and reject two such approaches.

3.4.6.1   A prosodic account of VF

The movement of the *v*P in (3.104–3.107) causes the auxiliary or modal in T to be-sentence final. This movement operation, then, is reminiscent of prosodically driven movement. Such movement is crosslinguistically common (see, for example, Zubizarreta (1998) for Romance languages and Szendrői (2003) for Hungarian), and conspires to place new, focused information in the position of the default focus accent.

At first blush, a prosodic analysis seems plausible for VPP because the nuclear focus accent in English falls on the rightmost constituent. The rightmost constituent in VPP is the stranded auxiliary or modal. So by moving the *v*P out of the way, the default accent falls on that auxiliary. The auxiliary is then interpreted as focused; because auxiliary focus most often corresponds to focus on polarity, we get a VF interpretation.

This explanation, however, does not jibe with the general prosodic or information structural properties of English. English, unlike Romance languages or Hungarian, does not have a rigidly designated focus position. In general, the nuclear accent shifts to coincide with the focus. While variations in word order may have information structural consequences, these consequences are due to the moved constituent itself. There are (to my knowledge) no instance of movement causing focus to fall on an *in situ* constituent in the language.

Note also that, under a prosodic account, there is no connection between VF in the canonical word order—which must still be accounted for via [F]-marking—and VF in VPP. For these reasons, as well as the impossibility of distinguishing between a VF and a modal focus interpretation, I reject a prosodic account of VF in VPP in favor of a semantic one.

3.4.6.2 A pragmatic account of VF

A second alternative approach is based on the givenness of the preposed *v*P. Under this type of pragmatic account, no [F] feature would be associated with Σ (or any syntactic position, for that matter). Instead, VF would arise when all the lexical material has been previously mentioned. That is, when the proposition expressed by the VPP-sentence is given, we get focus on polarity—the only non-given information being communicated.

The focus accent on the stranded auxiliary would then be a last resort. Assuming that each sentence must contain (at least) one focus accent, placing that accent on the

auxiliary prevents any of the given material from bearing a focus accent (Schwarzschild, 1999).

But at least two problems arise from the attempt to derive VF from the givenness of the preposed *v*P. First, it is not always the case that the lexical material in the preposed *v*P is discourse-given. Given sufficient pragmatic support, an antecedent may be accommodated.[43] An example of such accommodation is given in (3.110). The preposed material in the VPP-sentence, "answer it" has not been mentioned and is therefore not best characterized as given.

(3.110)   How much is a life worth? Merely posing the question offends most people. But <u>answer it</u> they must and <u>answer it</u> they do, says Kip Viscusi, an economist at Duke University.

The second problem is that the preposed material does not behave intonationally as though it were given, even when it has an identical overt discourse antecedent. I discuss the intonational patterns associated with VPP in detail in the next chapter. For now, notice that the preposed *v*P does have an intonational contour; VPP is wholly ungrammatical if the preposed *v*P is deaccented, contrary to the predictions of a givenness-based analysis. I conclude, therefore, verum focus is a semantic property of VPP, not a pragmatic one.

3.5 Summary

In this chapter, I have argued that VPP expresses VF in the sense that preposing of the *v*P always cooccurs with F-marking of Σ, and that the distributional differences between canonical-order VF and VPP are attributable to the topicalization of the *v*P, which must indicate a shift in topic. I have also argued that VF can and should be analyzed in a

---

[43]See the next chapter for much more discussion.

standard alternative semantics framework, making it no different from more familiar types of focus.

While the topicalization is compatible only with a topic-shift interpretation, I suspect that this is a pragmatic condition rather than a syntactic one. In other words, it is possible that syntax does not encode the topic shift itself, but only topicality. The work of matching the preposed constituent to a discourse-familiar antecedent is done by the pragmatics. In the next chapter, I discuss how the account can be extended to cases in which there is in fact no overt discourse antecedent for the preposed vP. I also turn my attention to an additional pragmatic component of the meaning of VPP that is absent from canonical-order VF constructions.

Chapter 4

The pragmatics of VPP

4.1   Introduction

In this chapter, I discuss two additional pragmatic components of the meaning of VPP. The first of these is the possibility of accommodating an antecedent. Under certain pragmatic circumstances, it is possible to accommodate an antecedent for a VPP-sentence that is not overt in the discourse (*cf.* (3.110)). In Sections 4.2–4.3 of this chapter, I discuss what these pragmatic conditions are and how they can be formalized in a QUD-based framework. I suggest that the flexibility in accommodating an antecedent is a result of the syntactic topicalization inherent in VPP—intuitively, because canonical-order VF does not overtly point out the question it is answering before the focus is realized, an accommodation procedure would require additional backtracking on the part of the hearer (*cf.* Birner et al. (2007) on the compositionality of discourse functions).

While the core semantic contribution of a VPP-sentence is VF, I argue in the second half of this chapter that an emphatic component can be built on top of VF. This emphatic interpretation has been discussed in the literature as a property of VPP it-

self. I claim, however, that its presence is due to an independently attested intonational contour. The relevant intonational pattern also occurs in the canonical word order and has the same pragmatic effect. In highlighting the role of intonation, the discussion contributes to the decomposition of the meaning of VPP. With the topicalization, VF, and emphatic intonational components in place, we can understand the full semantic and pragmatic profile of a VPP structure. VF contributes the need for an antecedent and requires that that antecedent be a polar question. Topicalization places additional restrictions on the interpretation of the antecedent—as we saw in the previous chapter, it signals a topic shift that precludes the VPP-sentence from addressing the most salient QUD. Finally, the optional intonational pattern conveys emphasis. Each of these components is independently possible in the canonical word order;[1] because each makes the same contribution to the meaning in the canonical order as in the VPP order, we can understand the semantic meaning and discourse effects of VPP in a compositional manner.

4.2 The antecedence requirement revisited

It is clear that VPP, like other realizations of VF, requires a discourse antecedent. In the previous chapter, I followed work by Ward (1990) and others in assuming that the discourse antecedent must be linguistically overt. Recall that evidence for this assumption comes from the fact that VPP cannot be used out-of-the blue (4.1) or in the absence of a linguistic antecedent (4.2):

(4.1)   Guess what?
        # <u>Chop</u> the company must, as long as there is a remaining supply of Ruth bats.

---

[1]Indeed, VF and emphasis are also possible where there is (non-VPP) topicalization; the crucial point here is that they are not intrinsically linked to VPP.

(4.2) They disappeared into another windstorm, then a rainstorm. The pair never did find the wedding, but they found welcome at the Lounge Lizard Cabaret. That's how it is on the playa at night.

  # And <u>stumble upon something better</u> they did.

The intuition that an antecedent is required is quite robust among speakers. When presented with an example of VPP that does not have a linguistic antecedent, speakers will spontaneously attempt to repair the context to provide one. The following reactions are taken from a social media conversation; the first three comments are from non-linguists, while the final two are from non-specialists with linguistic training. The last comment in fact anticipates the analysis I will pursue in the remainted of this chapter.

(4.3) The least likely group of 9/11 'truthers' are architects and engineers. But <u>doubt</u> they do.[2]

- "I don't find it grammatical but was eventually able to parse it by something like replacing 'truthers' with 'doubters.'"
  - "Yeah, I could accept it if the preceding sentence were different, e.g. 'Who would think that engineers would doubt 9/11? But doubt it they do.'"
- "[P]erhaps it'd be more typical for 'doubt they do' to follow a sentence using the word 'doubt' ('You wouldn't expect [...] to doubt, but doubt they do')."
- "[I]t's pretty bad without a linguistic antecedent for 'doubt.' I would find it fine if there was one. Like 'least likely people to doubt blablablah, but doubt they do.'"
- "It seems to me that there's kind of a spectrum of acceptability when there's no linguistic antecedent, maybe based on prototypicality? I find something like 'Mary isn't a stereotypical ballerina, but dance she does' much better than the 'doubt' example."

In order to make the alternative semantic analysis of VF as simple as possible, I further assumed that the relevant antecedent for calculating alternatives to the VF proposition is not the linguistic antecedent itself, but rather the polar question corresponding

---

[2]https://www.facebook.com/globe/posts/10153809339473258 (retrieved 27 November 2015). While there is clearly some pragmatic connection between *truther* and *doubt*, it is apparently not as easy for hearers to recover as, for example, the connection between *cut* and *chop* in (4.5).

to that piece of linguistic structure. The motivation for this assumption was that the focused Σ should differ from the Σ in the antecedent. If the antecedent is a question, it does not have affirmative or negative polarity and therefore differs from the polarity of both positive and negative VF sentences.

The significance of this second assumption becomes clear when we consider examples that seem to violate the first assumption. It is possible to use VPP in contexts where no linguistic material corresponds to the preposed vP. In some cases, the preposed verb is roughly synonymous with a previously occurring verb. This synonymy may arise from the presence of morphologically relatedness (4.4), but it may also entirely unrelated but synonymous expressions in the "antecedent" (4.5). In this sense, the antecedence condition is similar to the antecedence condition on VP ellipsis.

(4.4) "[...] I had male buddies but not boyfriends. I didn't like making out with boys. I was repelled by it, but I thought maybe I'd get used to it. I did know that **I would never get married**."
But <u>marry</u> she did.
After lowering her academic sights, she signed up for the Army student nurse program at the university and became a member of the Army in 1961. She was stationed in Nuremberg when she met her future husband. "After going out with Harvey for six months, I couldn't think of a reason why not to marry him," said Cammermeyer, as matter-of-fact about this as she is about any topic placed before her.

(4.5) Mancera called the company's chopping-block mode of marketing "product innovation." She offered a splendid assurance that if this were the last game-used Ruth bat left, **the company would not cut it up**. The company's research found that 50 to 100 Ruth bats are still around.
So, <u>chop</u> the company must, as long as there is a remaining supply.
"That's how it works sometimes," Mancera said.

But there need not be any corresponding antecedent at all. Some examples of such contexts are given in (4.6) and (4.7):

(4.6) Leave Gare Montparnasse at 7:50 a.m., read a newspaper, have coffee, watch the fields rocket by, and step out onto the platform at Nantes at 9:59 a.m. I did just that last week to be able to spend a week with Jean-Ernest Sauvion, a

wine maker in this town in the vineyards 20 miles southeast of Nantes itself. This is muscadet country, and Sauvion is one of the best-known producers of that pale, invigorating wine. Within minutes of arriving at his estate here, the Chateau du Cleray, I was in a laboratory confronted by 25 examples of Sauvion wines, most of them muscadet. To someone who had been asleep in Paris a few hours earlier, it was a formidable sight.

But <u>taste them we did</u>, reaffirming that muscadet at its best is still one of the most underestimated of the world's fine wines.

To a generation of Americans who came to wine through full-bodied chardonnay, muscadet can seem thin and acidic. But no California chardonnay can enhance a skillfully cooked fish the way a muscadet can. Chardonnay will overwhelm a delicate fish; muscadet is an accompanist, not a rival.

(4.7) This is a tale of three money pits. It's also a tale of monetary regress—of the strange determination of many people to turn the clock back on centuries of progress. The first money pit is an actual pit—the Porgera open-pit gold mine in Papua New Guinea, one of the world's top producers. The mine has a terrible reputation for both human rights abuses (rapes, beatings, and killings by security personnel) and environmental damage (vast quantities of potentially toxic tailings dumped into a nearby river).

But gold prices, while down from their recent peak, are still three times what they were a decade ago, so <u>dig</u> they must.

The second money pit is a lot stranger: The Bitcoin mine in Reykjanesbaer, Iceland. Bitcoin is a digital currency that has value because . . . well, it's hard to say exactly why, but for the time being at least people are willing to buy it because they believe that other people will be willing to buy it. It is, by design, a kind of virtual gold. And like gold, it can be mined: you can create new bitcoins, but only by solving very complex mathematical problems that require both a lot of computing power and a lot of electricity to run the computers.[3]

The conclusion to be drawn from these examples is that the antecedent question need not be explicitly mentioned. Rather, it is sufficient for the antecedent to be inferable from the discourse (Prince, 1981b). While it is difficult to determine what exactly "inferable" means for a constituent the size of a VP or a proposition since the literature normally discusses bridging inferences between DPs (though see AnderBois (2011) for discussion of "issue-bridging" in the context of sprouting involving an accommodated

---

[3]http://www.nytimes.com/2013/12/23/opinion/krugman-bits-and-barbarism.html (accessed 2 March 2015)

antecedent in sluicing), note that the more predictable the information conveyed by a VPP-sentence is, the easier this inference becomes:

(4.8) As he grieved for his friend, Blocker said he decided "something had to be done about it." So Blocker spent about 16 hours on the streets asking questions , trying to get information on the shooting of the 30-year-old replacement player.
    a.   And <u>help</u> he did.
    b. # And <u>hire a lawyer</u> he did.

I argue in the next section that, given sufficient contextual support, a pragmatically plausible antecedent question may be accommodated. This property of VPP distinguishes it from canonical-order VF constructions, and I argue that the difference is derivable from the fact that preposing draws the hearer's attention to the particular antecedent question.

4.3 The QUD

As discussed in the previous chapter, I assume a Question Under Discussion (QUD)-based framework for structuring the discourse. In this section, I discuss two desiderata for a QUD theory compatible with the pragmatic distribution of VPP. The ideal framework must allow the utterance of a VPP-sentence to answer a question other than the one raised most recently in the discourse, and it must allow questions to be accommodated from the discourse context. I begin by considering one of the most influential implementations of QUD structure—that of Roberts (1996).

Roberts (1996) defines **Acc** as the subset of discourse moves that are accepted by the interlocutors into the Stalnakarian common ground and $<$ as the precedence relation indicating the order of utterance in the discourse. She then defines the QUD stack as follows:

(4.9) **QUD**, the questions-under-discussion stack, is a function from M (the moves in the discourse) to ordered subsets of Q∩Acc such that for all m∈M:

    a. for all q∈Q∩Acc, q∈QUD(m) iff

        i. q < m (i.e., neither m nor any subsequent questions are included), and

        ii. CG(m) fails to entail an answer to q and q has not been determined to be practically unanswerable

    b. QUD(m) is (totally) ordered by <.

    c. for all q, q′ ∈QUD(m), if q < q′, then the complete answer to q′ contextually entails a partial answer to q.

Roberts contends that a question may only be added to the top of the stack if it is a sub-question of the topmost question already on the stack. This relationship is guaranteed by principles of relevance, including the interlocutors' commitment to answering questions that have previously been posed. Roberts does acknowledge that the interlocutors' commitment is really to the overall strategy rather than to answering individual subquestions, which means that answering a question lower in the stack obviates the need to direcly answer any subquestions. It is not clear, however, how an interlocutor would go about answering a lower question in a manner consistent with Roberts' formalism. She defines relevance only in terms of the topmost question on the stack; it is therefore difficult to imagine a scenario in which a speaker could make a move that is relevant to the immediate QUD while simultaneously answering a question lower in the stack (unless the lower question is a superquestion of the immediate QUD).

The discussion of VPP in the previous chapter led to the conclusion that VPP can (and must) be used to answer a question other than the immediate QUD. Implementing this function of VPP is impossible in a system like Roberts' that allows for only one relation between a question and the context—namely, simply adding the question to the QUD stack. Later work makes distinctions between, for example, the set of open questions in the discourse and the current or congruent question. The remainder of this section is devoted to theories of that type.

Beaver and Clark (2008) build on Roberts' work to provide a QUD structure that can account for various focus phenomena. They assume that the question on top of the QUD stack, called the Current Question (CQ) remains open until it is answered and replaced with a new sub-question (the next sub-question in the stack). The CQ is constrained by the Current Question rule in (4.10).

(4.10) **Current Question Rule**: The Current Question must contain at least one true alternative, and contain multiple alternatives which are not resolved as true or false in the common ground.   (Beaver and Clark, 2008, (2.53))

Conversational moves are relevant to the current question if they are partial or total answers to that question in that they are incompatible with some alternatives but compatible with at least one alternative. Beaver and Clark propose two modifications to Roberts' model of QUD structure, given in (4.11) below:

(4.11) a. **Discourse Principle**: Utterances should be maximally relevant to the CQ.
        b. **Focus Principle**: Some part of a declarative utterance should evoke a set of alternatives containing all the Rooth-Hamblin alternatives of the CQ. (Beaver and Clark, 2008, (2.54))

The Discourse Principle enforces relevance, while the Focus Principle constrains the questions that a declarative sentence can be used to answer by relating the alternatives evoked by the utterance's focus to the alternatives evoked by the current question. The Focus Principle represents the crux of Beaver and Clark's (2008) departure from Roberts' model. Where Roberts' notion of congruence required identity between the alternative set evoked by the focus and the denotation of the current question, the Focus Principle requires only a subset relation. It therefore allows for the focus alternative set to contain alternatives that are not contained in the denotation of the current question. Beaver and Clark also weaken Roberts' notion of congruence by requiring only that some part of the utterance—rather than the entire declarative sentence—contain the

current question's alternatives. This allows for answers to the current question to be contained within an embedded clause.

Beaver and Clark break the notion of the QUD into two components—a list of open questions, and the current question. The current question is always the most recently introduced member of the tuple of open questions, so the system remains stack-based. Beaver and Clark provide the following illustration of the mechanics of their system (The abbreviations used are: CG (Common Ground), OQ (open questions), CQ (current question), CS (context set). When the context set is empty, the smiley face represents the interlocutors' state of blissful ignorance.)

