

# Focus and topic in VP-anaphora constructions\*

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## *Abstract*

*This paper explores the information structure of VP-anaphora constructions in English, Spanish, and German. The goal is to provide an initial account of the syntactic and prosodic licensing mechanisms of VP-anaphora and to suggest some theoretical consequences for the syntactic representation of the different types of focus and topic. Recent studies (e.g. Rooth 1992b; Tomioka 1995; Fox 1998) have proposed that the characteristic feature of VP-anaphora constructions is that they bear contrastive focus on the remaining subject. We argue against this claim by providing evidence from prosodic and syntactic investigations of the remaining elements. Our hypothesis is that presentational focus in VP-anaphora is realized on the negative/affirmative expression and that the remaining constituent is free to take various discourse functions depending on the context and the type of construction in which the VP-anaphora occurs. Our main empirical argument against the above claim comes from Spanish, where the remaining constituent can never be interpreted as a contrastive focus.*

## **1. Introduction**

In recent papers on focus typology, convincing arguments have emerged that at least two types of focus must be differentiated: presentational focus and contrastive focus (Kiss 1995, 1998; Kenesei 1996; Drubig 1994, 1998). Drubig proposes two distinct syntactic analyses for each type, assuming that presentational focus is licensed by a lower polarity phrase, whereas contrastive focus is licensed by a higher polarity phrase. Most previous analyses of the information structure of elliptical constructions have concentrated on only one aspect of focus, either on the deaccented redundant VP (Tancredi 1992) or on the contrastive remnant(s) (Rooth 1992b; Tomioka 1995; Kim 1997; Fox 1998; Romero 1998). In our paper

we will concentrate on the syntax and information structure of VP-anaphora (VPA) constructions in English, Spanish, and German and will propose that they provide evidence for the existence of a lower polarity phrase (here called *SigmaP* [ $\Sigma P$ ]), which marks the domain of presentational focus, and a higher polarity phrase (here called *focus phrase* [FP]), which hosts contrastive focus.

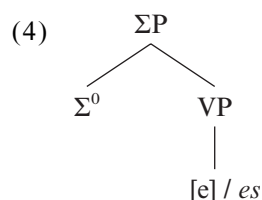
The constructions that we are going to concentrate on are exemplified in (1) to (3):

- (1) English
  - a. Peter has seen “Wag the Dog” but John has not.
  - b. John has not seen “Wag the Dog” but Peter has.
- (2) Spanish
  - a. Susana leyó *Guerra y Paz* pero María no.  
Susana read War and Peace but Mary not
  - b. María no leyó *Guerra y Paz* pero Susana sí.  
Maria not read War and Peace but Susana yes
- (3) German
  - a. Jan kann die Aufgabe lösen, aber ich weiß, dass Peter es nicht  
Jan can the task solve but I know that Peter *es* not  
kann.  
can
  - b. Peter kann die Aufgabe nicht lösen, aber ich weiß, dass Jan es  
Peter can the task not solve but I know that Jan *es*  
kann.  
can

(1) exemplifies VP-ellipsis (VPE) in English, a well-studied type of construction. (2) exemplifies the less-known equivalent in Spanish. (2) looks different from (1) at first sight because the presence of an auxiliary is obligatory in English but prohibited in Spanish; however, they are otherwise equivalent constructions, and we refer to both of them as VPE.<sup>1</sup> In (3), the anaphoric morpheme *es* replaces a VP, a construction that to the best of our knowledge has not been systematically discussed up to now. (3) is different from English VPE in that the English examples include a phonetically silent predicate whereas the German examples include an overt proform (other, more subtle differences are discussed in section 3.3). We assume that (3) is equivalent to (1) and (2) and we refer to all three collectively as VP-anaphora (VPA).

A property that all three constructions share is that a negative or affirmative word occurs right next to the anaphoric predicate. We argue below that the English auxiliary *has* in (1b) and the German modal *kann* in (3b) bear an emphatic-affirmative feature (Chomsky 1957; Laka 1990;

López 1995). We assume, following Laka (1990), that the NEG/AFF features are encapsulated in the syntax in a functional category called  $\Sigma$ , which takes a VP as a complement. In López (1994, 1995, 1999), building on a suggestion in Laka (1990), it is further argued that the functional head  $\Sigma$  licenses VPE. We extend this to VPA in general, to cover the German case (3), and we represent it in the somewhat abstract form shown in (4) (structural details will be filled in as we proceed).



All three constructions fit into the general schema represented in (5):

- (5) [REMNANT XP] [(AUX) AFF/NEG] [VP e/es]

A VPA construction is a tripartite structure consisting of (i) a phrase or (rarely) phrases, normally including the subject, which we call the remnant; (ii) an affirmative/negative component, in English and German accompanied by a verbal head; and (iii) the anaphoric VP.

As far as we know, no attempt has been made to systematically study the information structure of VPA constructions from a cross-linguistic perspective. Remarks in the literature tend to be brief and perfunctory; often it is said that the remnant must be focused, without fully specifying the nature of this focus. The role of the negative/affirmative particle and the auxiliary that may support it is not even discussed. However, we contend that an investigation of the focus structure of VPA can shed light on our understanding of how the construction itself is licensed as well as on the broader theoretical issue concerning the proper syntactic representation of different types of focus within the theory of grammar.