(4.12) a.
$$\begin{bmatrix} \text{CG:} & \{\ \} \\ \text{OQ:} & \langle\ \rangle \\ \text{CQ:} & \\ \text{CS:} & ☺ \end{bmatrix}$$

b. Speaker A: "Who does Sandy feed what?"

c.
$$\begin{bmatrix} \text{CG:} & \{\ \} \\ \text{OQ:} & \langle\ \text{WHO DOES SANDY FEED WHAT?}\ \rangle \\ \text{CQ:} & \text{WHO DOES SANDY FEED WHAT?} \\ \text{CS:} & ☺ \end{bmatrix}$$

d. Speaker A: "Who does Sandy feed Nutrapup?"

e.
$$\begin{bmatrix} \text{CG:} & \{\ \} \\ \text{OQ:} & \langle\ \text{WHO DOES SANDY FEED WHAT?,} \\ & \quad \text{WHO DOES SANDY FEED NUTRAPUP?}\ \rangle \\ \text{CQ:} & \text{WHO DOES SANDY FEED NUTRAPUP?} \\ \text{CS:} & ☺ \end{bmatrix}$$

f. Speaker B: "Sandy feeds [Fido]$_F$ Nutrapup." (true in w and w$'$)

g.
$$\begin{bmatrix} \text{CG:} & \{\ \text{SANDY FEEDS FIDO NUTRAPUP}\ \} \\ \text{OQ:} & \langle\ \text{Who does Sandy feed what?}\ \rangle \\ \text{CQ:} & \text{WHO DOES SANDY FEED WHAT?} \\ \text{CS:} & \{\ w, w'\ \} \end{bmatrix}$$

Beaver and Clark structure the discourse by means of a stack of open questions. The topmost question on the stack is the current question, and it must be addressed before any other open questions can be reached. For that reason, their system will have

difficulty with VPP, which seems to skip over the most recent question to answer one that has been raised and ignored at a previous point in the discourse.

Beaver and Clark also acknowledge that few naturally occurring discourses proceed as interrogatives followed by declarative sentences followed by interrogatives followed by declarative sentences and so on until perfect knowledge is reached. Given the obvious need for implicit questions in natural discourses, the authors offer two possibilities for incorporating them into the theory. The first is that questions may be conversationally implicated *via* Gricean reasoning if thosse questions are "made salient" by the prior discourse. Second, hearers may accommodate a question upon receiving the answer to it; in these cases, "the fact that a speaker thinks that a certain question is of interest becomes evident only when the answer is given." Beaver and Clark shy away from a full theory of accommodation due to the extensive nature of such a project. They do, however, offer two principles that might constrain accommodation, given in (4.13) below:

(4.13) a. Q-accommodation 1. A question may be accommodated (i.e., added to the list of open questions) if the resulting structure involves only moves satisfying the Discourse Principle.
b. Q-accommodation 2. A question may be accommodated only if it is part of a strategy that is jointly identifiable by speaker and hearer as a means to common discourse goals.

(Beaver and Clark, 2008, (2.56))

While Beaver and Clark do not relate accommodation directly to their Focus Principle, the two combine to form the basis of the theory of accommodation laid out in Simons et al. (to appear). I turn to that discussion now, concluding that it does not appropriately constrain the question types that can be accommodated when a sentence with VF is uttered.

152

4.3.1 Accommodating an implicit QUD

Simons et al. (to appear) introduce the concept of a *congruent question* (CQ), a concept designed to narrow the domain of the alternatives under consideration to those that are relevant to the purposes of the discourse. Their definition of CQ is given in (4.14). The idea is that sentences are associated with focal alternatives, while utterances are associated with CQs. The "privilege" that the CQ enjoys is the speaker's intention to distinguish among those particular alternatives.

(4.14) **Congruent question (CQ) for an utterance**: The CQ for an utterance is a privileged subset of the focal alternatives of the uttered sentence (given a structural analysis of that sentence, including focus marking).

The CQ is constrained by the focal intonation pattern of the speaker's utterance. To take one of Simons et al.'s examples, the underlined portion of (4.15) is compatible only with QUDs that ask whose graduation party James has found out about (4.16):

(4.15) A: James just found out that Harry's having a graduation party, and I just can't understand why he's so upset about it.

  B: [He didn't find out that [HARRY'S]$_{L+H*}$ having a graduation party]$_{L-H\%}$, he found out that HARRIET is having a graduation party, and HARRIET is his best friend.

  (Simons et al., to appear, (6))

(4.16) {p: for some *a*, p = James found out that *a* is having a graduation party} = For which person *a* is it the case that James found out that *a* is having a graduation party? (*ibid.*, (19))

The CQ further narrows this set of individals. In any conversational context, there is some domain-restricted set of people who might be having graduation parties that the speaker intends to be relevant. If James is a high school student, this is probably a set of his classmates; the fact that his younger cousin's graduation from preschool might also be honored with a party is irrelevant.

Simons et al. make a case for the CQ for a given utterance being the simplest

possible question. The authors follow Rooth in claiming that a wide-focus utterance has as its alternative set the set of all possible propositions. The QUD in such circumstances must be something like *What is the way things are?*, a complete answer to which is a complete description of the actual world. The CQ cannot narrow the domain of this question on the basis of the utterance's focal intonation. Instead, Simons et al. introduce the principle that the hearer assumes the simplest question compatible with the speaker's utterance. While the details of the definition of "simplest" are not relevant here, the simplest possible CQ is the polar question associated with the utterance's propostional content. This CQ is the most specific possible question compatible with wide focus in the sense that its alternative set is the smallest.

The CQ is not the same notion as the QUD. In the standard QUD model (Roberts, 1996, *e.g.*,), something like the CQ (*i.e.*, the question that the utterance answers) must become the new QUD. It is placed on top of the QUD stack, and must be addressed before questions deeper in the stack can be. In order for the discourse to be coherent, the new question should be a subquestion of the previous QUD. This is not necessarily the case with the CQ. Simons et al. describe the difference in intuitive terms: "the CQ is determined primarily 'from below' by linguistic features of the utterance [...;] the QUD is determined primarily 'from above,' by prior utterances and by discourse goals. While CQs are associated with single utterances, a QUD is associated with a segment of discourse, and can be thought of as the topic which that segment addresses." In this framework, discourse coherence arises from the relationship between the CQ and the QUD. In other words, the hearer assumes that the CQ associated with the speaker's utterance is relevant to the QUD and constructs (a) a specific CQ and (b) its relation to the QUD that allows the speaker's contribution to be relevant to the discourse goals.

For present purposes, the CQ is relevant because it provides a formalism for accommodating implicit questions that are answered by the VPP-sentence. The focus

intonation associated with VF signals overtly that the CQ is a polar question. This question does not necessarily have to be a subquestion of the QUD in any formal sense, so long as the hearer is able to understand how that narrow question contributes to answering the overarching QUD. Importantly, the CQ can be accommodated without any corresponding linguistic material. To take another of Simons et al.'s (to appear) examples, Alexis's utterance in (4.17), with the focus accent falling on the DP *the paying lot*, raises the question of the form in (4.18).

(4.17) Chloe: Why is it taking Lawrence so long to get here?
         Alexis: [with sudden realization] He doesn't know the car's parked in the
                paying lot!   (Simons et al., to appear, (26))

(4.18) {p: for some location *l*, Lawrence doesn't know that the car is parked in l}

The question of where Lawrence does or doesn't know the car is parked has not been stated explicitly in the discourse. But Alexis's utterance nevertheless answers that question. So while the QUD is given by Chloe's utterance, the set of propositions in (4.18), as signaled by Alexis's focus intonation[4], is the CQ. It is up to the participants in the conversation to determine the relationship between the CQ and the QUD. In this case, the question in (4.18) is relevant to the QUD only if Lawrence is taking a long time to arrive because he doesn't know where the car (which he is trying to retrieve) is parked.

We can say something similar about how a hearer reconstructs the relationship between the QUD and a VPP-sentence that does not have an overt linguistic antecedent for the preposed *v*P. To see how this works, consider again the example in (4.19):

(4.19) Leave Gare Montparnasse at 7:50 a.m., read a newspaper, have coffee, watch
         the fields rocket by, and step out on the platform at Nantes at 9:59 a.m. I
         did just that last week to be able to spend a day with Jean-Ernest Sauvion, a

---

[4]While focus is not marked in the original discussion, Simons et al. note that Alexis's utterance "would plausibly be spoken with intonational prominence within the final NP, indicating narrow focus on that phrase. (Lawrence does, after all, know that the car is parked, not just *where* it is parked.)"

wine maker in this town in the vineyards 20 miles southeast of Nantes itself. This is muscadet country, and Sauvion is one of the best-known producers of that pale, invigorating wine. Within minutes after arriving at his estate here, the Chateau du Cleray, I was in a laboratory confronted by 25 examples of Sauvion wines, most of them muscadet. To someone who had been asleep in Paris a few hours earlier, it was a formidable sight.

But <u>taste them</u> we did, reaffirming that muscadet at its best is still one of the most underestimated of the world's fine wines.

The QUD here must be something broad, along the lines of *What happened on your trip to Nantes?*. Given the VF intonation associated with the VPP-sentence, the CQ for that clause must be of the form given in (4.20):

(4.20)   Did you taste the wines?

It is possible for the hearer to accommodate this question from the discourse and recognize that the VPP-sentence answers it. Her next task is to determine the relationship between this CQ and the QUD. In this case, the relationship is clear in the sense that ths speaker had been talking about the events of his trip. While the purpose of that trip was apparently to taste some wines, he had hinted that actually doing so might be unlikely—the discourse cues for this unlikelihood include the phrases "confronted by" and "a formidable sight". The VPP sentence then confirms that the tasting did in fact happen.

A second example illustrating this interpretive procedure is given in (4.21), with the corresponding CQ in (4.22):

(4.21)   The Rev. Peter Colapietro woke on Wednesday sniffling, sneezing, wheezing and unable to sing.
         But <u>rise he did</u>, since there are no sick days for a priest at Christmas.
(4.22)   Did the Reverend rise from bed?

Again, it is the VF associated with the VPP sentence that determines the CQ. The context given in (4.21) is discourse-initial; the QUD is something like *What happened on*

the Reverend's Christmas morning?. The CQ, then, straightforwardly provides information about what happened that morning and confirms that the Reverend did indeed get out of bed.

There are, however, potential problems with the CQ implementation of antecedent accommodation. In general, the approach is too permissive, especially when the QUD is a general question of the form *What happened?*. It predicts that any utterance should be acceptable in such a context so long as the hearer can reconstruct a relationship between the CQ that the utterance answers and the QUD. But this is not what we see with VPP (nor with VF more generally; see below). In cases where there is no linguistic antecedent corresponding to the preposed *v*P, the polar question that the VPP-sentence answers must be easily recoverable from the discourse context. The attested VPP-sentence in (4.23a) is felicitous because the question of whether the Americans actually bought the paintings is highly salient.

(4.23)   Also included in the sale was a pair of Canalettos, "Views of Venice from the Piazza San Marco," which went to Richard Green, the London dealer, for $4.5 million, more than twice its $ 2 million high estimate. The Canalettos were among 24 paintings being sold from the collection of the British Rail Pension Fund. The pension fund, which has had three successful Old Master sales at Sotheby's in London over the last few years, was trying the New York market because many of the works had been on loan to American institutions and were on the pretty side, more to American tastes.
    a.   And <u>buy</u> they did.
    b.   # And <u>complain to the auction house</u> they did.

The (unattested) VPP-continuation in (4.23b), on the other hand, is infelicitous.[5] We can easily reconstruct a CQ for this utternance (*Did they in fact complain to the auction house?*), and we can equally easily accommodate a relationship between this CQ and the QUD *What happened at the art auction?*. It is possible, for example, that the

---

[5]The felicity of such examples decreases along with the plausibility (and/or relevance) of the antecedent. A highly implausible continuation like *Hold a bake sale to raise funds they did* is less acceptable in the same context.

American buyers were insulted at being offered only cast-off paintings that Europeans had no interest in, or that they thought the auction was poorly run. But despite the existence of these possibilities, the VPP-sentence that is consistent with this CQ is infelicitous.

The problem that the CQ account faces, then, lies in predicting a more promisucous accommodation procedure than we actually observe. It is not the case that any possible relation between the CQ indicated by the VPP-sentence and the QUD can be reconstructed felicitously. Instead, as we have seen, the question answered by the VPP-sentence must be quite salient in the discourse (So salient that, the vast majority of the time, it is linguistically explicit.). Only those questions that arise naturally from the discourse context may be addressed by a VPP-sentence. While I acknowledge the fact that "arising naturally" is not a notion that is easily formalized, the crucial point is that the questions that a VPP-sentence may address are a narrow subset of the questions that Simons et al. predict should be possible CQs. And indeed, this set of questions often involves the kind of close-to-entailment relation that we see in (4.23a): if the paintings are being sold, it is highly likely that someone bought them.

A second problem for the CQ approach is that it predicts no difference between VPP and canonical-order VF. Both constructions have the same focus structure and the same focus intonation, but their felicity conditions are not identical. Specifically, a linguistic antecedent is always required in the case of canonical-order VF. The kind of antecedent accommodation that happens for the VPP-sentence in (4.23a) is not possible in the canonical order. The example in (4.24) below illustrates:[6]

(4.24)   How much is a life worth? Merely posing the question offends most people.
   a.   # But they MUST answer it and they DO answer it.
   b.   But <u>answer it</u> they must and <u>answer it</u> they do, says Kip Viscusi, an

---

[6]Note that this is also a problem for Ward (1990), so long as "proposition affirmation" is characteristic of both VPP and canonical-order VF.

economist at Duke University.

In this context, the felicity of the VPP-sentence in (b) and the canonical-order VF sentence pull apart. Despite an easily recoverable sequence of CQs (*Must they answer the question? Do they answer it?*) and an obvious relationship between posing the question and answering it, the canonical-order VF sentence is infelicitous. This fact is unexpected under the CQ theory of QUD structure. And even more unexpected is the difference between the two instantiations of VF. So long as VPP and auxiliary focus both express verum focus, the two word orders are predicted to pattern together.[7]

4.3.2 A return to d-trees

Rather than adopting a distinction between the QUD and the CQ, I therefore adopt a model of the discourse that is not stack-based. For ease of exposition, I represent discourses in Büring's (2003) D-tree framework, modifying his definition of relevance. Büring assumes that "[f]or any move M, the question under discussion is the move M' immediately dominating it. For a move to be relevant it must answer or at least address this question under discussion", and defines relevance as follows:

(4.25) Relevance:

    a. an assertion A is relevant in a d-tree DT iff A is an answer to the QUD for A in DT

    b. a question Q is relevant in a d-tree DT if at least one answer to Q is an answer to the QUD for Q in DT   (Büring, 2003, (9))

---

[7]Recall that canonical-order auxiliary focus sentences are ambiguous between a true VF reading in which focus falls on the Σ head and a reading in which the modal or auxiliary itself is focused. While it is possible that the first conjunct in (4.24a) in fact expresses modal focus and is therefore not comparable to the corresponding VPP-sentence, no such alternative analysis is available for the second conjunct. The judgments remain the same if the first clause is disregarded:

(4.1) How much is a life worth? Merely posing the question offends most people.

    a.   # But they DO answer it.

    b.   But <u>answer it</u> they do.

In order for a VPP-sentence to be relevant in this sense, the possible QUDs for a given assertion (or question) must include more than the immediately dominating move. I propose that the QUD for a given assertion may actually be any question that has been raised in the previous discourse.[8] VPP has the particular constraint that the QUD must not be the most recently raised question, as discussed in the previous chapter. Given the evidence discussed in this chapter, we can further clarify the nature of this constraint. When the antecedent question for a VPP-sentence is accommodated rather than arising from linguistic material in the discourse, the VPP-sentence may answer the most recently accommodated question. An illustrative d-tree for an accommodated question is given in (4.26) below.

(4.26) The Rev. Peter Colapietro woke on Wednesday sniffling, sneezing, wheezing and unable to sing.
But <u>rise</u> he did, since there are no sick days for a priest at Christmas.
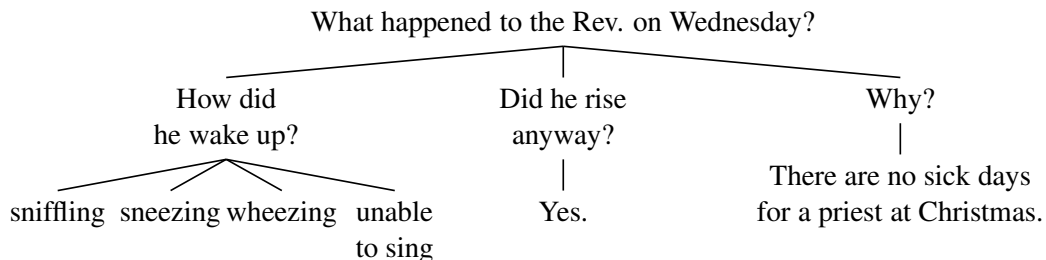
Here, the question of whether the Reverend got out of bed despite being sick is accommodated. While it is possible that the first sentence facilitates the accommodation of other questions as well, it is clear that the question of whether he rose is (a) a natural follow-up to his waking up sick, and (b) arises immediately after the assertion of the first sentence. The speaker, therefore, is not bypassing a more immediate QUD to answer this question with the VPP-sentence.

I conclude, therefore, that the constraint on which QUDs can be antecedents for VPP-sentences is slightly more complex than it appeared in the previous chapter. In-

---

[8]Subject, probably, to cognitive constraints preventing assertions from answering a question that was raised several hours/paragraphs/etc. previously.

stead, we must say that a VPP-sentence may not address the most salient *linguistically raised* QUD. Given sufficient pragmatic support, an antecedent QUD may be accommodated and immediately addressed by a VPP-sentence.

It seems likely that the default structure of the overall discourse is compatible with a stack-based model. VPP-sentences represent a deviation from the restrictions imposed by a strict stack by bypassing the most recent question(s). The marked word order coincides with the marked discourse strategy. The preposed *v*P signals to the hearer that the speaker intends to address a polar question that has not yet been answered; the content of the *v*P points to exactly which polar question that is.

This correlation between syntactic and discourse-strategic markedness leads us to expect that there are other syntactic constructions that signal other types of departures from the canonical discourse organization. Just as VPP addresses a polar question raised in the prior discourse, we might expect to find another non-canonical construction that addresses a constituent question raised in the prior discourse. Whether such constructions exist remains a matter for future research.

4.4 The emphatic interpretation

Many of the VPP-sentences discussed above have an emphatic interpretation. For example, the most natural interpretation of the VPP-sentence in (4.27) is that the anti-Bush protesters *really* expressed themselves—they expressed themselves so loudly and unorthodoxly that the Gore campaign wanted nothing to do with them.

(4.27)   Sure, she said, she considered something dignified and quiet, like the silent vigil her group had organized on the night of the Supreme Court's decision last week. But that just got drowned out by the noisemakers from the other side. "The Bush people were yelling and screaming and chanting," Lenard said horsely, popping a throat lozenge into her mouth. "We decided we needed to get out there and **express ourselves**."

And express themselves they did.

"Help me, Daddy Bush!" Paul Vasquez, Florida field director for the AFL-CIO, shouted through a bullhorn. "I need you, Daddy," someone yelped back in a refrain. "Oh, Daddy!" A Gore campaign spokesman, Dough Hattaway, said the protesters were independent of the campaign and the party.

Ward (1990) refers to this emphatic interpretation as "scalar affirmation"—a third discourse function of VPP, distinct from both independent proposition affirmation and concessive affirmation. Under Ward's analysis, the predicate is construed as a scale upon which the subject is assigned a high value. In (4.28), for example, the idea is that the riders rank highly on some contextually determined scale of mud-hitting. The scale is contributed by the predicate *hit mud*, and the preposing causes the hearer to rank the subject high on that scale, concluding that the riders hit an extraordinarily large amount of mud.

(4.28) Led by police cars with flashing lights and trailed by other vehicles and more police, the seven cyclists were carefully watched for about the first three weeks of their journey [across the Soviet Union]. Neither the Soviets nor the Americans knew how to get rid of the police "shadows." "**They stopped when we hit the mud**," Jenkins said.
And hit mud they did. And swamps. And paths so small they could barely be followed.

(Ward 1990, (15))

It is clear from examples like this that the standard for what it means to rank highly on a given scale is contextually determined. The amount of mud that counts as an extraordinary amount might be higher on a cross-country ride than for a six-year-old just learning to cycle. But note also that the type of scale given by the predicate must also be contextually determined. That is, while the scale contributed by the VP *hit mud* is related to the amount of mud, it is not the case that the scale associated with every (transitive) predicate involves a large measurement of the object. A long list of examples is given in (4.29–4.34) below; these examples have been chosen to illustrate the variety of ways a relevant scale can be determined. When examined closely, the

scales are quite diverse. The most natural interpretation of (4.29), for example, is that the predicate holds for an extraordinarily long amount of time (*i.e.*, Franklin gives a wide-ranging interview). The example in (4.30) is more about the extent described by the verb *rise*: Engskov began with a very low-status job and ended up with a prestigious position, making his net rise extraordinarily large. The context before the VPP-sentence in (4.31) makes clear that the predicate was true on many distinct occasions: Every time the Sonics had the opportunity to run, they ran. Notice that this example cannot mean that they ran for a long time (a basketball possession is generally very short) or that they ran a long distance (they can run at most the 94 feet of the court at a time); the only possible interpretation is that they ran small amounts extraordinarily often within a short amount of time. The example in (4.32) similarly concerns distinct events. In this case, the subject (Newsome) participated in extraordinarily many (football-) catching events. The time span is not particularly relevant here, just the fact that he caught many more passes than would be expected of a tight end.

(4.29)   DURATION
"Is this for radio?" she asks. When told the interview is for a newspaper, she relaxes her voice—no need to sound peppy and perfect—and says, "This is good. **I can lay down to talk**."
And <u>talk</u> she does.
When you're the reigning queen of gospel, a 61-year-old dynamo who delivers the truth as song, you've got stories to tell. Like the time she sang for Bob Dylan at the Kennedy Center Honors. The rock legend insisted she attend or else he wouldn't bother showing up. "Well, Bob is crazy," she says with affection.

(4.30)   EXTENT
Bottom was seven years ago, when Engskov and a friend drove from Arkansas to the nation's capital without money or jobs, and on the hunt for both. Bottom was being holed up in a $35-a-night motel in a big, strange city, and being "scared to death." But without a bottom, **there's nowhere to rise**.
And <u>rise</u> he did, from volunteer staff at the White House to trip coordinator in the travel office, to the president's aide and assistant press secretary.
Engskov's job was to make sure the president was reading from the right script. In fact, he would walk up to the dias, glance down at the president's

speech and place it on the lectern before Clinton rose to speak. Tall and rail thin, he was also responsible for tapping the president on the shoulder to let him know it was time to go, and for acting as chief gatekeeper outside the Oval Office. His closeness to Clinton was enough to trap him into two appearances before the grand jury investigating the president's relationship with former intern Monica S. Lewinsky.

(4.31) FREQUENCY

During a timeout, **Sonics coach George Karl instructed his team to run at every opportunity**—it was their only chance.

And <u>run</u> they did.

Before they were done running, they had pulled within two late in the half. Included in their 18-2 run was a stretch of more than five scoreless minutes for the Lakers, who combined cold shooting with poor ball movement. Simply put, it was exactly the right formula for a team behind by 18 points to get back into a game it had no business getting back into.

(4.32) NUMBER OF EVENTS

Even then, all could see that Newsome possessed magnificent hands. Special ones. Newsome knew it too, and so did Bryant, because he always said of Newsome, "**He can catch a BB in the dark**." Let alone footballs.

<u>Catch them</u> he did, in big games at Alabama and then in big ones in the National Football League.

Newsome would play 13 Cleveland Browns seasons, catch more passes (662) than any other tight end in pro football history, play in 198 professional games and become a Browns team captain in a career that ended in 1990. At 6 feet 2 inches and 225 pounds, he helped reinvent the position by showing how tight ends could not only block but also catch the ball frequently and as a deep threat.

(4.33) NUMBER OF SUBJECTS

Companies raced to sell shares and take advantage of a stock market that surged this year, sending the benchmark Standard & Poor's 500 index up 34 percent. Demand for new shares was also fueled by a shrinkage in the numbers of shares available to the public caused by a record number of companies buying back stocks and a record year for mergers and acquisitions. Meanwhile, billions of dollars poured into the marked from baby boomers starting to sock away cash for retirement. "**That's a pretty good stage on which to tap dance no matter what you are selling**," said Dick Smith, managing director and new issues specialist at Montgomery Securities, in San Francisco.

And <u>sell</u> they did.

So far this year, 541 companies sold stock to the public for the first time, second only to 1993 when 666 companies sold stock for the first time to raise $34 billion, according to Securities Data Corp. Among this year's most stunning IPOs was that of Netscape. Sold to investors in August for 28 a share, it first

traded at 71. The shares later rose to 174, as frenzied investors placed huge wagers on a company they hoped would dominate the worldwide computer network, or Internet.

(4.34) GENERAL EMPHASIS

"The economy is going to pick up an interest rates are going to go higher. And the market can't handle that." Still, for the session, **the attitude was "Buy 'em,"** as Alfred Goldman, a market strategist at A.G. Edwards Inc. in St. Louis, headlined a fax sent out yesterday.

And <u>buy</u> they did.

Of the Dow's 30 component stocks, 29 gained Tuesday, led by Proctor & Gamble, up 4 a share, to 138; J.P. Morgan, up 4 5/16, to 111 13/16; Merck, up 3, to 95 11/16; and GE, up 3 to 66 3/16. U.S. stocks had their best day since the start of the Persian Gulf War in 1991, sending the Dow Jones Industrial Average to its biggest point gain ever. Proctor & Gamble Co., J.P. Morgan & Co. and Merck & Co., which have some of the largest market capitaliztions in their industries, led the gains, sending the 30-stock average up 257.36, or 3.37 percent, to 7879.78.

The examples in (4.33) and (4.34) go beyond Ward's characterization of scalar emphasis in interesting ways. In these cases in particular, the predicate cannot be interpreted as a scale on which the subject ranks highly. In (4.33), no extraordinarily large amount of selling can be attributed to any one company. Instead, an extraordinarily large number of companies each sold a reasonable amount of stock. So the scale here is not contributed by the predicate, as it cannot be evaluated without reference to the subject.

The example in (4.34) poses a more vexing challenge. Here, no one person or group did a lot of buying, nor did the buying take place for a long time, with great frequency, or on a large number of occasions. Instead, there seems to have simply been a great buying frenzy, a general enthusiasm for buying, or perhaps a great number of buying events. It is not at all clear what the scale might be in such an example, not to mention how the subject could rank highly on a predicate-based scale.

Because it is not always clear what the relevant scale is or how it can be determined by the context, I will refer to this property of VPP-sentences as "emphasis" rather than

165

"scalarity". The important point here is that there is some meaning component involved in the interpretation of VPP that conveys a sense of emphasis or extraordinariness.

As mentioned above, Ward (1990) treats this emphatic interpretation as a distinct function of VPP. The primary consequence of such an analysis is that the context determines whether a given VPP-sentence is emphatic or not. That is, the VPP-sentence either independently affirms a given proposition, concessively affirms it, or affirms the proposition and its scalarity, depending on the relevance of these interpretations. In different contexts, the same VPP-sentence can be interpreted as emphatic or not, as shown in the example in (4.35). The (attested) context after the VPP-sentence in (a) makes clear that the VPP-sentence itself should not be interpreted emphatically: The Cowboys won the game, but it was not a particularly impressive victory. By contrast, the context in (b) leads to an interpretation that is emphatic: Not only did the Cowboys win, but they did so in spectacular fashion.

(4.35)   a. "I don't want to get too foaming at the mouth over winning this game," [Jerry Jones, the Dallas Cowboys' owner] said. "We should beat the Giants here at home with as much at stake as we got with the players that we got. **We should beat them**."
And beat them the Cowboys did.
But this was not a stunning loss by the Giants.

       b. "I don't want to get too foaming at the mouth over winning this game," [Jerry Jones, the Dallas Cowboys' owner] said. "We should beat the Giants here at home with as much at stake as we got with the players that we got. **We should beat them**."
And beat them the Cowboys did.
This was a stunning loss by the Giants.

Note that the emphasis here does not arise just from the fact that the VPP-sentence is contributing new information beyond what is likely given the preceding modalized antecedent. A canonical-order VF sentence would contribute the same kind of information, but the emphatic interpretation is not available with canonical-order auxiliary focus (*cf. And the Cowboys* DID *beat them* in the context above).

The context-dependence of the availability of the emphatic interpretation is a strong indication that emphasis is not part of inherent semantics of VPP-sentences, but is rather a pragmatic contribution that is not available in canonical-order VF clauses. In the remainder of this section, I discuss the source of this emphatic interpretation and where we find it outside of the realm of VPP.

4.4.1 The emphatic interpretation is not part of the at-issue meaning

Because the emphatic interpretation is a pragmatic component of the meaning of VPP, it is tempting to analyze it as a Gricean implicature. Indeed, Ward (1990) claims that scalar affirmation results from a quantity implicature. The implicature comes about when the speaker makes a "prima facie redundant" assertion; the Gricean reasoning goes that the speaker must have intended to convey some non-redundant meaning. Emphasis is apparently available as a non-redundant meaning component, and the hearer concludes that the speaker intended to convey additional emphasis.

This particular implementation of emphasis-as-implicature faces two challenges. First, it is not clear why preposing should lead to emphasis under this approach. The emphatic interpretation would not be a property of preposing itself, so nothing about VPP in particular would lead directly to an emphatic interpretation. A second problem is that the analysis predicts that the emphatic interpretation should be available in all and only those cases where the VPP-sentence re-asserts previously asserted linguistic material. This is not the case: It is both possible to have an emphatic interpretation when the proposition expressed by the VPP-sentence has not previously been asserted (4.36a) and to have no emphatic interpretation when the VPP-sentence's proposition has been asserted (4.36b):

(4.36) a. Miller said she was fielding offers from a variety of organizations, including philanthropic groups. Miller expressed no sorrow for investors who had bought Priceline's stock on her arrival, having interpreted her move as a buy recommendation from a savvy Wall Street veteran. "Investment decisions are different from career decisions," she said, adding that she was motivated not by the lure of internet stock options, but by "personal decisions about what I wanted **to learn**."

And <u>learn</u> she did, about electronic commerce and about building a consumer brand, Miller said.

But she said she also found that dot-com enterprises are not all that different from more traditional corporations. In particular, Miller said, she no longer believed that the new economy was any more hospitable to women executives than the old one. Shortly after she left Citigroup, Miller said of her experience there: "I know I've had a very good run, but that doesn't excuse what I know to be real bias." At the time, she said she expected a start-up like Priceline would be a better place for women to flourish.

b. He doesn't mean it's sad like "Love Story" is sad. He doesn't mean it's a bummer like a bad boss is a bummer, or a root canal, or a blown transmission. He means it's a stinking, snarling, slobbering beast that'll rip your heart out, stomp it in the ground, and then scarf it like a starving dog. He means it's pain that permeates everything, a pit where **the sun seldom shines**.

But <u>shine</u> it does, every once in a while, and the practical man caught a ray last week.

Monday night at 6. The practical man whipped into his ex-wife's driveway to pick up the kids. His hopes weren't high, for his 8-year-old daughter at 12-year-old son are still ticked off a tad because the old man left home. Hence the happy conversation when they got in the car.

Under the analysis presented above, in which verum focus is the core semantic meaning of VPP, the reasoning behind the (manner) implicature would be as follows: If the speaker wanted to convey only verum focus, she could have used auxiliary focus in the canonical word order. Preposing the *v*P introduces additional complexity, which signals to the hearer that the speaker intends to convey additional meaning. While it is still not entirely clear how this additional meaning would be identified with emphasis, the verum focus analysis of VPP leads to a sensible interpretation of implicature cancelation. The emphatic interpretation can in fact be called off by contexts that make

clear that emphasis was not intended. When such cancelation occurs, the basic verum focus interpretation remains. The example in (4.37) illustrates this. The (attested) continuation in (4.37a) is compatible with the emphatic interpretation. The continuation in (4.37b) is not, effectively canceling the implicature. When the emphatic interpretation is not available, the most natural interpretation of the VPP-sentence is as simple verum focus. While the (a) example means that Zevin's rudeness had a big payout, with a large number of free items, the (b) example means only that Zevin got some benefit— in this case, the minimum compensation that any restaurant-goer with a problem might receive.

(4.37)   Most of the people whose incivility made this story—at least those who can read—will surely say something like, "yeah, so?" Regardless, one story in the group is a must-read. It is "Rude Awakening," in which self-proclaimed civilian Dan Zevin and a friend bully their way through an evening at one of Boston's finer restaurants. The idea is to be rude, annoying, even mean, to feel what it's like to deliver such punishment, and to see whether **it pays**.
   a.   And, according to Zevin, <u>pay</u> it does: They got lobster terrine and crème brûlée for free, and other items knocked off the check.
   b.   And, according to Zevin, <u>pay</u> it does: They got coffee for free.

Further support for the implicature analysis comes from the fact that the implicature is harder to cancel when the VPP-sentence's propositional content is entailed by the preceding context. This makes sense if, without the emphatic interpretation, the VPP-sentence would be infelicitously redundant:

(4.38)   Mertz isn't the only person who heads a workplace where employees know they're valued. Fortunately, there are other great places to work. But this is Mertz's story about **attracting and keeping workers at the promotional products supply company that has about 140 employees**.
   a.   And <u>keep them</u> he does. TradeNet's annual turnover rate is about 5 percent—far below the manufacturing and printing industry standard of 10 percent to 15 percent. Hardly anyone leaves by choice. Most of the few departees are asked to leave because they fail to measure up to perfomance standards. There's also a waiting list of people who want to work there.

b. # And <u>keep them he does</u>. TradeNet's annual turnover rate is about 12 percent—squarely within the manufacturing and printing industry standard of 10 percent to 15 percent.

The idea here would be that contexts that are compatible only with the verum focus interpretation, like (4.38b), are infelicitous because their propositional content has already been asserted. Since we already know that Mertz keeps workers at his company, it is redundant for the speaker to restate that information. Thus, only the emphatic interpretation, which adds additional information, is licit when the propositional content of the VPP-sentence is already in the common ground.