This paper consists of two parts. In the first, we concentrate on the [(AUX) AFF/NEG] part of (5). In contrast to other studies (e.g. Rooth 1992b; Tomioka 1995; Fox 1998), which claim that VPA constructions bear contrastive focus on the remaining subject, we show that VPA is characterized by pitch-accent assignment to the AFF/NEG term (see Winkler 1997). We identify this accent as polarity focus (in the sense of Selkirk 1995) and argue that it licenses VPA. Polarity focus, as is the case with other types of focus, is ambiguous between either a contrastive or a presentational focus interpretation, depending on the context and the function of the remnant. The latter interpretation of polarity focus is a crucial case for our hypothesis that  $\Sigma P$ , which hosts affirmation and

assertive negation in English, German, and Spanish, demarcates the domain of presentational focus.

In the second part of this paper, we discuss the remnant and show that as a consequence of the above focus analysis, the remnant is free to take either a topic or a contrastive-focus function or even to be fully anaphoric. Interestingly, our analysis provides surprising evidence for a syntactic approach to contrastive focus (see Chomsky 1976; Drubig 1994, among others). We show that contrastive focus is a syntactic feature that selects for and merges with a tensed clause and attracts (overtly or covertly) another constituent with a matching feature. As a consequence, if a phrase marker does not include a T node, as is the case in (2), no constituent can bear contrastive focus. Therefore, VPA presents evidence that contrastive focus is a syntactic phenomenon that involves a functional category and the formation of a syntactic chain at LF.

The paper is organized as follows: in section 2, we discuss the notions of focus and topic that play a relevant role in the rest of the paper. In section 3, we discuss the focus properties of the negative/affirmative component of VPA constructions and argue that polarity focus licenses VPA. In sections 4 and 5, we discuss the different information structural functions of the remnant XP and argue that VPA presents evidence that contrastive focus is a syntactic phenomenon that requires a certain amount of syntactic structure.

For our analysis we are going to use the toolbox provided by the *minimalist program* (Chomsky 1995). We assume that the reader is familiar with a syntactic framework in which functional categories can be syntactic heads and with the notions of *merge* and *attract*, as defined in Chomsky (1995).

## 2. Focus and topic

In this section, we first discuss the notions of focus within a theory that acknowledges the existence of at least two different types of foci: presentational focus and contrastive focus (for an overview see Kiss 1998). As we will show below, polarity focus may receive either a presentational or a contrastive interpretation. Then we address the different notions of topic: topic as an aboutness relation in the sense of Reinhart (1982, 1995), anaphoric topic (Kuno 1972; Lambrecht 1994), and the contrastive topic (Kuno 1973; Büring 1997; for an overview see Molnár 1998).

2.1. *Presentational focus vs. contrastive focus*

We will follow a long tradition initiated by Halliday (1967), Chomsky (1972), and Jackendoff (1972) and continuing through Rochemont (1986) and Winkler (1996) up to Kiss (1998), among others, in differentiating the notions of presentational and contrastive focus. We will assume that presentational focus is pragmatically defined as an utterance that is not contextually construable (Rochemont 1986), or not discourse-linked (D-linked) (Pesetsky 1987), and that allows a maximal projection of the focus feature.<sup>2</sup> It is generally assumed for intonational languages that the syntactic-focus feature [F] is assigned to the most prominent element of the intonational domain. An uncontroversial case is given in (6a) (falling intonation is marked by a backslash, \):

- (6) a. A: What's new about Anna?  
       B: Anna [bought *The Minimalist PROGRAM*]\<sub>F</sub>  
       b. A: What did Anna buy?  
       B: She bought [*the Minimalist PROGRAM*]\<sub>F</sub>

Example (6aB) is a felicitous answer to the question in (6aA). The lexical element on which the strongest pitch accent is realized is also assigned the focus feature. From there the feature is said to project outside the maximal projection of the accented word, namely up to VP as indicated by the brackets and the subscript F. *Anna* is not included in the focus domain since it is D-linked and functions as the discourse topic. Since (6aB) could also be an appropriate answer to a VP-focus-inducing question, such as *What did Anna do?*, this type of sentence is referred to as VP-focus, or wide focus. (6bB), on the other hand, answers only a single question, namely (6bA), and is thus described as a narrow focus. Narrow foci may be interpreted either as presentational, providing an answer to the question, as in (6bB), or as contrastive, as in the discourse given in (7):<sup>3</sup>

- (7) A: I heard that Anna finally read *The Minimalist PROGRAM* \.  
       B: No, she only BOUGHT \ it.

For presentational focus, we follow Selkirk's (1984, 1995) argument-structural approach, which is based on the observation that accent location within a phrase is rule-governed. In particular, we will make the assumptions (8i)–(8iii) regarding focus assignment:

- (8) (i) An accented head is assigned a focus feature [+F].  
       (ii) A focus-assigned head licenses the focus assignment of its projection.

- (iii) A focus-assigned internal argument licenses the focus assignment of its head.