While analyzing the emphatic interpretation as an implicature makes some welcome predictions, it does not account for the distribution of such interpretations. Remember that there is not a one-to-one correspondence between whether the propositional content of the VPP-sentence has been asserted and whether the emphatic interpretation is available. Further, the version of the implicature analysis that is compatible with the verum focus analysis of VPP predicts that, in general, sentences with verum focus cannot be uttered felicitously if their propositional content has been asserted. (4.38b) is infelicitous precisely because the verum focus interpretation is incompatible with a context in which the participants agree that Mertz keeps his employees. This is not generally the case, however, as (4.39) shows:[9]

(4.39)   A: Sophie took a tour of Europe last summer. She went to London and Paris, and then she drove all around Italy.
         B: She DID go to Italy last summer, She's never been to London or Paris, though.

In addition to the fact that sentences with verum focus are not generally redundant in cases where their propositional content has been established, there remains a ques-

---

[9]This example is slightly different from the canonical-order verum focus examples discussed in the preceding chapter because it is difficult to exclude a contrastive topic analysis. The crucial point—that verum focus is not generally ruled out if it adds no new information—remains.

tion of what would derive an emphatic implicature in particular. I therefore reject the implicature analysis. In the next section, I present an alternative that is not subject to the problems an implicature-based analysis faces. In particular, the analysis I will propose reduces the emphatic interpretation in VPP to an intonational contour that is independently attested in canonical-order sentences.

4.5   The role of intonation

The type of emphatic interpretation discussed for VPP-sentences above is not limited to inverted word orders. The same kind of emphatic interpretation is available when a main verb is repeated in the canonical word order:

(4.40)   When they produce, they **PRODUCE**.

In this example, the bold small caps are intended to represent an intonational pattern that is both different from and more complex than the normal intonational focus—in the ToBI system for prosodic transcription (Silverman et al., 1992), a LH*H% contour. Emphasis in the canonical order is interpreted very similarly to emphasis in VPP: the most natural interpretation of the second clause in (4.40) is that when the people in question are engaged in producing, an extraordinary amount of production occurs.

Where there is sufficient contextual support, emphasis is also possible in the absence of verb repetition:

(4.41)   How much is a life worth? Merely posing the question offends most people. But they **ANSWER** it.

This example is most naturally interpreted as meaning that people provide extraordinarily thorough or loquacious answers to the relevant question.

Like in the VPP cases, the emphatic interpretation may be called off if the following context does not support it:

(4.42) a. When the fascination with disaster sells magazines, it **SELLS** them. The October 1996 cover of *Outside* magazine featuring Jon Krakauer's piece about deaths on Mt. Everest sold 150,000 copies on the newsstand, compared with an average of about 80,000.

      b. When the fascination with disaster sells magazines, it SELLS them. But often such long-hyped articles fall flat at the newsstand.

In the canonical order, it is clear that the emphatic interpretation may be accompanied by a particular intonational contour. More concretely, the verb in a sentence like the one in (4.40) may bear a LH*H% contour. In the canonical order, the intonation is optional, and an emphatic continuation is also compatible with default intonation:

(4.43) Rancher-turned-congressman Richard Pombo had a clear mission as he led his task force across the South and West this spring: find people who have been hurt by the Endangered Species Act, America's most uncompromising environmental law, and let them talk.

      a. And they **TALKED**.

      b. And they talked.

From loggers who blame the loss of their jobs on the spotted owl to Louisiana shrimpers who see a rare turtle as a threat to their livelihood, Pombo's panel tapped into anger at a law so strong that it can stop a major dam project to save a fish. At one hearing in California, the crowd got so ornery that they booed elementary schoolchildren who spoke in support of the act.

Both of the canonical-order sentences in this context are compatible with an interpretation under which people did an extraordinarily large amount of talking about the Endangered Species Act. The intonationally neutral (4.43b) does not convey the emphatic information on its own, but neither does it exclude emphasis. The LH*H% contour on *talked* in (4.43a), however, contributes the emphatic meaning and is in fact not compatible with a verum-focus-like interpretation. Consider the minimally different (4.44):

(4.44) There's little interest in programming. The devices necessary are expensive and hard to find (digital set-top boxes sell for around $800 and up). And few consumers are interested. "All three (price, technology and consumer interest) have to come together for interactive communications to take off," Reddersen says.

   a.   # But they'll **COME TOGETHER**, Reddersen thinks.

   b.   But they'll come together, Reddersen thinks.

He looks at VCRs as a model. "Fifteen years ago, there was little you could do with your VCR other than tape TV shows," he explains. Now there's a vast array of uses, from watching movies to teaching yourself French. What happened?

The context here supports only a verum focus interpretation—either the three relevant factors will come together or they won't. Such a context is compatible with the intonationally neutral sentence in (4.40b), but the intonational contour in (4.40a) contributes emphasis that isn't supported by the context. The complex intonation is therefore infelicitous.

The same two intonational options are available for VPP-sentences, with similar interpretive effects. The preposed verbs in VPP-sentences that have verum focus interpretations bear at most a H* pitch accent:

(4.45)   The communists were coming on strong; they would dominate the parliamentary elections in December. His approval rating was 8 percent. He suffered a serious heart attack. American intelligence services were quietly saying **he couldn't survive without open-heart surgery**.

   a.   But <u>survive</u> he did.

   b.   # But <u>**SURVIVE**</u> he did.

And the question now is whether Yeltsin's apparent new life is any less evanescent than his near death. Even in Moscow, where there are probably more definitive opinions per capita than in any other city on earth, bemused shrugs are the current fashion. The coming election is considered too close to call.

The antecedent for the VPP-sentence in this case is the question of whether Yeltsin would survive. The VPP-sentence answers that question affirmatively, and there is no room for an emphatic interpretation—it is not the case that he survived for an extraordinarily long time, for example. Because the emphatic interpretation is impossible, so is the emphatic intonation. The more neutral intonation is compatible with the verum focus interpretation.

Conversely, when the context supports only an emphatic interpretation (and not the verum focus interpretation), only the emphatic intonation is possible. An example of this is given in (4.46).

(4.46) "We guarded [Jordan] as well as we can guard him," Van Gundy said. Ron Harper said that before the game, he started to ask Jordan how his back felt, but Jordan stopped him mid-sentence. "I'm fine," Jordan said. "**Let's play**."

 a. # And <u>play</u> he did.
 b. And **PLAY** he did.

By the end of the first quarter, Jordan hat 15 points and the message was clear. Nothing would hinder Jordan—not his back, and certainly not the Knicks.

The VPP-sentence in this example cannot be interpreted as meaning that Jordan did in fact get into the game. Instead, the natural interpretation is that he played extraordinarily well. This interpretation cannot be conveyed by the intonationally neutral VPP-sentence; it is compatible only with the emphatic intonation. There is therefore a strict correlation between the interpretation of the VPP-sentence and its intonation. Semantically, the VPP-sentence expresses verum focus; pragmatic emphasis is contributed by intonation.

The overall pattern that emerges is illustrated in (4.47) below. Emphatic contexts (a, c) require the emphatic intonational contour; verum focus contexts (b, d) require the neutral intonation.

(4.47) "I am starting at the bottom again," he said. Bottom was seven years ago, when Engskov and a friend drove from Arkansas to the nation's capital without money or jobs, and on the hunt for both. Bottom was being holed up in a $35-a-night-motel in a big, strange city and being "scared to death." But without a bottom, there's nowhere **to rise**.

 a. And **RISE** he did, from volunteer staff at the White House to trip coordinator in the travel office to the President's aide and assistant press secretary.
 b. And <u>rise</u> he did, from volunteer staff at the White House to a paid job doing the same thing.

c. # And **RISE** he did, from volunteer staff at the White House to a paid job doing the same thing.

d. # And <u>rise</u> he did, from volunteer staff at the White House to trip coordinator in the travel office to the President's aide and assistant press secretary.

The important thing to notice about this pattern is that the intonation is a crucial determinant of the felicity of a given VPP-sentence. That is, the appropriateness of a given VPP-sentence cannot be determined by the context alone.

Again, canonical order sentences show a slightly different pattern in that the neutral intonation is more flexible. In the canonical order, the neutral intonation is compatible with a scalar context:

(4.48) "I am starting at the bottom again," he said. Bottom was seven years ago, when Engskov and a friend drove from Arkansas to the nation's capital without money or jobs, and on the hunt for both. Bottom was being holed up in a $35-a-night-motel in a big, strange city and being "scared to death." But without a bottom, there's nowhere to rise.

a. And he **ROSE**—from volunteer staff at the White House to trip coordinator in the travel office to the President's aide and assistant press secretary.

b. And he rose from volunteer staff at the White House to a paid job doing the same thing.

c. # And he **ROSE**—from volunteer staff at the White House to a paid job doing the same thing.

d. And he rose from volunteer staff at the White House to trip coordinator in the travel office to the President's aide and assistant press secretary.

From these patterns, it is possible to conclude that the emphatic interpretation of VPP comes from the intonational contour. This intonational pattern is independently attested in the canonical order and, crucially, has the same interpretive effect independent of preposing. This interpretation, then, is not an idiosyncratic property of VPP.

175

4.6   Conclusion

This chapter has discussed two pragmatic properties of VPP that distinguish it from canonical-order VF. The first of these is the obligatory topic-shift nature of VPP. I formalized this restriction by requiring that VPP answer a question that is not the most salient question in the discourse (*i.e.*, not the topmost question on the QUD stack). This property of VPP led us to a particular means of structuring the discourse, one which cannot rely on a strict first-in, last-out stack.

The second important pragmatic property of VPP is the optional emphatic interpretation that is associated with it. *Contra* previous work, I have argued that this "scalar" emphasis is not a distinct discourse function of VPP. I have shown that the emphasis is independent of VF both in its optionality in VPP-sentences and in the fact that it is possible in canonical-order constructions. VF, in turn, is independent of preposing. The crux of the analysis presented here is that the three components—emphasis, VF, and preposing—come together in a compositional way. This means that what appears on the surface to be a complex constellation of pragmatic properties is derived from a few simple ones.

The preposing involved in VPP contributes topicalization, which is a natural place for repetition. Because it is a strategy for re-referencing a less salient QUD, the result is a shift in topic. Polarity is always focus-marked in the syntax, resulting in VF, and the focus accent is realized on the stranded auxilary. Finally, there is an additional, optional intonational contour that contributes the emphatic component of the meaning of VPP.

At this point, several questions remain unanswered. First, why do these properties in particular come together so frequently and so naturally? A second, empirical question is whether speakers distinguish the two interpretations of VPP as the discourse

unfolds. Do speakers have access to the fact that the interpretations are distinct? If so, how do they utilize this distinction?

The more vexing set of questions, however, corresponds to the relationship(s) between the different components of VPP. How exactly does syntactic movement cause topic shift? What is the relationship between *v*P movement and F-marking? (For example, why is it not possible for the subject to be F-marked in VPP? Questions like these provide the basis for the discussion of the relationship between syntax and information structure in the next chapter.

4.A The information structure of postverbal material

As mentioned in Chapter 3, much of the existing work on the syntax of VPP has focused on the possibility of stranding *v*P-internal material at the end of the sentence. This body of work has not investigated the properties of VPP istself; rather, it has used VPP as a tool to diagnose processes of structure-building and movement. Some of the more widely discussed examples are reproduced below:

(4.49)   John intended **to give candy to children in libraries on weekends**, and
  a. <u>give candy to children in libraries on weekends</u> he did.
  b. <u>give candy to children in libraries</u> he did on weekends.
  c. <u>give candy to children</u> he did in libraries on weekends.

  (Lechner, 2003, (4))

(4.50)   a. John said **he would give books to them**,
     and <u>give books to them</u> he did on each other's birthdays.
  b. Mary said **she would congratulate every boy**,
     and <u>congratulate every boy</u> she did at his graduation.
  c. John said **he would read every book**,
     and <u>read every book</u> he did at breakneck speed.   (Phillips, 2003, (35))

I and the other speakers I have consulted find such examples ungrammatical without a significant intonational break between the auxiliary and the stranded material.

And indeed, no examples of this type, containing *v*P-internal material appearing after the auxiliary, appear in the corpus. All of the examples in which the auxiliary is not sentence-final involve longer, plausibly extraposed material. All such examples are given at the end of this Appendix.[10]

There is, however, a class of examples with stranded sentence-final material that all speakers agree is grammatical. The constructed example in (4.51) illustrates:[11]

(4.51)　She was required **to submit her thesis by 5 p.m. on Friday**, and <u>submit it</u> she did, at 4:59.

Here, the stranded material is not strictly part of the antecedent, nor does it contribute to answering the question of whether she submitted her thesis as required. Rather, the sentence final *at 4:59* answers a subquestion of the QUD answered by the VPP-sentence: Given that she submitted the thesis by 5 p.m., when did she submit it? Two obersvations are relevant here. First, because this additional information does not contribute to answering the polar antecedent, it is odd to include it in the preposed *v*P:

(4.52)　# She was required **to submit her thesis by 5 p.m. on Friday**, and <u>submit it at 4:59</u> she did.

Second, stranding is less felicitous when there is only a tenuous relationship between the question answered by the VPP-sentence and the question answered by the stranded material. Whether she submitted her thesis exactly at the deadline is more relevant than whether she submitted it in the morning to the question of whether she submitted it at all; this difference is reflected in the degraded felicity of (4.53):

---

[10]This list does not include examples like (10) that attribute the VPP-clause to another speaker or examples like (10) that are followed by a second, conjoined clause.

  (i)　But <u>answer it</u> they must and <u>answer it</u> they do, saysKip Viscusi, an economist at Duke University.

  (ii)　But <u>warm up</u> they did, and after a local election gave him the go-ahead, Wager signed a deal in 1995 with tribal leader larry Snake.

[11]Thanks to Colin Phillips for helpful discussion of this point.

(4.53)   #? She was required **to submit her thesis by 5 p.m. on Friday**, and <u>submit it</u> she did, at 11:59 a.m.

The degredation is exacerbated if there is no clear relation between the two questions at all. While the length of her thesis might be interesting, it has little to do with whether she submitted it. Thus, (4.54) is even less felicitous than (4.53).

(4.54)   # She was required **to submit her thesis by 5 p.m. on Friday**, and <u>submit it she did</u>, with 250 pages.

The corpus contains only one example in which the auxiliary and the stranded material are not separated by a comma. Even in this example, however, the stranded material is not *v*P-internal, and is not part of the proposition that is affirmed with VPP's VF:

(4.55)   Now that Eddie the D and the D-Ettes (Carmen Policy, Willie Brown and associate wizards) have played the ace, though, they really have no choice but to play it al the way. If they win on June 3 (which no matter what poll you might have read is still a possibility), then the entire point is moot. The brilliant financial plan with the side order of blackmail will have done its work, and the populi will have voxed. But if the 49ers lose (which no matter what newspaper story, television feature or radio chat fiend blatherama you notice is still more of a possibility), then **they should go**.
They can cry, or shake their fists, or kick Jack Davis' party organizers down an elevator shaft, but <u>go they should</u> all the same.
Because plainly San Francisco isn't meant to enjoy their sun-king-like brilliance. Because Los Angeles is a much better place to do business (ask Al Davis). Because Cleveland has a richer football tradition (ask Art Modell). Because Houston has a larger population (ask Bud Adams).

I conclude, therefore, that post-auxiliary material can appear only when it answers a salient subquestion of the question answered by the VPP-sentence (without the stranded material).

4.A.1   Corpus examples with postverbal material

(4.56)   Nathan Hale, the Yale-educated patriot hanged by the British in 1776 for syping, said he had but one life to lose for his country. The Yale Club in midtown

Manhattan, where Old Blues hang out after bellying up to the bar and ordering tumblers of Johnnie Walker Black with the rocks on the side, had but one Nathan Hale statue **to lose**.

Lose it it did, sometime between midnight and 6:50 a.m. last Saturday.

The Yale Club employees who told the police it was missing from its second-floor alcove no doubt had a sense that, like a game-winning come-from-behind touchdown against Dartmouth, something similar had happened before. And in fact, this was not the first time the statue has been stole. The last time, said a police spokesman, Detective Joseph Gallagher, it was returned and the incident was writen off as a prank. "Who steals it, people from Princeton?"

(4.57) "For some period of time, the term March Madness has been associated with us," said Jack Waters, the director of licensing for the NCAA, based in Overland Park, Kan. "The Illinois high school people have used it for a number of years, too. "A little March madness may complement and contribute to sanity and help keep society on an even keel." By 1942, an erstwhile poet named H.V. Porter wrote of the Illinois state tournament, "A sharp-shooting mite is king tonight/**The Madness of March is running**."

And <u>run</u> it does, with every school in Illinois automatically entered into the tournament.

The girls' tournament for 641 schools ended Saturday and the boys' Class A for 431 schools ends next Saturday and the boys' Class AA for 290 schools ends a week from Saturday. The NCAA tournament did not begin until 1939, and was clearly second to the National Invitational Tournament in New York until the mid-1950s. The NCAA eventually became territorial, running its event at the same time as the NIT and enlisting conference champions. Nobody linked March and madness even when Oscar Robertson, Bill Bradley and Lew Alcindor were playing in it.

(4.58) About 50 demonstrators camped overnight, and police reported no trouble. Five arrests were made, all for misdemeanors. In this major battle in a 30-year war about race, class and opportunity, the regents were in a somber mood. "We're here our **listening** skills," said the board chairman, Clair Burgener, a former congressman and, like most of the regents, a Republican.

<u>Listen</u> they did, to a multicultural chorus of witnesses.

John Vasconcellos, a longtime liberal legislator from San Jose, describing himself as "a white man raised to believe we are one people," urged delay. "If you vote 16-10 or 13-12, you'll mirror the state's division. Don't rush to judgment. Take your time," he said.