Examples (9a) to (9d) spell out the focus-projection mechanism that is generally assumed for intonational languages. Applying (8i)–(8iii), the paradigm in (9a) shows that a single pitch accent on *Casablanca* gives rise to four different sentence foci depending on different context questions.<sup>4,5</sup> A pitch accent on the head of the DP *rerun* in (9b) or on the head of the VP *watch* in (9c) provides either a narrow-focus reading or a wide-focus reading. The wide-focus readings are felicitous if *Casablanca* and *a rerun of Casablanca* respectively are D-linked. (9d) results in a narrow-focus reading on *Anna*, since this example can only answer a single question, namely *Who watched a rerun of Casablanca?*

- (9) a. Anna watched a rerun of “CASABLANCA”\.
- i. Anna watched a rerun of [“CASABLANCA”]\<sub>F</sub>.
  - ii. Anna watched a [rerun of [“CASABLANCA”]\<sub>F</sub>]\<sub>F</sub>.
  - iii. Anna [watched [a rerun of [“CASABLANCA”]\<sub>F</sub>]\<sub>F</sub>]\<sub>F</sub>.
  - iv. [Anna [watched [a rerun of “CASABLANCA”]\<sub>F</sub>]\<sub>F</sub>]\<sub>F</sub>.
- b. Anna watched a RERUN\ of “Casablanca.”
- i. Anna watched a [RERUN]\<sub>F</sub> of “Casablanca.”
  - ii. Anna watched [a [RERUN]\<sub>F</sub> of “Casablanca”]\<sub>F</sub>.
- c. Anna WATCHED a rerun of “Casablanca.”
- i. Anna [WATCHED]\<sub>F</sub> a rerun of “Casablanca.”
  - ii. Anna [[WATCHED]\<sub>F</sub> a rerun of “Casablanca”]\<sub>F</sub>.
- d. ANNA watched a rerun of “Casablanca.”
- i. [ANNA]\<sub>F</sub> watched a rerun of “Casablanca.”

The crucial cases with respect to the function of information structure in VPE/VPA are (10a) and (10b), which are marked by a pitch accent on the auxiliary *do*. It follows from (8) above that (10a) and (10b) have either a narrow- or a wide-focus reading as indicated in (i) and (ii) respectively (rising intonation is marked by a slash, /):

- (10) a. Anna DID\ watch a rerun of “Casablanca.”
- i. Anna [DID]\<sub>F</sub> watch a rerun of “Casablanca.”
  - ii. Anna [[DID]\<sub>F</sub> watch a rerun of “Casablanca”]\<sub>F</sub>.
- b. /SANDRA didn’t watch a rerun of “Casablanca”\ but /ANNA DID\.
- i. /SANDRA didn’t watch a rerun of “Casablanca”\ but /ANNA [DID]\<sub>F</sub>.
  - ii. /SANDRA didn’t watch a rerun of “Casablanca”\ but /ANNA [[DID]\<sub>F</sub>]\<sub>F</sub>]\<sub>F</sub>.

In (10a) and in the elliptical clause in (10b), the H\*L-L% accent is

realized on the auxiliary *did*, which represents the positive instantiation of sentence polarity. This type of accent on the polarity time is referred to as polarity focus. Under our assumption that sentential polarity is represented as an independent functional projection, polarity focus is realized on  $\Sigma^0$ . It follows from the rules in (8) that focus on  $\Sigma^0$  allows, in addition to a narrow-focus reading ([10ai] and [10bi]), a presentational-focus reading in which focus assignment to  $\Sigma^0$  licenses the focus assignment of its projections (cf. [10aii] and [10bii]) depending on an appropriate context. The polarity focus on the auxiliary in (10a) can project to the node  $\Sigma P$ , instantiating presentational-VP-focus reading (10aii), when (10a) is uttered as a continuation of the context given in (11a) or as an answer to the question in (11b):

- (11) a. John said that it would be great to watch a rerun of “Casablanca.” He began to persuade his girlfriend. So,  
b. What happened after all?

Following this line of argumentation, the presentational reading of the VPE in (10b) is straightforward if, for example, uttered as a continuation of the sentence in (12B):

- (12) (Context: Sandra and Anna are twins who live in different cities.)  
A: They even spend their evenings in the same way.  
B: No, that’s not true. Yesterday,  
/SANDRA didn’t watch a rerun of “CasaBLANCA”\ but  
/ANNA [DID]\<sub>F</sub>.

The discourse context in (12) allows for a reading in which *watch a rerun of Casablanca* could refer to two different reruns showing at two different locations. It follows that the fully spelled VP in the first conjunct and the VPE in the second conjunct refer to two different events of the same type. Thus, as in (10a), focus on the head of  $\Sigma P$  allows for a presentational reading of the specific event of Anna watching a rerun of “Casablanca” showing in her town.<sup>6</sup> This is represented configurationally in (13):

- (13) a. presentational focus                      b. polarity focus
- XP[+F]

└───┬───┘

X<sup>0</sup>      YP

[+F]      D-linked

$\Sigma P$ [+F]

└───┬───┘

$\Sigma^0$       VP

[+F]      D-linked

The hypothesis intimately connected with this analysis states that the domain of existential closure is the VP (see Kratzer 1988; Diesing 1992;

Kondrashova 1996) and that  $\Sigma P$ , which hosts assertive negation in English, demarcates the domain of presentational focus as proposed by Drubig (1994).

Let us now turn to contrastive focus. We say that a constituent bears contrastive focus when it is overtly or covertly associated with a focus operator. Examples of overt focus operators are *only* and *even* in English:

- (14) a. Even MARY could tell you where to find a yellow car.  
b. Only MARY could tell you where to find a yellow car.

There has been some debate over the last three decades on whether association with focus is a syntactic phenomenon or a purely semantic one. More recently, Rooth (1985, 1992a) has proposed the so-called alternative semantics for focus, which does not assume any sort of syntactic movement. Both Rooth and Kratzer (1991) argue that focus in English cannot involve movement because it would violate island constraints, as shown in example (15) (from Kratzer 1991: 828):

- (15) They only investigated the question whether you know the woman who chaired the ZONING board.

The focus operator *only* is associated with the heavily stressed phrase *zoning board*. According to a syntactic approach to focus, the accented phrase would raise at LF into the checking domain of the focus operator. However, *only* and the focused phrase are separated by a complex DP, which constitutes a strong island. This would suggest, according to Kratzer, that association with focus is a purely semantic phenomenon.

However, Drubig (1994) shows that those cases in which focus movement would seem to cross islands actually involve pied-piping of the entire island (a line of argumentation with roots in Nishigauchi 1986, who discusses the similar case of LF wh-movement). His test to determine the extent of focus is the negative contrastive construction, which acts as a tag to a focused phrase, as in (16):

- (16) Only BEANS\ I like, (not LENTILS\).

Drubig assumes, correctly in our opinion, that the negative tag indicates precisely which constituent is being focused. We can now consider different tags to Kratzer's example:

- (17) They only investigated [<sub>DP1</sub> the question whether you know [<sub>DP2</sub> the woman who chaired [<sub>DP3</sub> the ZONING\ board.]]]  
a. \*not the SCHOOL\ board.  
b. \*not the woman who chaired the SCHOOL\ board.



- c.  $\sqrt{\text{not the question of whether you know the woman who chaired the SCHOOL\ board.}}$

Notice that the negative tag shows that the actual focused phrase is not the accented  $\text{DP}_3$  or even the  $\text{DP}_2$ , but the higher  $\text{DP}_1$ . This shows that a focus operator cannot be associated with a focused phrase across an island and suggests a syntactic movement analysis in which  $\text{DP}_1$  is pied-piped.

A second type of focus operator is phonetically null. Consider the sentences in (18) (rising topic intonation is marked by a slash, /; comma suggests an intonational break):

- (18) a. /BEANS, I like.  
b. I like BEANS\.

In (18a) the object *beans* has been fronted — a syntactic movement usually (and confusingly) referred to as topicalization (Chomsky 1976). (18a) can only be uttered in order to contradict a previously asserted proposition. Thus, we assume that the null focus operator has a distinct adversative meaning. (18b) can also (but not only) be uttered to contradict a previous assertion or, in other words, is ambiguous between a presentational- and a contrastive-focus reading. If it is a contrastive focus, we will assume that the *in situ* focus raises at LF in a way parallel to that in (17). Again, islands provide evidence for LF movement and pied-piping, as Drubig (1994) shows:

- (19) He didn't interrogate the man who invited the ex-convict with the RED\ shirt but  
a. \*the BLUE\ shirt.  
b. \*with the blue shirt.  
c. \*the ex-convict with the BLUE\ shirt.  
d.  $\sqrt{\text{the man who invited the ex-convict with the BLUE\ shirt.}}$

Where do contrastive-focus constituents move to? It has been argued (Culicover 1991; Drubig 1994) that contrastive focus depends on a functional category that projects a phrase called *polarity phrase*, situated above IP. We assume the correctness of this analysis (we will present some reasons presently), and we recast it in minimalist terms in the following manner: a focus operator/feature (or maybe, more generally, an affective operator; see Culicover 1991) can merge with a TP and attract a constituent with a matching feature, either overtly or covertly. The affective feature projects onto a phrase of the same type as the

feature itself, namely a *focus phrase* (FP). The resulting clause structure that we assume is as in (20):

- (20) [FP ... [TP ... [ΣP ... [VP]]]]

To sum up: (i) focus is a functional category, and (ii) it attracts a constituent with a contrastive-focus reading, thus forming a syntactic chain. The examples used so far are all in English, but shortly we will show that the same is the case in German and Spanish. Moreover, overt focus movement has been described and analyzed in detail in languages as distant as Basque (Ortiz de Urbina 1989) and Hungarian (Horvath 1985; Kiss 1995, 1998), among others. We will tentatively hypothesize that the syntactic basis of focus is part of UG.

## 2.2. Topic

Topic, which is defined in terms of aboutness (Reinhart 1982, 1995), is the part of the sentence that we are talking about and that anchors the sentence to the previous discourse (Vallduví 1993). In the simplest possible case, the topic simply repeats previous information. We will refer to this as anaphoric topic. Consider example (21):

- (21) a. A: What about John?  
       B: John married ROSA, but he / [e] didn't really LOVE her.  
       b. A: Who married Rosa?  
       B: JOHN married Rosa, but he /\*[e] didn't really love her.

As observed by Lambrecht (1994: 136), the anaphoric topic *he* in the second conjunct of (21a) can be omitted if the subject correspondent in the antecedent clause is a topic. If it is a focus, as in (21b), the omission of the subject pronoun in the second conjunct results in ungrammaticality.

Very often, a topic specifies a subset of a given set, as in (22):

- (22) A: Tell me about your students in Linguistics 101. Did they turn in their homework on time?  
       B: /MARY turned in her homework YESTERDAY\  
           but /JOHN will need a little extra TIME\.