(4.59) The fat lady over at the Resolution Trust Corp. is getting ready to sing. On Dec. 31, RTC goes dark after a six-year run during whch its mission was **to liquidate assets held by insolvent lenders caught up in the nation's savings and loan association scandal of the late 1980s**.

And liquidate it did, auctioning off billions of dollars worth of real estate and other assets, sometimes at fire sale prices, to everyone from mom 'n' pop investors to multimillion-dollar syndicates.

Now, for its grand finale, RTC will offer investors their final major chance to pick up agency assests—this time nonperforming and performing loans during a three-day sale in december. "This auction will be the last opportunity for investors to purches RTC loan assets at a major auction event before the agency 'sunsets' at the end of the year," said John E. Ryan, the agency acting chief executive officer. The loans have a book value of approximately $700 million. There are 6,100 loans that are grouped into 390 packages ranging in book value from $100,000 to $22 million.

(4.60) That balance helped Landers—given name: Eppie Lederer—win a contest in 1955 to replace the reall Ann, a nurse-turned-columnist who died. "I was new in town, and I had friends at the Sun-Times who said I should enter," recalls Never Had a Paid Job, who switched to the Chicago Tribune in 1987. "I thought, 'By golly, **I can do this**.'"
And do it she does, on an IBM Selectric.

(4.61) James Roundell, from London, bidding on behalf of a client, purchased Van Gogh's "Interior of a Restaurant" (1887–1888) for $10.3 million, right at Christie's estimate. The painting had belonged to the Danforth family from Rhode Island and had been in private hands for generations. Such multimllion-dollar sales were harder to come by at the contemporary art auctions. But if a painting, drawing or sculpture was well priced, bidders were hungry **to buy it**.
And buy they did, often at brices well above the works' estimates.
Of the two auction hauses, Christie's had a leaner sale with only two paintings selling for more than $1 million. Both ere new to the market. Topping its sale, held on Tuesday night, was Willem de Kooning's "Mailbox," a 1948 gem, which sold to an unidentified American collector bidding by telephone for $3.7 million, above its $3 million high estimate. Christie's sale totaled $15.2 million, in the middle of its $13.2 million-to-$17 million estimate.

(4.62) Leave Gar Montparnasse at 7:50 a.m., read a newspaper, have coffee, watch the fields rocket by, and step out onto the platform at Nantes at 9:59 a.m. I did just that last week to be able to spend a day with Jean-Ernest Sauvion, a wine maker in this town in the vineyards 20 miles southeast of Nantes itself. This is muscadet country, and Sauvion is one of the best-known producers of that pale, invigorating wine. Within minutes after arriving at his estate here, the Chateau du Cleray, I was in a laboratory confronted by 25 examples of Sauvion wines, most of them muscadet. To someone who had been asleep in Paris a few hours earlier, it was a formidable sight.
But taste them we did, reaffirming that muscadet at its best is still one of the most underestimated of the world's fine wines.

To a generation of Americans who came to wine through full-bodied chardonnay, muscadet can seem thin and acidic. But no California chardonnay can enhace a skillfully cooked fish the way a muscadet can. Chardonnay will overwhelm a delicate fish; muscadet is an accompanist, not a rival. The Roman legions introduced vines here some 1,500 years ago.

(4.63) When Bob Dole have his acceptance speech two weeks ago in San Diego, absolutely the worst line in it was the one where he said it doesn't take a village to raise a child—a village, you see, implies "the state" (yes, he actually said that)—what it really takes is a family. Not only was this an egregious misread of Mrs. Clinton's book, it was a pathetically ham-handed piece of rhetoric. (Use of the phrase "the state" should be confined to undergrad poli-sci classes and Newt Gingrich sewing circles). So I was sort of expecting **Mrs. C to respond in her talk last night**.
And <u>respond</u> she did, by pointing out with considerable power and clarity that, to raise a child, it does take a village—a family plus teachers and clergy and businesspeople and local leaders.
It was a statement that had the virtue of being true. It also had the virtue of being something no full-witted Republican could ever disagree with. Indeed, the need for community (as opposed to government) solutions is something that thoughtful Republicans speak to eloquently. But Bob Dole has never been one of them.

(4.64) The Rev. Peter Colapietro woke on Wednesday sniffling, sneezing, wheezing and unable to sing.
But <u>rise</u> he did, since there are no sick days for a priest at Christmas.
There would be hundreds to see at the three morning services at the Roman Catholic Church of the Holy Cross, near the Port Authority Bus Terminal on West 42nd Street, where Colapietro is pastor. Helpers would have to be rousted after a long midnight Mass, and morning phone calls from the lapsed would need fielding. Colapietro, 6 feet 2 and 300 pounds, glided through the rectory like a black-clad iceberg, leaving a trail of coughs on his way to a breakfast of coffee and cigarettes in the kitchen. The Rev. Angel Cruces was there, singing "The First Noel," but it did little to brighten Colapietro's mood.

(4.65) The room was crowded, the tables were laden with coffee and pastry, and the battery of cameras, microphones and tape recorders indicated that a Washington moment was at hand. In this case, it was another stop in the cycle of presidential campaigning that occupies Washington's attention, regardless of how far away Election Day lies. Why else would a first-term Republican senator from Missouri who doesn't wield any special influence in the Capitol's corridors attract so much attention on a cold Monday morning in January? "In the past year, I have traveled across this great country," said Sen. John Ashcroft as he stood before the assemblage, "And what I head about taxes over and over is this: It is time to spell 'reform' **R-E-D-U-C-E**."

182

And <u>reduce it</u> he would, to the tune of $985 billion over five years, with the bulk of the cuts aimed at the middle class.

Anyone hoping to run for president under the Republican banner has to have a tax-reform plan. Supply-sider Ronald Reagan had one. Even deficit hawk Bob Dole in 1996 was nudged into a call for tax cuts. "It's like the litmus test," said David Rehr, a lobbyist and key conservative activist in Republican circles.

(4.66) Ah, desecration for the public benefit. Mancera called the company's choppng-block mode of marketing "product innovation." She offered a splendid assurance that if this were the last game-used Ruth bat left, **the company would not cut it up**. The company's research found that 50 to 100 Ruth bats are still around.

So, <u>chop</u> the company must, as long there is a remaining supply.

"That's how it works sometimes," Mancera said. "It wouldn't matter if there were 5 or 50 Ruth bats left," Ralph said. "They all need to be presered." Upper Deck purchased a Michael Jordan jersey last month for $26,400 and will cut it into 138 swaths to be inserted into card packs.

(4.67) His lips are sealed, by edict of the NBA, so Del Harris couldn't rip his players for a nonchalant practice Thursday. Instead, **the Lakers coach lectured the only people allowed to listen**: reporters.

And <u>lecture he did</u>, apparently in the hope his team reads the morning paper. "It's good to see them there working together… but all in all, I was disappointed with the effort," Harris said after observing voluntary workouts at L.A. Southwest College. "I just think we have to work an awful lot harder than they were working in order to get ourselves ready to play by Feb. 5." NBA teams have been practicing informally since Monday, and the league has lifted its ban on team officials observing sessions. But they still can't talk to players.

(4.68) That could mean crushing a few labor unions or stamping out some annoying government regulation. or it cold mean the kind of far-sighted move that IBM Corp. recently made. IBM said it would stop advertising on any Web site that didn't pledge to respect visitros' privacy. "Our objective is not to cancel advertising," said IBM spokesman John Bukovinsky, "but to get people to comply."

And <u>comply</u> they shall, if they want a slice of IBM's $60-million Web advertising budget.

It's a classic case of a big, powerful mega-corporation throwing its weight around in exactly the right way. At a single stroke, IBM gave every major We site an incentive to do what they should all be doing anyway—looking out for the privacy of Internet users. It's good business for IBM to reach out to Internet-shy sustomers fretful about losing privacy. But it also comes across as a noble deed.

(4.69) Even then, all could see that Newsome possessed magnificent hands. Special ones. Newsome knew it, too, and so did Bryant, because he always said of Newsome, "**He can catch a BB in the dark**." Let alone footballs.

Catch them he did, in big games at Alabama and then in big ones in the National Football League.

Newsome would play 13 Cleveland Browns seasons, catch more passes (662) than any other tight end in pro football history, grab passes in 150 consecutive games, play in 198 professional games and become a Browns team captain in a career that ended in 1990. At 6 feet 2 inches and 22 pounds, he helped reinvent the position by showing how tight ends could not only block but could also catch the ball frequently and as a deep threat. Saturday Newsome—along with Eric Dickerson, Tom Mack, Billy Shaw and Lawrence Taylor—will become enshrined here at the Pro Football Hall of Fame. You get into this places and you've made it.

(4.70) "I like to stay acive," he says. "I keep moving. If you sit too much, time passes too slowly. I like **to work**."

So work he does, every weekday from 9 a.m. to 2 p.m.

He enjoys the company of his co-workers and customers such as yacht captain Mitch Armstrong. "I'm here two or three times a day, and I always look for Bill," Armstrong says. "He's been to my house. He knows my children. We talk about boats and I enjoy listening to his stories."

(4.71) America's CUp fans doubtless would agree that the best story line of any of the last 30 Cups, sailed over 149 years, came in 1987. That's the year Dennis Conner, the frist sailor in history to lose the Cup for the New York Yacht Club, charged down to Fremantle, Australia, **to win it back**.

And win it he did, in the hug style that had come to mark the COnner circus. Lose it big. Win it back bigger. However, he did not win it for New York but for San Diego. So what would be more fitting than Conner, on the 20th anniversary (sort of) of losing the Cup in that excruciating light-air race 7 against Australia II in 1983, winning the America's Cup back for the New York Yacht Club and sending us all back to Newport?

(4.72) That's when the other guys hit Mangy Bill, gang tackling him and dragging him down to the floor in a flood of shouts and curses, a torrent of arms and fists. "**Run**!," they were yelling at the young man. "We can't hold him long!"

And run he did, across the room and out the door to his car.

Cranking it up and floor-boarding it, tires screeming, he careened down the country road and into the night. Monday at the office, when he tried to talk to his friend about what had happened to Mangy Bill, the older man just shook his head. "Better rthat we never mention it," he whispered. "Not now, not ever."

(4.73) "I know we need to deal with greater archiving issues," said Lewis, little Rose's mom. "We just haven't researched what's best. It's our intention to do

that, but we all know what path good intentions can take us down. They're all irreplaceable, littl ebits of her lfe, and I'd really hate **to lose them**," she said of her 300 megabytes of photos—about 214 floppy discs' worth.

Yetlose them she may, if she's not careful.

Unlike conventional photos stuffed into shoeboxes and stashed in the closet, digital pictures won't survive benign neglect. The data that make up a digital photo can be easily lost, corrupted, or simply become obsolete and unreadable. The medium is so new that there is no tried-and-true method for preserving it for decades, much less hundreds of years, say experts dealing with this problem. "I can tell you exactly how to store silver felatin (black-and-white) photos...for the next 50 or 100 years," said Andrew Robb, senior photograph conservator for the Library of Congress in Washington.

(4.74) "I am starting at the bottom again," he said. Bottom was seven years ago, when Engskov and a friend drove from Arkansas to the nation's capital without money or jobs, and on the hunt for both. Bottom was being hold up in a $35-a-night motel in a big, strange city and being "scared to death." But without a bottom, there's nowhere **to rise**.

But rise he did, from volunteer staff at the White House to trip coordinator in the travel office to the president's aide and assistant press secretary. Engskov's job was to make sure the president was reading from the right script. In fact, he would walk up to the dais, glance down at the president's speech and place it on the lectern before Clinton rose to speak. Tall and rail thin, he was also responsible for tapping the president on the shoulder to let him know it was time to go, and for acting as chief gatekeeper outside the Oval Office. His closeness to Clinton was enough to trap him into two appearances before the grand jury investigating the president's relationship with former intern Monica S. Lewinsky.

(4.75) He doesn't mean it's sad like "Love Story" is sad. He doesn't mean it's a bummer like a bad boss is a bummer, or a root canal, or a blown transmission. He means it's a stinking, snarling, slobbering beast that'll rip your heart out, stomp it in the ground and then scarf it like a starving dog. He means it's pain that permeates everything, a pit where **the sun seldom shines**.

But shine it does, every once in a while, and the practical man caught a ray last week.

Monday night at 6. The practical man whipped into his ex-wife's driveway to pick up the kids. His hopes weren't high, for his 8-year-old daughter and 12-year-old son are still ticked off a tad because the old man left home. Hence the happy conversation when they got in the car.

(4.76) Arriving at a Los Angeles photo studio for a long day of interviews and photo shoots, the matriarch of the "Malcolm In The Middle" clan insists that she's not sick—her voice has simply and mysteriously left the building. Later, over lunch, she hoarsely recalls that once she and a friend discussed which sense

185

they would most hate to lose. "The sense of speech," Kaczmarek decided, only to be told that speech is not a sense. "It is for me," she squawks, sipping on her herb tee and willing **her voice to cooperate**.

And <u>cooperate</u> it does, in a wide-ranging conversation that covers her show, naturally her television husband Bryan Cranston "is not hairy at all," she says. "That's yak hair, they glue that on with spirit gum." Her life comes up, too— reaching for a jar of CHeese Whiz, she jokes, "I'm from Wisonsin. My cat is named Velveeta!" The half-zany, half-steely edge that Kaczmarek displays each week in her bravura performance as Lois is more than evident during the photo shoot, as she is put though her paces by an imaginative photographer.

(4.77) Even in that context, Miller's hasty retreat resounded through executive suites, because "Heidi was and is an 'A' player," said Rick Savoir, an executive recruiter who specializes in technology companies at the directorship Search Group in Manhattan. Miller said she was fielding offers from a variety of organizations, including philanthropic groups. Miller expressed no sorrow for investors who had bought Priceline's stock on her arrival, having interpreted her move as a buy recommendation from a savvy Wall Street veteran. "Investment decisions are different from career decisions," she said, adding that she was motivated not by the lure of Internet stock options but by "personal decisions about what I wanted **to learn**."

And <u>learn</u> she did, about electronic commerce and about building a consumer brand, Miller said.

But she said she also found that dot-com enterprises are not all that different from more traditional corporations. In particular, Miller said, she no longer believed that the new economy was any more hospitable to women executives than the old one. Shortly after she left Citigroup, Miller said of her experience there: "I know I've had a very good run, but that doesn't excuse what I know to be real bias." At the time, she said she expected a start-up like Priceline would be a better place for women to flourish.

Chapter 5

Derivational mechanisms

The principal task that remains at this point is to consider in a more detailed way than has been possible so far what the actual mechanisms are which shape the course of derivations in VPP constructions. It will be useful to begin with what was established in Chapter 2 about participle preposing.

5.1 Participle preposing

Recall from Chapter 2 that movement of the preposed participle to SpecTP and (and on to SpecCP) is driven by a discourse-sensitive FAM feature. The FAM feature originates on C and is inherited down the functional projection with T. FAM is bundled with T's EPP property, but not with its φ features. The result is that there are two probes associated with T. The uninterpretable φ features probe and Agree with the DP subject, and FAM probes its c-command domain and attracts the FAM-bearing vP to SpecTP. Because the canonical subject has raised out of vP to SpecPredP before T is merged, the two probes may be active in any order.

5.2 VPP

The situation is somewhat different in VPP. To this point in the discussion, I have shied away from committing to a particular landing site for the preposed vP or, indeed, from taking any position on what the featural motivation for its movement might be.

In at least one important sense, the mechanics of movement are more difficult to work out in the case of VPP than for participle preposing. Namely, while it is the vP that moves, the primary information-structural effect is VF associated with the *in situ* Σ head. The VF-marking is a necessary condition for VPP but not a sufficient one. That is, VF can occur without vP fronting (leading to auxiliary focus in the canonical word order), but vP fronting cannot occur without VF. The question, then is how to ensure that the vP fronting is dependent on F-marking of Σ.

Fortunately, the conception of VF as involving marking narrow focus on the expression of polarity gives us a place to start here. Crucially, F-marking is a syntactic feature (as the discussion in Schwarzschild 1999 makes very clear, for instance). The syntactic face of VF, therefore, is F-marking on the Σ head, and the syntactic object $\Sigma_{[F]}$ can act as the crucial starting point in the chain of syntactic effects that has VPP as its outcome. The question now becomes why VPP is possible only when Σ—and no other constituent—is F-marked. It is possible to imagine steps toward an answer.

The analysis relies on the assumption that G-marking, like F-marking, is a syntactic feature. In this respect, I depart from Schwarzschild's reductionist program. Evidence for this assumption comes from Selkirk (2008), who argues that both F- and G-marking are necessary. She claims that the properties second-occurrence focus, which behaves differently from contrastive focus, result from second-occurrence foci being simultaneously F- and G-marked. (See also Féry and Samek-Lodovici (2006); Tancredi (2016) for arguments that focus and Givenness must be represented separately, though not

necessarily syntactically).

Once we accept that (a) F-marking is syntactic and (b) the second-occurrence foci that are simultaneously F- and G-marked behave differently from F-marked contrastive foci, we reach the conclusion that G-marking, like F-marking, is syntactic. And once those discourse-sensitive features are syntactic characteristics, they should be manipulable by syntactic operations. This is the hypothesis that I pursue here.