Although both *Mary* and *John* are new in the discourse, the felicitousness of (22) crucially depends on both of them being members of the set *students in Linguistics 101*. In this sense, we consider them to be topics. Since *Mary* and *John* are marked with a rising intonation and express a

double contrast, we will refer to them as contrastive topics. There has been an ongoing debate between those who analyze the contrastive topic as a subtype of topic, for example, Kuno (1973: 44–49), Kiss (1987), and Büring (1997), and those who assume that contrastive topics are actually foci, for example, Krifka (1998) and Selkirk (1984). Our study on VPE supports the proposal made by Molnár (1998) that contrastive topics show a “combined effect of topicality and focusing” (1998: 135), and that they occur in “obligatory combination [...] with an additional focus in the sentence” (1998: 135). That is, the criteria of (i) rising intonation, (ii) sentence-initial position, and (iii) the aboutness relation qualify *Mary* and *John* as topics, while the contrastive reading characterizes them as foci. Although *Mary* and *John* stand in the type of relation that Rooth (1992a) calls a symmetric contrast, this relation is distinct from what we refer to as contrastive focus. The difference between contrastive topic and contrastive focus can be seen in the following example (secondary pitch accents are marked by the acute accent, ‘):

- (23) (Two teachers are talking about their male students):
- a. #/JOHN will not turn in his homework ON TIME\ but /MARY WILL\.
  - b. A: John said he would turn in his homework on time.  
B: No, MARY\ said she would.

(23a), pronounced with the indicated intonation, is an infelicitous remark in the given context because *Mary* is not a member of the set established in the previous discourse. (23bB), with an articulated fall on *Mary*, is fine as a response to (23bA). The H\*L pitch accent in (23bB) turns this constituent into a contrastive focus, which contradicts the previous assertion and introduces a referent that does not necessarily belong to the set that constituted the original topic of conversation. Contrastive focus as in (23bB) can force an accommodation of the presupposition set, whereas contrastive topic cannot. Furthermore, a contrastive topic requires that another constituent bear an additional focus, in (22B) realized as a fall, while a contrastive focus as in (23bB) does not require an additional intonationally marked focus (see the discussion of examples [35] to [37] below).

Topics in English either can be left *in situ*, or they can be fronted, thus forming a chain (Vallduví 1992):

- (24) What did you do with the books?
- Well, I put /WAR AND PEACE in the CUPBOARD\ and
  - a. I left /CRIME AND PUNISHMENT in the BARN\.
  - b. /CRIME AND PUNISHMENT, I left in the BARN\.

It seems at least plausible that the *in situ* topic moves covertly, but we will not explore this issue here. Let us now focus on (24b). It seems that the topic constituent has been fronted to a peripheral position. It is usually assumed that it is adjoined to TP and, as far as we can tell, that is a likely candidate. However, it is not the only possibility. It has long been observed (see Culicover 1991) that whenever we find two fronted constituents, the first one is a topic and the second one is a focus:

(25) /THIS BOOK, to ROBIN\ I gave.

Thus, it follows that topics in English are free to adjoin to TP and FP (cf. Rizzi 1997). Another possibility is that topic is also a syntactic feature that merges with the highest clausal projection projecting a topic phrase (cf. Koizumi 1995). As we will show in later sections, German and Spanish instantiate different grammars for topic. In German, topic is a functional head that projects an independent phrase and attracts a verbal head and a topic phrase. In Spanish, topic phrases appear adjoined to several functional categories (see Zubizarreta 1998 for a recent analysis and references).

### 3. The role of polarity focus in VPA

#### 3.1. *Introduction*

The syntactic literature on VPE has paid considerable attention to the functional constituents that occur at the left edge of an elided VP. Zagona (1988) argues that VPE is licensed if the VP is properly governed by INFL, while Lobeck (1995) uses the notation of agreement between the functional head tense and its VP complement. As discussed in section 1, we assume that a  $\Sigma$  head licenses the appearance of a null VP in the syntax (see [4]). However, the possibility that this functional constituent may play a role in licensing the elided category at PF has not been explored so far. In this section, we make a first attempt at filling this gap: we concentrate on the negative/affirmative component of the VPA construction and propose that polarity focus plays a crucial role in the licensing of VPE in English and Spanish and of VPA in German.

As discussed above, the function of polarity focus is to either affirm or negate that there is an event that is introduced in the first coordinate sentence, as seen in (26)–(28) for English, Spanish, and German. We concentrate on the pitch accents in the elliptical conjuncts and leave the intonation of the first conjuncts unspecified for now:

- (26) a. Ben said he has read Dostoyevsky's *Idiot*, but he HASN'T\ [e].  
 b. Jan said that he hasn't read Dostoyevsky's *Idiot*, but he HAS\ [e].
- (27) a. Susana leyó *Guerra y Paz* pero María NO\  
 Susana read War and Peace but Maria did not  
 b. María no leyó *Guerra y Paz* pero Susana SÍ\  
 Maria did not read War and Peace but Susana did
- (28) a. Jan kann die Aufgabe lösen, aber ich weiß, dass /Peter es  
 Jan can the task solve but I know that /Peter es  
 NICHT\ kann.  
 not can  
 b. Peter kann die Aufgabe nicht lösen, aber ich weiß, dass /Jan  
 Peter can the task not solve but I know that Jan  
 es KANN\  
 es can

Polarity focus is realized in each of the VPA sentences that we have encountered. On the strength of this observation, we suggest the licensing condition in (29):<sup>7</sup>

- (29) VPA in English, German, and Spanish is licensed if (i) and (ii) hold:  
 (i) VPA is coherently [-F].  
 (ii)  $\Sigma^0$  is [+F].

The Spanish example in (27) is the straightforward case. As is convincingly shown in Ladd (1996) and also in Zubizarreta (1998), presentational focus in Romance languages, and particularly in Spanish, is consistently realized on the sentence-final element. Thus, the [+F] feature is realized as an H\*L accent on the negative *no* in (27a) and on the affirmative *sí* in (27b). Accordingly, the presentational-focus accent in the complete counterpart of (27a) is not realized on the NEG/AFF term, but again on the last element of the sentence. There seems to be a restriction that the sentence-final position must be accented, even if the VP is contextually given, as shown in (30).

- (30) ¿Susana leyó *Guerra y PAZ*?  
 Susana read War and Peace  
 a. No. Susana no leyó *Guerra y PAZ*  
 b. \*No. Susana NO\ leyó *Guerra y Paz*  
 no Susana not read War and Peace

Zubizarreta proposes that Spanish employs a specific phonologically motivated movement mechanism, called p-movement, which moves unfo-

cused elements away from the sentence-final position, which is reserved for focusing. Assuming Zubizarreta's observations to be correct, we can then speculate that the occurrence of an empty or anaphoric VP proform fulfills the same purpose as phonologically motivated movement in Spanish: the sentence-final focus position is marked by [+F] and thus licenses VPA as predicted in (29).

In section 3.2, we discuss the English cases and show that (29) is a necessary condition for the acceptability of VPE. German VPA, which presents a certain degree of complexity, is discussed in section 3.3.

### 3.2. *English*

We identify the pitch accent on the remaining functional element  $\Sigma$  in English, German, and Spanish VPA constructions as polarity focus and claim that it can be interpreted either as presentational focus, as in (31a) and (31b), or as contrastive focus, as in (32). (31a) represents a coherent discourse.

- (31) a. (Context: A and B are talking about Anna and Sandra.)  
           A1: What did Anna do?  
           B1: She LEFT.  
           A2: And what did Sandra do?  
           B2: She DIDN'T.  
       b. A: Who did what? (having Anna and Sandra in mind)  
           B: /ANNA LEFT\ but /SANDRA DIDN'T\.

The argument that VPE in (31b) allows a presentational-focus reading is based on the observation that wh-questions form a special kind of focusing device “that sets up a local (temporary) focus-background structure by specifying the constituent that must be focused in the answer” (Drubig 1998: 29). The answer to a wh-question as such is neither contrastive nor presentational. Rather it has the function of providing the speaker with the missing information in a sentence that has a focus structure that parallels the focus structure of the question. Since the foci in the answers B1 and B2 in (31a) are noncontrastive, the answer in (31b) is also noncontrastive. It introduces two different events of the same type, a leaving event by Anna and a different leaving event by Sandra.<sup>8</sup> Therefore, we assume that assertive negation, hosted in spec,  $\Sigma$ P, licenses a presentational-focus reading. This analysis is compatible with the proposals by Diesing (1992), Krifka (1992), Drubig (1994), and Kondrashova (1996), who propose that the domain of presentational focus is VP.

Consider now example (32):

- (32) A: Can John solve the problem?  
B: No, he CAN'T.

In (32B), the focus on the auxiliary is interpreted as contrastive focus. In this case, we assume that the negative auxiliary has been attracted to the head of FP, the domain of contrastive foci (see [20]). In other words, we suggest the following derivation: (i) the negative auxiliary in  $\Sigma^0$  receives a pitch accent and a [+F] feature, and (ii) by head-to-head movement, the auxiliary is attracted to  $F^0$  at LF, acquiring a contrastive-focus reading. This analysis suggests the possibility that contrastive focus in general be analyzed as an extra layer imposed on presentational focus — a possibility that we leave for future research to explore.

In both instances of polarity focus, the presentational and the contrastive, the focus condition on licensing heads of VPA is satisfied. In each case,  $\Sigma^0$  must be [+F] realized as an H\* accent to license a [-F] constituent at PF.

If  $\Sigma$  is not realized with a pitch accent on the auxiliary as in (33a) and (33b), but rather with an L-L% boundary sequence on the contracted or reduced auxiliary as in (33a'), (33b'), or (33b''), the sentence becomes sharply ungrammatical (cf. King 1970; Martin 1992; Lobeck 1995; López 1995, among others):

- (33) a. Jan said that he said that he has read Dostoyevsky's *Idiot*,  
but he HASN'T\ [e].  
[hæznt]  
a'. \*Jan said that he has read Dostoyevsky's *Idiot*,  
but he hasn't [e].  
[həznt]  
b. Jan said that he hasn't read Dostoyevsky's *Idiot*,  
but he HAS\ [e].  
[hæz]  
b'. \*Jan said that he hasn't read Dostoyevsky's *Idiot*,  
but he has [e].  
[həz]  
b''. \*Jan said that he hasn't read Dostoyevsky's *Idiot*,  
but he's [e].  
[z]

The focus condition on licensing heads in (29) requires that the  $\Sigma P$  must be assigned a [+F] feature, which is realized by a pitch accent in intonational languages, in order to license VPA, thus accounting for the ungrammaticality of (33a') (33b'), and (33b''). (29) also holds for (34):<sup>9</sup>

- (34) Jan said that he has read Dostoyevsky's *Idiot*, but he's NOT.

In (34), the auxiliary is contracted, but the licensing element for VPE is the negation, which is assigned [+F], here realized by a pitch accent on *not*. Consider now (35):

- (35) A: Who left?  
B: JOHN did.