For the purposes of VPP, F-marking on Σ implies G-marking on vP in the sense that material that is not F-marked must be Given (Schwarzschild, 1999). Since G-marking must be a syntactic feature (mediating both phonological and semantic-pragmatic effects), and since vP is what raises to the left periphery, it seems plausible that a probe which seeks a local G-marked element is the probe which drives raising of the vP. In this way, we make a principled link between VF and the raising of a vP that must be given.

The question then becomes: On what head does that probe (call it a "G-probe") reside? I will argue that the probe involved in the derivation of VPP is in fact the same G feature that is normally used to mark Given material. The availability of G-probes as drivers of syntactic movement is a natural consequence of the Y model of syntax—as soon as we notice that F- and G-marking influence the interpretation of a sentence, we must locate them in the syntax. And once they are located in the syntax, we expect them to participate in syntactic processes like Agreement (which in turn triggers movement).

This approach differs from the Givenness movement discussed in Kučerová (2007, 2011) in several respects. First, in English, G-driven movement is not obligatory as Givenness movement is in Czech. Second, I assume that G-marking is determined in syntax, before any movement occurs, and is not dependent on satisfaction of a presupposition introduced by a syntactic-semantic operator.[1] Finally, the movement dis-

---

[1]Of course, Rooth's $\sim$ is such an operator. The difference is that $\sim$ is used in the evaluation of focus,

cussed in this dissertation targets specific syntactic positions, again unlike Givenness movement in Slavic languages. This means that it is possible—and, for the sake of simplicity, desirable—to assimilate it to more familiar types of feature-driven movement.
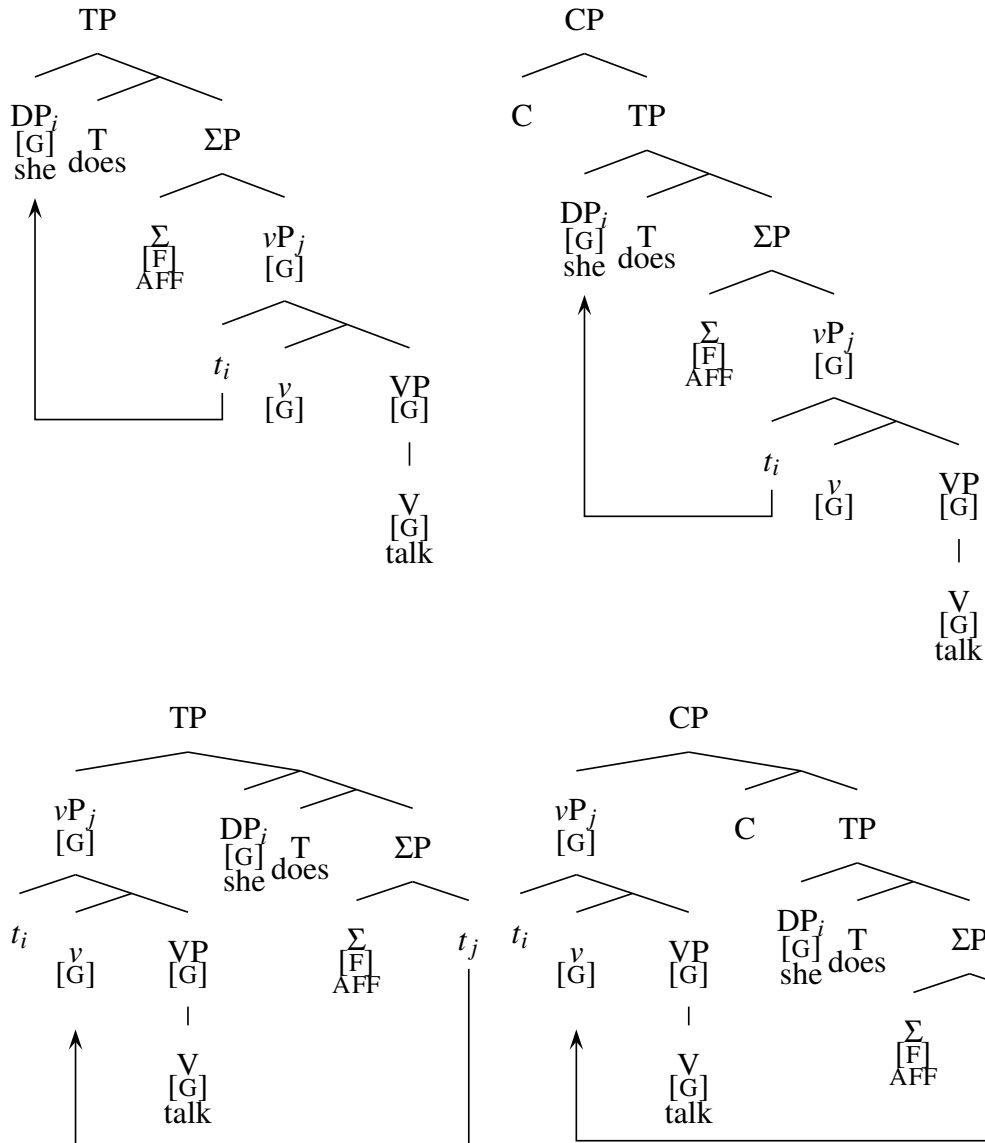
Two versions of such an analysis are presented below. In the first, the G-probe is located on T and attracts the G-marked phrase to a second specifier of TP. In the second, the G-probe is located on C and attracts the G-marked phrase to the specifier of CP. Both possibilities capture the same set of facts, but each requires a different stipulation in order to make the full range of desired predictions.

The T analysis (shown in the left column of (5.1)) involves two movement processes triggered by features of T. First, as in the canonical word order, T is responsible for movement of the subject to its specifier. This is accomplished by a φ probe associated with an EPP property. What differentiates VPP from the canonical word order is the presence of an additional probe associated with T. In the case of the second probe, T searches for a G-marked phrase. This given constituent is displaced, so the G-probe must also be associated with an EPP property. If this probe of T targets a discourse-given constuent, the closest moveable constituent will always be the vP.
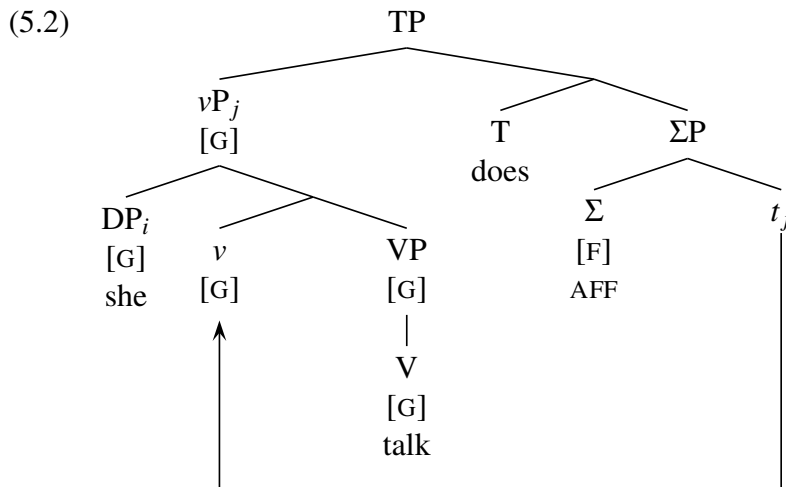
(5.1) <u>Talk</u> she does.

---

not to evaluate Givenness *sui generis*.

TP

- DP$_i$ [G] she
- T does
- ΣP
  - Σ [F] AFF
  - vP$_j$ [G]
    - t_i
    - v [G]
    - VP [G]
      - V [G] talk

CP

- C
- TP
  - DP$_i$ [G] she
  - T does
  - ΣP
    - Σ [F] AFF
    - vP$_j$ [G]
      - t_i
      - v [G]
      - VP [G]
        - V [G] talk

TP

- vP$_j$ [G]
  - t_i
  - v [G]
  - VP [G]
    - V [G] talk
- DP$_i$ [G] she
- T does
- ΣP
  - Σ [F] AFF
  - t_j

CP

- vP$_j$ [G]
  - t_i
  - v [G]
  - VP [G]
    - V [G] talk
- C
- TP
  - DP$_i$ [G] she
  - T does
  - ΣP
    - Σ [F] AFF
    - t_j

The C analysis (shown in the right column of (5.1)) begins in exactly the same way, with raising of the subject DP to SpecTP. The second movement is again triggered by a G-probe, but under this approach the G-probe is associated with C (or with one of the heads that constitute an extended C-domain). C attracts the G-marked vP to its specifier, deriving the same linear order we saw in the T analysis.

In terms of the timing of these two movements under the T analysis, the φ-EPP feature bundle must probe first and raise the DP subject to the specifier of T before the G-EPP bundle probes. If the derivation were to proceed in the opposite order, nomina-

tive case could not be assigned to the DP subject and the φ features on T and the DP subject would not be able to Agree. To see this, consider the beginnings of the failed derivation in (5.2), in which the vP has undergone G-Agreement and raised to SpecTP. Because the DP subject remains in its first-Merge position in Spec$v$P and raised along with the vP, it is no longer within T's c-command domain and is therefore inaccessible for the purposes of Agreement. If T and the DP undergo φ-Agreement before the vP raises to SpecTP, no such problem arises and the derivation converges.

(5.2)

```
                        TP
         ┌───────────────┼───────────────┐
       vP_j                      ┌────────┴────────┐
       [G]                       T                 ΣP
    ┌────┴──────┐              does          ┌──────┴──────┐
  DP_i     ┌────┴────┐                       Σ            t_j
  [G]      v        VP                      [F]
  she     [G]       [G]                     AFF
             ↑       │
             │       V
             │      [G]
             │      talk
             └────────────────────────────────┘
```

Under the C analysis, there is no question of timing since the φ features associated with T must probe before the G-probe associated with C for familiar reasons of cyclicity.

Once the DP subject has moved to SpecTP, the vP is the only G-marked phrase available for movement to the second, outer specifier of TP. It is the closest G-marked phrase, and it is phasal (and therefore eligible for movement under the assumptions discussed in Chapter 2).

While it is beyond the scope of this work to provide a full account of sentences containing more than one focused constituent, the analysis appears to make the correct predictions for VPP-sentences in which the vP is given but some subconstituent of the vP is focused, as in (5.3):

(5.3) **He criticized Trump**, but
<u>critcize CLINTON</u> he would not.

So long as the *v*P constituent is Given in such a context (Selkirk, 1995; Schwarzschild, 1999), it remains the closest G-marked phrase to the probe and is therefore eligible to undergo preposing.[2] Since *v*P is the only constituent that can in principle undergo preposing, the VPP word order is correctly predicted to occur only when there is a suitable discourse antecedent for the entire *v*P.

A further welcome prediction of this analysis is that, even in other information-structural configurations, the G-probe will never be able to attract anything other than *v*P to the second specifier position. To illustrate this consequence of the analysis, let us first consider the fact that non-contrastive given objects cannot appear to the left of the subject, regardless of the focus structure of the rest of the sentence:

(5.4) I finally met Henry yesterday.
    a.   # Henry Sophie talks to regularly.
    b.   # Henry Sophie DOES talk to regularly.[3]

(5.4b) is ruled out by the lack of a suitable discourse antecedent for the canonical-order VF-sentence. That is, the presupposition introduced by the $\sim$ operator cannot be met. Consider now the structure that would lead to the sentence in (5.4a). It is one in which T, as in the derivation of VPP above, bears two probes—a φ-probe that raises the subject *Sophie* to SpecTP and a G-probe that ought to raise *Henry* to a second specifier
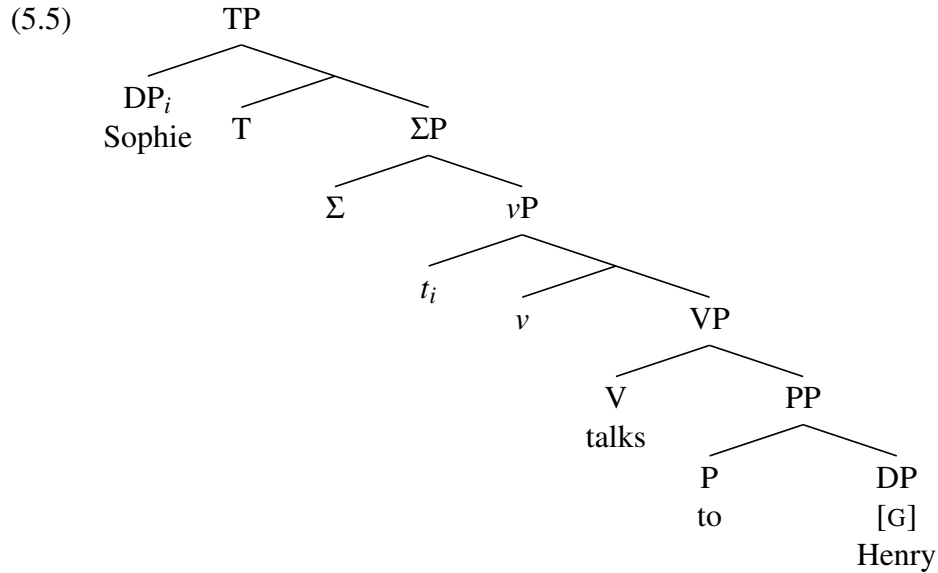
---

[2]Of course, the same logic predicts that it should also be possible to focus the subject in addition to Σ:

(i)   #? **Sanders wouldn't criticize Clinton**, but
    <u>criticize her</u> TRUMP would.

Such examples seem to be slightly degraded as compared to their object-focus counterparts. This is the sort of subtle cotrast suitable for quantitative investigation at a future time.

[3]Both of these examples become felicitous if *Henry* is interpreted contrastively and surfaces with a corresponding contrastive-topic accent. The intended infelicitous is one in which the speaker is not contrasting how often Sophie speaks to her with how often Sophie speaks to Henry.

of TP. Abstracting away from the adverb in (5.4), the structure after the subject has raised is schematized in (5.5):

(5.5)

```
                    TP
             ┌──────┴──────┐
          DPᵢ            ┌──┴──────┐
        Sophie     T           ΣP
                          ┌─────┴─────┐
                        Σ           vP
                                ┌────┴────┐
                              tᵢ        ┌──┴────┐
                                     v         VP
                                          ┌────┴────┐
                                        V         PP
                                       talks   ┌───┴───┐
                                             P       DP
                                            to       [G]
                                                    Henry
```

At that point, T probes its c-command domain for a G-marked goal. The only G-marked constituent is the object DP; however, that DP is too deeply embedded in the structure to be visible to T. That is, the vP phase is opaque to movement at this point in the derivation and its subconstituents are no longer accessible to T.

The argument ends here for the T analysis; any G-marked phrase is too deeply embedded in the vP phase to be visible to A-movement. Something more must be said under the C analysis, since movement to SpecCP is not subject to the same locality constraints as movement to SpecTP. It is clear that the G-probe associated with C cannot reach down into the vP to raise, for example, the G-marked object. Since A′-movement generally proceeds cyclically, with the moved constituent stopping off at phase edges, we can assume that C's G-probe can only access the object if it has moved to the edge of the vP phase. Ruling out preposing of the object, then, amounts to ruling out this intermediate movement. It seems, therefore, that English simply lacks a v head that enters the derivation associated with a G-probe. While this claim is somewhat stipultative,

it has the advantages of (a) correctly ruling out unattested structures, and (b) locating this property of the grammar in the functional vocabulary.

The F-marking of Σ is intimately related to the G-marking of its complement vP. If G-marking of the vP (and its subconstituents) is not possible, the focus structure of the utterance is incoherent (Schwarzschild, 1999).

The natural alternative to this proposal is to assimilate VPP to topicalization in English, which is conventionally analyzed in terms of raising to the specifier position of a dedicated Top head located below C but above T. But in the context of such an analysis we would expect the discourse and interpretive properties of the construction to be close to those of VPP. But this is not the case. Notice first that discourse-familiarity is not a sufficient condition for topicalization—in the (a) examples below, the topicalized DP has been mentioned in the discourse, but the topicalization is infelicitous.

(5.6)   a.   # I saw you at the movie theater last night. <u>You</u> I didn't think would leave early.
       b.   I suspected that a lot of people would walk out of the movie last night. <u>You</u> I didn't think would leave.

(5.7)   a.   # Mary asked me about the scholarship. <u>Mary</u> I told that I wasn't chosen.
       b.   I haven't spoken to Al about the scholarship yet. <u>Mary</u> I told that I wasn't chosen.

(5.8)   a.   # I knew I'd be bored waiting at the DMV. <u>Some books</u> I brought with me.
       b.   I didn't bring my collection of magazines to the DMV. <u>Some books</u> I brought.

(adapted from Prince 1981a, (10))

In the (b) examples, the topicalized DP has not necessarily been explicitly evoked in the linguistic context. Instead, the topicalized DP contrasts with an entity that has indeed been mentioned (In Prince's (1981a) terminology, the topicalized DP is a member of a set to which the discourse-familiar entity also belongs). The resulting generalization is that ordinary topicalization in English is necessarily contrastive. VPP, by

contrast (and as argued at length in Chapter 3), requires only that the preposed *v*P be discourse-given. The topicalization component of VPP is therefore distinct from ordinary English topicalization.

By way of comparison, it is well known that English subjects tend to be topical in the aboutness sense. That is, subject DPs are much more likely than DPs that fill other grammatical roles to refer to previously established discourse referents. While the preposed *v*P in a VPP-sentence does not refer to a discourse referent, it does have the same reference as a previously mentioned proposition. From an information-structural standpoint, therefore, the preposed *v*P behaves more like a DP subject than a topicalized DP. With that in mind, it is plausible that the *v*P moves from its base position to a specifier of T rather than to an information-structurally differentiated A′-position.