In (35), focus assignment to the auxiliary interacts with the marking of the subject as focus to a wh-question. Since the pitch accent on *John* is stronger than the pitch accent marking presentational focus, some authors wrongly conclude that focus in these cases has only been assigned to the subject. For instance, Williams (1977: 107) claims that the auxiliary that is found in VPE cannot be identified with the auxiliary that is found in emphatic-assertive sentences, as in *John did leave* — in our terms, the affirmative  $\Sigma$  head. However, the auxiliary in (35) cannot be contracted. If Williams were right, we would be in a paradoxical situation: the auxiliary is not a  $\Sigma$  head, but it is not an ordinary auxiliary either.

We claim that the auxiliary in (35) is a  $\Sigma$  head, which is marked as [+F], despite the fact that the focus feature is not realized as an H\*L accent. The [+F] feature on polarity, however, is still responsible for the noncontractability of the auxiliary in (36B1) and (37a). The lack of an H\*L accent is due to the rhythm rule (Lieberman and Prince 1977), whose function is to avoid the stress clash that occurs between two adjacent syllables that are realized with equally strong stress. By interspersing additional material between the adjacent elements it can easily be recognized that both the subjects and the auxiliaries are prosodically marked by a pitch accent:

- (36) A: Who's left?  
B1: \*JOHN'S.  
B2: /JOHN probably HAS\  
B3: \*JOHN probably has.  
[həz]
- (37) a. \*John has not read Dostoyevsky's *Idiot* but /PETER'S.  
b. John has not read Dostoyevsky's *Idiot* but /PETER  
presumably HAS\  
c. \*John has not read Dostoyevsky's *Idiot* but /PETER  
presumably has.  
[həz]

The subjects are assigned the typical topic accent L\* + H (signaled by / for *rise*). The auxiliaries in (36B2) and (37b) are assigned a focus feature



typically realized as an H\*L·L% tone sequence (signaled by \ or *fall*) on the term that realizes the NEG/AFF features of  $\Sigma^0$ . Notice that a deaccented auxiliary is ungrammatical, as seen in (36B3) and (37c). Therefore, we maintain the claim that polarity focus licenses VPE in English even in examples like (35).

### 3.3. German

We have identified the prosodic realization of polarity focus on  $\Sigma^0$  as the licensing condition for VPE in English as stated in (29). We will argue that basically similar licensing regularities apply to the German *es* construction, with the difference that the German VPA is a scrambling construction that is subject to specific syntactic and discourse requirements. We will discuss these in more detail as we go along (see also Winkler 1998).

German VPA consists of the particle *es* selected by a modal verb, as shown in (3), repeated here:

- (38) a. Jan kann die Aufgabe lösen, aber ich weiß, dass Peter es nicht  
 Jan can the task solve but I know that Peter *es* not  
 kann.  
 can  
 b. Peter kann die Aufgabe nicht lösen, aber ich weiß, dass Jan es  
 Peter can the task not solve but I know that Jan *es*  
 kann.  
 can

*Es* in (38a) and (38b) replaces infinitival VPs. It is, however, well known that *es* can assume various other anaphoric as well as expletive functions (for a summary see Eisenberg 1994). Two more properties of German VPA are noteworthy: (i) *es* cannot be selected by an auxiliary, and (ii) *es* cannot be selected by an epistemic modal:<sup>10</sup>

- (39) a. \*Jan hat die Aufgabe gelöst, aber Peter hat es nicht.  
 Jan has the task solved but Peter has *es* not  
 b. Jan muss sein Auto jeden Tag waschen und Peter muss es auch.  
 Jan must his car every day wash and Peter must *es* too  
 c. Jan kann über den Zaun springen aber Peter kann es nicht.  
 Jan can over the fence jump but Peter can it not

Neither example (39b) nor (39c) allows for an epistemic reading.<sup>11</sup> The VPA in (39b) can only have the deontic meaning that Peter has the obligation to wash his car every day and cannot mean that Peter seems

(or is likely) to wash his car every day. Similarly, the VPA in (39c) only allows the dynamic reading, which expresses the capability to jump over the fence, and disallows the possibility reading. Both nonepistemic interpretations are commonly referred to as root modality (Hofmann 1976 [1966]).

In contrast to English and Spanish, German generally does not allow an empty category in VP position (cf. Klein 1993):

- (40) a. \*Jan hat Krieg und Frieden gelesen, und Anna hat auch.  
           Jan has War and Peace read and Anna has too  
       b. \*Jan ist gut angekommen, und Anna ist auch.  
           Jan is well arrived and Anna is too

Although (41a) is judged somewhat less marginal because the finite element is a modal and  $\Sigma$  is as signed a pitch accent, it still requires the insertion of the propredicate *es* to be fully acceptable, as in (41b):

- (41) a. ?Jan kann/muss zum Arzt gehen, aber Anna kann/muss  
           Jan can /must to the doctor go but Anna can /must  
           NICHT.  
           not  
       b. Jan kann/muss zum Arzt gehen, aber Anna kann/muss es  
           Jan can /must to the doctor go but Anna can /must *es*  
           NICHT.  
           not

We conclude that while German does not have VPE, it employs an anaphoric VP construction consisting of the proform *es* and a root modal. As with the English and Spanish covert counterparts, we propose that the functional category  $\Sigma$  plays an essential role in the licensing process of the *es* construction in German. Hypothesis (29) predicts that the functional head  $\Sigma^0$  must be focused to license the VPA *es*, which is  $[-F]$ . This prediction is borne out, as seen in the subordinate sentences in (42) and the matrix sentences in (45) below.