An important unanswered question under this approach, however, is how to derive the A′-properties of VPP: its unbounded nature and incompatibility with other A′-constructions. Since the movement proposed here is feature-driven, we can assume that it undergoes the same type of successive-cyclic feature-driven movement associated with WH-extraction from embedded clauses. The derivation simply fails to converge if the intermediate phasal projections do not bear the required G-probe. VPP's incompatibility with (for example) *wh*-questions and (contrastive) topicalization could have an information-structural explanation; namely, the focus structure required for VPP is incompatible with the focus structure required for these A′ constructions.[4] Alternatively, depending on the implementation of feature inheritance, the co-occurrence could be ruled out by a prohibition on C/T bearing two distinct information-structural features. Given the main conclusion of this dissertation—that the narrow syntax must make direct refernce to information structure—these two explanations are not as distinct as one might think. Given the parallels with participle preposing, it is also possible that the

---

[4]Of course, to pursue this possibility we would need an additional explanation for why canonical-order VF *is* compatible with *wh*-questions.

preposed vP undergoes a second movement to SpecCP in VPP as well as in participle preposing.

The C analysis provides a natural way of understanding these effects, as it automatically derives the A′-properties of VPP. VPP cannot occur in questions or co-occur with other A′-movements because the preposed vP competes for the same position with other fronted constituents. Because VPP bears all the hallmarks of an A′-construction, I take this as weak evidence in favor of the C analysis. The small stipulation that v may not be associated with a G-probe in the C analysis in my mind outweighs the need for a stipulative account of the A′-properties of VPP in the T analysis. On the other hand, the C analysis faces an additional challenge in ruling out G-driven movement of the subject since, as we have seen, Givenness-based topicalization is not possible in English. This movement would be string-vacuous, and I leave ruling it out for future work.

Regardless of the implementation, however, allowing G to probe and attract G-marked phrases to a left-peripheral specifier answers the question of what the connection is between vP preposing and VF. In Chapter 3, I showed the preposing only occurs when we have VF. I have shown here that this connection is mediated by G-marking of the vP: Focused Σ requires that the vP be given, allowing it to be a goal for the G-probe, and in fact the only accessible goal. The difficulty of determining the landing site for the preposed vP points to connections with a broader recent blurring of lines between A- and A′-movement (See van Urk (2015) for an overview and extensive discussion.); it is clear that the landing site matters less than the fact that the movement is driven by a discourse-sensitive feature.

5.3 Participle preposing and VP preposing compared

The two *v*P-inital constructions considered in this dissertation both involve movement driven by features that are sensitive to the discourse-familiarity of the fronted *v*P. From a formal perspective, the differences between them are located in two components of the grammar.

First, even though both participle preposing and VPP impose a familiarity restriction on the preposed *v*P, the way familiarity of the moved constituent is evaluated is different. In the case of VPP, the calculation is straightforward: If and only if every subconstituent of the *v*P is Given, the *v*P counts as Given for the purposes of G-driven movement. This is a consequence of Schwarzschild's (1999) recursive F-marking combined with his assumption that constituents that are not F-marked must be Given. Feature percolation behaves as we would expect, so long as *v*P is not the focused constituent (or a subconstituent of the focused constituent). So long as F- and G-marking apply before the subject is moved from its base position outside of the *v*P, we capture the fact that VPP is compatible only with a propositional antecedent (at least in cases with no other focused constituent).

In participle preposing, on the other hand, the situation is more complicated. The preposing is driven by a subconstituent of the *v*P. It is not the case that the entire VP must be discourse-familiar; rather, some piece of that *v*P—usually an object, and never the subject—is familiar. To make matters more complicated, it appears that what is relevant is a relative notion of familiarity. That is, the object need not be the only familiar consituent; it simply needs to be more familiar than the referent of the canonical subject. If this generalization is correct (and the corpus investigation reported in Chapter 2 suggests that it is), it poses two problems for our grammar.

The first problem is one of feature percolation. If movement of the *v*P is driven by

the FAM feature, and that feature is originally associated only with the familiar object, how do we ensure that it percolates to the *v*P level (and no further than the *v*P level)?

The second problem is one of how to evaluate relative familiarity. Since the comparative notion is more complicated than the Schwarzschildian characterization of Givenness, it is not clear that it can be implemnted with reference to the G-marking that drives VPP. One possible solution to this dilemma is to locate the familiarity calculation in a different component of the grammar from the familiarity-marking itself. For example, the syntax could allow movement to take place when the relevant constituent is Given in the absolute sense, but cases in which the canonical subject is (a) also Given and (b) more salient (or more recently mentioned) could be ruled out pragmatically.

A complication for this idea, however, is the fact that participle preposing can also be used in scene-setting. Such cases may be discourse-initial, and therefore no given material appears anywhere in the sentence. This suggests that Givenness in the sense of Given material being the complement of F-marked material is not the relevant factor in determining whether participle preposing is felicitious. Instead, we need to rely on a notion of discourse-familiarity in most cases. For presentational or scene-setting uses, it appears that familiarity to the speaker is relevant. In most cases, presentational uses of participle preposing co-occur with a topic shift to the canonical subject of the participle preposing sentence. In the corpus study reported in Chapter 2, 316 of 675 (47%) of the total participle preposings were classified as presentational based on the fact that neither the referent of the object nor the referent of the canonical subject was familiar in the discourse. A topic shift, characterized by coreferece between the subject of the following sentence and the canonical subject of the participle preposing sentence, occurred after 118 (37%) of the presentational examples (compared to 116 of the 359 (32%) examples in which at least one of the arguments was discourse-familiar). In these cases, the speaker uses participle preposing to make the hearer aware of the information

in the preposed *v*P, thereby making it discourse-old, but she backgrounds it in favor of the canonical subject. Since she goes on to talk about the canonical subject rather than the *v*P material, the effect is to introduce the canonical subject to the hearer as discourse-new. The complex interaction with the discourse-level pragmatics points to the need to treat the feature involved in driving participle preposing differently from the simple G feature involved in VPP. The heuristic used to evaluate whether a topic shift has taken place is likely to have significantly undercounted the number of topic shifts, and further development of this measure should be a focus of further research.

A second difference between the two constructions is the pattern of feature inheritance and bundling. In participle preposing, the driver of the initial A-movement is associated with T. This information-structure-sensitive feature, I argue, originates on C and is shared *via* inheritance with T. As a result, T has three relevant properties: a FAM probe, a φ probe, and an EPP property. The FAM probe is bundled with the EPP property, causing the FAM-bearing *v*P to undergo raising to SpecTP. The φ probe is not associated with an EPP property and so is satisfied by the DP subject in a low, post-verbal position.

The inheritance mechanism itself is also of interest. The FAM feature is not simply passed down the structure from C to T (as, for example, φ features would be). Instead, one copy of the feature remains on C while another is passed down to T. After the FAM feature on T attracts the *v*P to its specifier, the FAM feature associated with C does the same thing by means of its own EPP property, triggering the *v*P's second, A$'$-movement to SpecCP.

VPP operates without any special inheritance properties. T inherits φ and EPP features in the same was as it does in canonical-order sentences. The G feature originates with C and stays there. The feature bundling is also unremarkable when compared to canonical word orders. On T, the φ and EPP properties are bundled and together induce

movement of the DP subject to SpecTP in the usual way. The G feature on C is associated with its own EPP property—again, unremarkable for a case of A′-movement in English—and attracts the G-marked *v*P to its specifier.

To summarize the discussion in this subsection, both participle preposing and VPP are *v*P-initial word orders in which movement of the *v*P to the left edge is driven by features that are directly sensitive to information structure. The distinct information structural effects of the two constructions are, at a mechanical syntactic level, the result of combinatoric differences in feature inheritance and bundling.

5.4   The syntactic representation of information structure

In participle preposing, evidence for the direct syntactic representation of information structural properties comes from the fact that the preposed participle (a) may undergo raising, and (b) must, in the basic cases, contain a familiar object. In VPP, the evidence is simply that only discourse-given *v*Ps may undergo preposing.

This pattern is, in principle, compatible with a theory of movement in which movement of any consituent is free and in which a system of surface filters are employed to rule out information-structurally inappropriate utterances (Chomsky, 2008; Fanselow and Lenertová, 2011). Such a theory is, however, deeply unsatisfying. For one thing, any correlation between the word order and the interpretation is accidental. In a version of a free-movement account that incorporates a cartographic multiplicity of left-edge landing sites, we are still left with the problem of ruling out derivations in which the interpretation is not congruent with the discourse context. That is, if any DP is free to move to a topic position, very many derivations will involve movement of DPs that cannot be interpreted as contrastive topics to that position. Or, to take an example more

applicable to the current discussion, if any *v*P can be preposed, very many derivations will infelicitously involve movement of *v*Ps that are not Given. These must be ruled out as contextually inappropriate, since they are not produced if they don't conform to principles of question-answer congruence. But since there is no direct communication between the syntax and the pragmatics, the cause of the infelicity must be wholly pragmatic. Such an explanation, however, ignores the connection between the word order and its information-structural force.

Free-movement accounts that utilize a single left-peripheral position (Fanselow and Lenertová, 2011) fare even worse. Even if we allow for phrases to be marked with features corresponding to their information structural status, these accounts predict that there should be no interpretive difference between a sentence with a particular pattern of F- and G-marking in the canonical word order and a sentence with the same F- and G-marking pattern in a non-canonical word order. As VPP shows us, this prediction cannot be maintained. VPP shares its focused Σ and Given *v*P with canonical-order auxiliary focus, but the pragmatics of the two word orders are distinct—the anti-recency effect associated with VPP is absent from canonical-order VF. At the very least, new—and at present unknown—mechanisms would have to be devised to enforce the necessary distinctions.

The appearance of anti-recency effects in VPP but not in canonical-order VF is in fact a problem for both types of free-movement theory, since it demonstrates that question-answer congruence alone is not enough to license VPP. Because VPP and canonical-order VF have the same focus structure, they should be possible answers to the same (polar) questions. But this is not the case: Canonical-order VF can be used in answers to polar questions and in contradictions, while VPP cannot. VPP-sentences are congruent in their focus structure with overt polar questions, but cannot be used to answer them. We therefore cannot maintain that question-answer congruence is

the sole condition licensing a particular information-structural configuration. We must additionally refer to the syntax of that configuration as well. Any theory that does not take the syntactic form of the utterance into account when determining its felicity is therefore inadequate.

The analyses discussed in this dissertation require a rethinking of Chomsky's inclusiveness condition, perhaps along the lines of Erteschik-Shir (2006). In order to satisfy Inclusiveness, we must ensure that (a) F- and G- features are properties of lexical items, and (b) that the F- and G-marking of complex constituents is recoverable from the F- and G-marking of their components. While a full exploration of the consequences for Inclusiveness is beyond the scope of this work, in the analysis of VPP presented above, it is enough to say that constituents containing only G-marked phrases are themselves G-marked and that F-marking may or percolate from heads and their arguments to maximal projections.

There is already good evidence for the necessity of both F- and G-marking in the syntax, and if that is the case it would be very strange if such features did not participate in syntactic processes such as those defined by the probe-goal interaction. I have argued that this theoretical expectation is realized, in that the same G feature that marks Given material is a driver of syntactic movement as well. The resulting account of VPP is reasonably spartan and avoids stipulating the existence of new features (or new functional projections) whose only *raison d'être* is to describe the facts at hand. Instead, it simply uses the G feature, which there is considerable independent evidence. A consequence is that these features are truly syntactic and that they participate in the core processes of syntax, including movement. Just as (interpretable) G features may be associated with lexical items and constituents, so may (uninterpretable) G features be associated with functional heads, where they serve as probes.

In the analysis of VPP outlined above, these G-probes are always bundled with

203

an EPP property, leading to movement of the G-marked phrase. Conceptualizing G-marking as an interpretable feature in the sense of the Minimalist Program also makes the prediction that there should be uninterpretable G features that are not associated with EPP properties. Such probes would agree with G-marked phrases *in situ*. To the best of my knowledge, this is an untestable (but also unfalsifiable) prediction, since no syntactic or interpretive consequences would follow from this IN SITU agreement.[5] I conclude, therefore, that treating G as a syntactic feature is both viable and a natural consequence of allowing F- and G-marking of syntactic constituents.

---

[5]The prediction is in fact stronger than this: If we take the strict Chomskyan view under which both interpretable and uninterpretable features must participate in an Agree relation, every sentence containing Given material must also include at least one uninterpretable G-probe.

Chapter 6

Conclusion

6.1 Open questions

The analyses presented in this dissertation contribute to the important project of under-standing of how information structure and syntactic structure mirror one another. But as always, some key puzzles remain unresolved.

For participle preposing, the mechanism by which the FAM feature percolates from the discourse-familiar object to the vP level remains somewhat mysterious.

In the analysis of VPP, the fact that preposing of the vP is parasitic on F-marking of Σ remains accidental. That is, we have an account of the observed word order patterns, but the connection between preposing and VF is indirect and mediated by the Givenness of the vP.

The difference between ordinary contrastive topicalization and the interpretation of VPP's preposed vP lacks a satisfying explanation to this point. Future work should investigate whether the anti-recency effect associated with the preposed vP is due to the role of the G-probe in deriving the preposed word order, or whether it is contributed by some other property of the construction. Along similar lines, further inquiry into the

amount of overlap between Givenness as a formal pragmatic property and G-marking as a formal syntactic property is needed.

6.2   The broad view

Both participle preposing and VPP lead us toward a tightly integrated view of the relationship between syntax and information structure, one in which discourse relations are represented directly in the syntax. The broad empirical generalization that emerges is perhaps unsurprising: marked interpretations are paired with marked word orders. Participle preposing is an exception to the tendency for subjects to align with topics in English, and we see that the subject appears postverbally, with the preposed participle in the subject's canonical position. VPP shares its core meaning with canonical-order verum focus, but the additional requirement that the question being answered is not the most salient question in the discourse goes along with the marked fronting of the preposed participle.

The types of discourse relations signaled by these non-canonical word orders are different, and we have seen evidence that several types of discourse information must be encoded in the syntax—discourse-familiarity, focus, and givenness at a minimum.[1] The overall picture, then, is one in which the grammar provides several ways of signaling deviations from the canonical interpretation. The speaker, therefore, has several ways of signaling her conversational goals.

A speaker can use participle preposing to convey that, perhaps contrary to expectations, she does not want to identify the subject with the topic. Or, she can use VPP to draw her interlocutor's attention back to an unanswered question that had been passed over in the preceding discourse. The hearer is not directly aware of these intentions

---

[1]Topicality must also be included in this list, though I have presented no evidence for its inclusion in this dissertation

of the speaker's, but she can reconstruct the (or a) discourse structure that allows the preposing to be felicitous. The structure underlying the conversation is in this way a negotiation. While their syntactic manifestation is a fact about language in particular, these complex patterns of inference and negotiation between speakers to guide the conversation and its goals relate to broader aspects of human cognition. The interaction between syntax and information structure, then, is more than a mechanical grammatical question. It is a question of how the formal system of language links to patterns of inference we find throughout cognition. The work in this dissertation has provided a glimpse into what the answer to a small subpart of this very large question must look like.

References

Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. Doctoral Dissertation, University of Connecticut, Storrs.

Aelbrecht, Lobke, and Marcel den Dikken. 2013. Preposition doubling in Flemish and its consequences for the syntax of Dutch PPs. *Journal of Comparative Germanic Linguistics* 16:33–68.

Alrenga, Peter. 2005. A sentential subject asymmetry in English and its implications for complement selection. *Syntax* 8:175–207.

AnderBois, Scott. 2011. Issues and alternatives. Doctoral Dissertation, University of California, Santa Cruz.

Baltin, Mark. 2006. The nonunity of VP-preposing. *Language* 82:734–766.

Beaver, David I., and Brady Z. Clark. 2008. *Sense and sensitivity: How focus determines meaning*. Oxford: Wiley-Blackwell.

Becker, Michael. 2006. Verum focus and T-toΣ movement in English. Paper presented at ECO5, March 2006.

Bianchi, Valentina, and Mara Frascarelli. 2010. Is topic a root phenomenon? *Iberia* 2:43–88.

Birner, B., and G. Ward. 1998. *Information status and noncanonical word order in english*. Amsterdam: John Benjamins.

Birner, Betty J. 1994. Information status and word order: An analysis of English inversion. *Language* 70:233–259.

Birner, Betty J. 1996. *The discourse function of inversion in English*. New York & London: Garland.

Birner, Betty J., Jeffrey P. Kaplan, and Gregory Ward. 2007. Functional compositionality and the interaction of discourse constraints. *Language* 83:317–343.

Birner, Betty J., and Gregory L. Ward. 1992. On the interpretation of VP inversion in American English. *Journal of Linguistics* 28:1–12.

Boeckx, Cedric, and Kleanthes K. Grohmann. 2007. Putting phases in perspective. *Syntax* 10:204–222.

Bošković, Željko. 1994. D-structure, θ-criterion, and movement into θ-positions. *Linguistic Analysis* 24:247–286.

Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, MA: MIT Press.

Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24:591–656.

Bresnan, Joan. 1994. Locative inversion and the architecture of Universal Grammar. *Language* 70:72–131.

Broekhuis, Hans. 2007. Does defective intervention exist? *Linguistics in the Netherlands* 24:49–61.

Bruening, Benjamin. 2011. Pseudopassives, expletive passives, and locative inversion. Ms., University of Delaware, January 2011.

Büring, Daniel. 2003. On D-trees, beans, and B-accents. *Linguistics and Philosophy* 26:511–545.

Büring, Daniel. 2008. Been there, marked that—a tentative theory of second occurrence focus. Ms., University of California, Los Angeles, available at http://semanticsarchive.net/Archive/jJlMThlZ/, March 2008.

Carstens, Vicki. 2003. Rethinking complementizer agreement: Agree with a case-checked goal. *Linguistic Inquiry* 34:393–412.

Castillo, Juan Carlos, John Drury, and Kleanthes K. Grohmann. 1999. Merge over move and the extended projection principle. *University of Maryland Working Papers in Linguistics* 8:63–101.

Chomsky, Noam. 1986. *Knowledge of language: Its nature, origin and use*. New York: Praeger.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, chapter 3, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, ed. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, chapter 6, 134–162. Cambridge: MIT Press.

Ciardelli, Ivano, Jeroen Groenendijk, and Floris Roelofsen. 2013. Inquisitive semantics: A new notion of meaning. *Language and Linguistics Compass* 7:459–476.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.

Clifton, Charles, Jr., and Lyn Frazier. 2012. Discourse integration guided by the 'Question under Discussion'. *Cognitive Psychology* 65:352–379.

Constant, Noah. 2014. Contrastive topic: Meanings and realizations. Doctoral Dissertation, University of Massachusetts, Amherst.

Cowper, Elizabeth. 2005. The geometry of interpretable features: Infl in English and Spanish. *Language* 81:10–46.

van Craenenbroeck, Jeroen. 2009. Alternatives to cartography: an introduction. In *Alternatives to cartography*, ed. Jeroen van Craenenbroeck, number 100 in Studies in Generative Grammar, 1–14. Berlin: Mouton de Gruyter.

Creswell, Cassandre. 2000. The discourse function of verum focus in wh-questions. In *Proceedings of NELS 30*, 165–180.

Culicover, Peter W., and Robert D. Levine. 2001. Stylistic inversion in English: A reconsideration. *Natural Language and Linguistic Theory* 19:283–310.

Davies, Mark. 2008–. The Corpus of Contemporary American English: 450 million words, 1990–present. Available online at http://corpus.byu.edu/coca/.

Diercks, Michael J.K. 2010. Agreement with subjects in Lubukusu. Doctoral Dissertation, Georgetown University, Washington, D.C.

Emonds, Joseph E. 1976. *A transformational approach to English syntax*. New York: Academic Press.

Engdahl, Elisabet. 2006. Information packaging in questions. In *Empirical issues in syntax and semantics*, ed. Olivier Bonami and Patricia Cabredo-Hofherr, volume 6, 93–111.

Erteschik-Shir, Nomi. 2006. On the architecture of topic and focus. In *The architecture of focus*, ed. Valéria Molnár and Susanne Winkler, 33–57. Berlin: Mouton de Gruyter.

Erteschik-Shir, Nomi. 2007. *Information structure: The syntax-discourse interface*. Number 3 in Oxford Surveys in Syntax and Morphology. Oxford: Oxford University Press.

Fanselow, Gisbert. 2008. In need of mediation: The relation between syntax and information structure. *Acta Linguistica Hungarica* 55:1–17.

Fanselow, Gisbert, and Denisa Lenertová. 2011. Left peripheral focus: Mismatches between syntax and information structure. *Natural Language and Linguistic Theory* 29:169–209.

Farkas, Donka, and Kim Bruce. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27:81–118.

Farkas, Donka F. 2003. Assertion, belief, and mood choice. Paper presented at the workshop on conditional and unconditional modality, ESSLLI, Vienna.

Féry, Caroline, and Vieri Samek-Lodovici. 2006. Focus projection and prosodic prominence in nested foci. *Language* 82:131–150.

Fowlie, Meaghan. 2010. More multiple multiple spell-out. In *Proceedings of GLOW 31: Principles of linearisation workshop*. Berlin: Mouton de Gruyter.

Gill, Kook-Hee, and George Tsoulas. 2004. Peripheral effects without peripheral syntax: the left periphery in Korean. In *Peripheries: Syntactic edges and their effects*, ed. David Adger, Cecile de Cat, and George Tsoulas. Hingham, MA: Kluwer Academic Publishers.

Ginzburg, Jonathan. 1996. Interrogatives: Questions, facts and dialogue. In *The handbook of contemporary syntactic theory*, ed. Shalom Lappin. London: Blackwell.

Givón, Talmy. 1983. *Topic continuity in discourse: A quantitative cross-language study*. Amsterdam: John Benjamins.

Graff, David, and Christopher Cieri. 2003. *English Gigaword*. Philadelphia: Linguistic Data Consortium.

Grohmann, Kleanthes. 2003. *Prolific domains: On the anti-locality of movement dependencies*. Amsterdam: John Benjamins.

Gundel, Jeanette K. 1988. *The role of topic and comment in linguistic theory*. New

York: Garland.

Gutzmann, Daniel, and Elena Castroviejo Miró. 2011. The dimensions of verum. In *Empirical issues in syntax and semantics 8*, ed. Olivier Bonami and Patricia Cabredo Hofherr, 143–165. Paris: Colloque de syntaxe et sémantique à Paris.

de Haan, German J, and Fred Weerman. 1985. Finiteness and verb fronting in Frisian. In *Verb second phenomena in Germanic languages*, ed. H. Haider and M. Prinzhorn. Dordrecht: Foris.

Haeberli, Eric. 2012. *Features, categories and the syntax of A-positions: Cross-linguistic variation in the Germanic languages*. Dordrecht: Springer.

Haegeman, Liliane, and Marjo van Koppen. 2012. Complementizer agreement and the relation between C0 and T0. *Linguistic Inquiry* 43:441–454.

Hardt, Daniel. 1993. Verb phrase ellipsis: Form, meaning and processing. Doctoral Dissertation, University of Pennsylvania.

Harwood, Will. 2015. Being progressive is just a phase: Celebrating the uniqueness of progressive aspect under a phase-based analysis. *Natural Language & Linguistic Theory* 33:523–273.

Heim, Irene. 1982. The semantics of definite and indefinite noun phrases. Doctoral Dissertation, University of Massachusetts, Amherst.

Heycock, Caroline. 2005. Embedded root phenomena. In *The Blackwell companion to syntax*, ed. M. Everaert and H. van Riemsdijk, volume II, 174–209. Malden, MA: Blackwell.

Heycock, Caroline, and Anthony Kroch. 1999. Pseudocleft connectedness: Implications for the LF interface level. *Linguistic Inquiry* 30:327–364.

Hiraiwa, Ken. 2005. Dimensions of symmetry in syntax: Agreement and clausal architecture. Doctoral Dissertation, MIT.

Hoeksema, Jack. 1986. Theoretical consequences of Dutch complementizer agreement. In *Proceedings of the twelfth annual meeting of the Berkeley Linguistics Society*, 147–158. Berkeley Linguistics Society.

Höhle, Tilman N. 1992. Über Verum-Fokus im Deutschen. In *Informationsstruktur und Grammatik*, ed. Joachim Jacobs. Westdeutscher Verlag.

Holmberg, Anders. 2001. The syntax of yes and no in Finnish. *Studia Linguistica* 55:140–174.

Hooper, Joan, and Sandra Thompson. 1973. On the applicability of root transformations. *Linguistic Inquiry* 4:465–497.

Horn, Laurence R. 1969. A presuppositional analysis of *only* and *even*. In *Papers from the fifth regional meeting of the Chicago linguistic society*, 98–107. Chicago: Chicago Linguistic Society.

Howell, Jonathan. 2009. Second occurrence focus and the acoustics of prominence. In *Interfaces in linguistics: New research perspectives*, ed. Raffaella Folli and Christiane Ulbrich, chapter 16, 278–298. Oxford: Oxford University Press.

Huang, C.-T. James. 1993. Reconstruction and the structure of VP: Some theoretical consequences. *Linguistic Inquiry* 24:103–138.

Iatridou, Sabine, and Anthony Kroch. 1992. The licensing of CP-recursion and its relevance to the Germanic verb-second phenomenon. *Working Papers in Scandinavian Syntax* 50:1–25.

Jackendoff, R. S. 1972. *Semantic interpretation in generative grammar*. Cambridge, MA: MIT Press.

Jacobs, Joachim. 2001. The dimensions of topic-comment. *Linguistics* 39:641–681.

Kehler, Andrew. 2000. Coherence and the resolution of ellipsis. *Linguistics and Philosophy* 23:533–575.

Koopman, Hilda. 2010. Prepositions, postpositions, circumpositions, and particles. In *Mapping spatial PPs: The cartography of syntactic structures*, ed. Guglielmo Cinque and Luigi Rizzi, volume 6, 26–73. Oxford: Oxford University Press.

Koster, Jan. 1978. Why subject sentences don't exist. In *Recent transformational studies in European languages*, ed. S. J. Keyser, 53–64. Cambridge, Mass.: MIT Press.

Krifka, Manfred. 2001. Quantifying into question acts. *Natural Language Semantics* 9:1–40.

Krifka, Manfred. 2008. Basic notions of information structure. *Acta Linguistica Hungarica* 55:243–276.

Kučerová, Ivona. 2007. The syntax of givenness. Doctoral Dissertation, Massachusetts Institute of Technology, Cambridge.

Kučerová, Ivona. 2011. Grammatical marking of givenness. *Natural Language Semantics* 20:1–30.

Laka, Itziar. 1990. Negation in syntax. Doctoral Dissertation, MIT, Cambridge, MA.

Landau, Idan. 2007. Constraints on partial VP-fronting. *Syntax* 10:127–164.

Lasnik, Howard, and Mamoru Saito. 1992. *Move α: Conditions on its applications and output*. Cambridge: MIT Press.

Lechner, Winfried. 2003. Phrase structure paradoxes, movement and ellipsis. In *The interfaces: Deriving and interpreting omitted structures*, ed. Kerstin Schwabe and Susanne Winkler, 177–203. Amsterdam: John Benjamins.

Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34:506–516.

Leonetti, Manuel, and Victoria Escandell-Vidal. 2009. Fronting and verum focus in Spanish. In *Focus and background in Romance languages*, 155–204. Amsterdam: John Benjamins.

Lipták, Anikó. 2006. The expression of sentential emphasis in hungarian. Ms., Leiden University.

Lohnstein, Horst. 2012. Verumfokus–Satzmodus–Wahrheit. In *Fokus–Wahrheit– Negation. Linguistische Berichte*, 31–67. Hamburg: Buske.

McNally, Louise. 1998. On recent formal analyses of topic. In *The Tbilisi symposium on language, logic, and computation: Selected papers*, ed. Jonathan Ginzburg, Zurab Khasidashvili, Carl Vogel, Jean-Jacques Lévy, and Enric Vallduví, 147–160. Stanford, CA: CSLI Publications.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands and the theory of ellipsis*. Oxford: Oxford University Press.

Mikkelsen, Line. 2005. *Copular clauses: Specification, predication and equation*. Amsterdam: John Benjamins.

Mikkelsen, Line. 2015. VP anaphora and verb-second order in Danish. *Journal of Linguistics* 51:595–643.

Miller, Philip H. 2001. Discourse constraints on (non-)extraposition from subject in English. *Linguistics* 39:683–701.

Milsark, Gary. 1974. Existential sentences in English. Doctoral Dissertation, MIT, Cambridge, MA.

Neeleman, Ad, and Hans van de Koot. 2008. Dutch scrambling and the nature of

discourse templates. *Journal of Comparative Germanic Linguistics* 11:137–189.

Pesetsky, David. 1995. *Zero syntax*. Cambridge: MIT Press.

Phillips, Colin. 2003. Linear order and constituency. *Linguistic Inquiry* 34:37–90.

Portner, Paul, and Katsuhiko Yabushita. 1998. The semantics and pragmatics of topic phrases. *Linguistics and Philosophy* 21:117–157.

Prince, Ellen F. 1981a. Topicalization, focus-movement, and Yiddish-movement: A pragmatic differentiation. *Berkeley Linguistics Society* 7:249–264.

Prince, Ellen F. 1981b. Toward a taxonomy of given/new information. In *Radical pragmatics*, ed. Peter Cole, 223–255. New York: Academic Press.

Reinhart, Tanya. 1981. Pragmatics and linguistics: An analysis of sentence topics. *Philosophica* 27:53–94.

Rezac, Milan. 2006. The interaction of Th/Ex and locative inversion. *Linguistic Inquiry* 37:685–697.

Richter, Frank. 1993. Settling the truth. Ms., University of Massachusetts, Amherst.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook of generative syntax*, ed. L. Haegeman, 281–337. Dordrecht: Kluwer.

Roberts, Craige. 1996. Information structure in discourse: Towards an integrated formal theory of pragmatics. In *Papers in semantics*, ed. J. H. Yoon and Andreas Kathol, number 49 in OSU Working Papers in Linguistics. Columbus: The Ohio State University.

Roberts, Ian. 2010. A deletion analysis of null subjects. In *Parametric variation: Null subjects in minimalist theory*. Cambridge University Press.

Romero, Maribel. 2005. Two approaches to biased *yes/no* questions. In *Proceedings of WCCFL 24*.

Romero, Maribel, and Chung-Hye Han. 2004. On negative *Yes/No* questions. *Linguistics and Philosophy* 27:609–658.

Rooth, Mats. 1985. Association with focus. Doctoral Dissertation, University of Massachusetts, Amherst.

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

Ross, John Robert. 1973. A fake NP squish. In *New ways of analyzing variation in English*, ed. Charles-James N. Bailey and Roger W. Shuy, 96–140. Washington, D.C.: Georgetown University Press.

Sailor, Craig. 2011. Remarks on retorts: On emphatic polarity in English. Poster presented at NELS 42.

Sailor, Craig. 2012. Inflection at the interface. Ms., UCLA, March 2012.

Schwarzschild, Roger. 1999. Givenness, AvoidF and other constraints on the placement of accent. *Natural Language Semantics* 7:141–177.

Selkirk, Elisabeth O. 1984. *Phonology and syntax: The relation between sound and structure*. Cambridge, MA: MIT Press.

Selkirk, Elisabeth O. 1995. Sentence prosody: Intonation, stress, and phrasing. In *The handbook of phonological theory*, ed. John A. Goldsmith, 550–569. Oxford: Blackwell.

Selkirk, Elisabeth O. 2008. Contrastive focus, givenness and the unmarked status of "discourse new". *Acta Linguistica Hungarica* 55:331–346.

Silverman, Kim, Mary Beckman, John Pitrelli, Mari Ostendorf, Colin Wightman, Patti Price, Janet Pierrehumbert, and Julia Hirschberg. 1992. ToBI: A standard for labeling English prosody. In *Second international conference on spoken language processing*, 867–870.

Simons, Mandy, Craige Roberts, David Beaver, and Judith Tonhauser. to appear. The best question: Explaining the projection behavior of factives. In *Discourse processes*.

Sobin, Nicholas. 2012. Explaining TH/EX. Paper presented at the Symposium on Existentials, University of Manchester, Manchester, England, UK 28–29 June, 2012, June 2012.

Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19:425–449.

Stalnaker, Robert. 1978. Assertion. In *Syntax and semantics 9*, ed. Peter Cole.

Stowell, Timothy. 1981. Origins of phrase structure. Doctoral Dissertation, MIT, Cambridge, MA.

Strawson, Peter F. 1964. Identifying reference and truth-values. *Theoria* 30:86–99.

Struckmeier, Volker. 2016. Two kinds of factors for ellipsis and copy spellout. Paper

presented at Ellipsis Licensing Beyond Syntax, Universiteit Leiden, January 2016.

Svenonius, Peter. 2004. On the edge. In *Peripheries*, ed. D. Adger, C. de Cat, and G. Tsoulas, 259–287. Dordrecht: Kluwer.

Szendrői, Kriszta. 2003. A stress-based approach to the syntax of Hungarian focus. *The Linguistic Review* 20:37–78.

Tancredi, Christopher. 2016. The syntax, semantics and pragmatics of **TOPIC**, FOCUS and *Givenness*. Paper presented at Ellipsis Licensing Beyond Syntax, Universiteit Leiden, January 2016.

van Urk, Coppe. 2015. A uniform syntax for phrasal movement: A case study of Dinka Bor. Doctoral Dissertation, Massachusetts Institute of Technology, Cambridge.

Vallduví, E. 1992. *The informational component*. New York: Garland.

Vallduví, Enrique, and Elisabet Engdahl. 1996. The linguistic realization of information packaging. *Linguistics* 34:459–519.

Vicente, Luis. 2007. The syntax of heads and phrases: A study of verb (phrase) fronting. Doctoral Dissertation, Universiteit Leiden.

Ward, Gregory L. 1990. The discourse functions of VP preposing. *Language* 66:742–763.

Watanabe, Akira. 2000. Feature copying and binding: Evidence from complementizer agreement and switch reference. *Syntax* 3:159–181.

Wilder, Chris. 2013. English 'emphatic *do*'. *Lingua* 128:142–171.

Zubizarreta, Maria Luisa. 1998. *Prosody, focus, and word order*. Cambridge, Massachusetts: MIT Press.

Zwart, Jan-Wouter. 1993. Verb movement and complementizer agreement. *MIT Working Papers in Linguistics* 18:297–340.