- (42) A: Anna and Jan are always equally optimistic about tasks.  
       B: Not this time  
           Anna glaubt, dass sie die Aufgabe lösen kann, und Jan  
           Anna thinks that she the task solve can and Jan  
           glaubt,  
           believes  
       a. dass er es NICHT kann.  
           that he *es* not can  
       b. \*DASS er es nicht kann.  
       c. \*dass er es nicht KANN.

The ungrammaticality of example (42b) results from the fact that focus on the complementizer requires that the entire proposition of the *dass* clause be presupposed (see e.g. Hetland 1992), as in (43) below.<sup>12</sup>

- (43) A: (Er fragt sich,) ob er die Aufgabe lösen kann.  
           (he asks himself) whether he the task solve can  
       B: (Ich weiß,) DASS er es kann.  
           (I know) that he *es* can

Example (42c) is ungrammatical because contrastive focus on the modal verb can only occur if every constituent in (42c), except the modal, is D-linked material, for example, as a reply in the context given in (44):

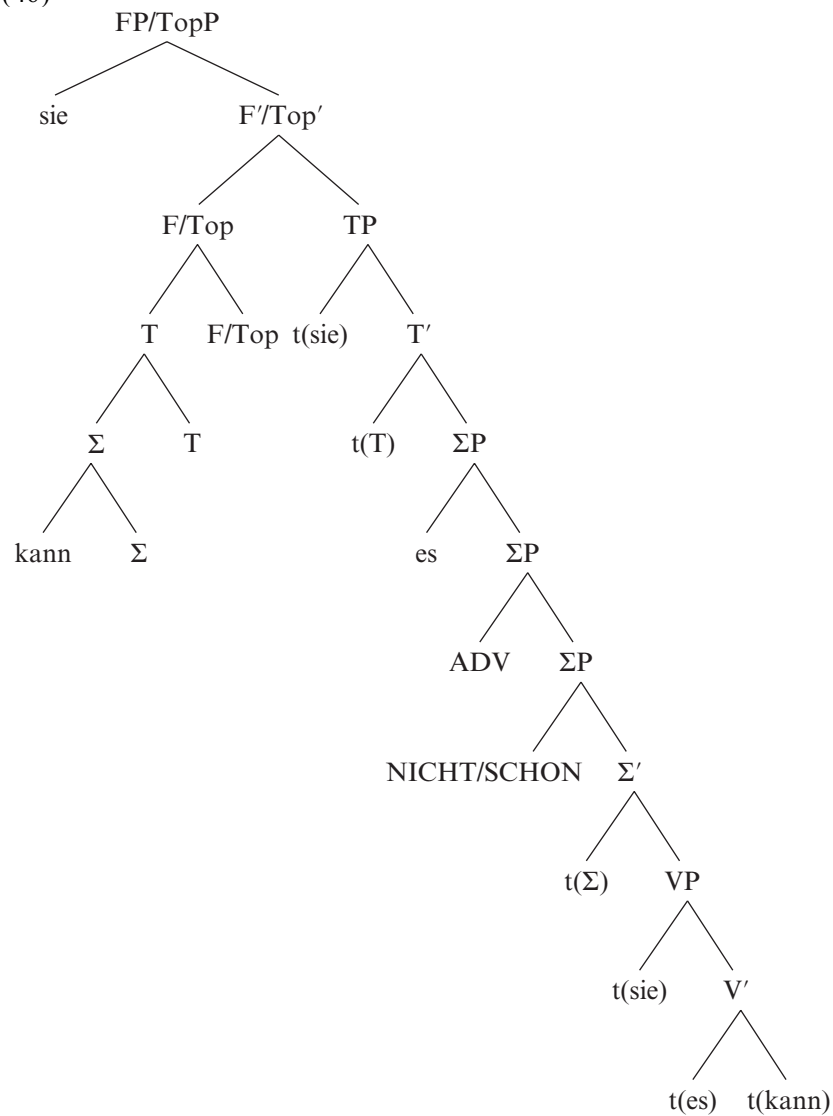
- (44) A: Jan glaubt, dass er die Aufgabe nicht lösen muß.  
           Jan thinks that he the task not solve must  
       B: Nein, Jan glaubt, dass er es nicht KANN.  
           no Jan thinks that he *es* not can

Principle (29) also accounts for the contrasts seen in the matrix sentences in (45). The NEG/AFF features, which are instantiated by the negative element *nicht* in (45a) and the affirmative element *schon* in (45b), license the VPA only if they carry a [+F] feature:

- (45) a. A: Anna kann die Aufgabe lösen.  
           Anna can the task solve  
       B1: Nein, sie kann es NICHT\\*nicht.  
           no she can *es* not  
       b. A: Anna kann die Aufgabe leider nicht lösen.  
           Anna can the task unfortunately not solve  
       B2: Doch, sie kann es SCHON\\*schon.  
           certainly she can *es* AFF-PARTICLE

The surface word order of (45B1) suggests that *es* is moved out of its initial position. This adds to the well-known V/2 effects in main clauses to yield a phrase marker like the one in (46):

(46)



Ordinary matrix sentences, such as in (46), are derived by two movement operations: (i) movement of the subject into spec, TopP, and (ii) V/2 head-to-head movement of  $V^0$  to  $\text{Top}^0$ . To account for the absence of V/2 effects in subordinate clauses we can invoke the traditional assumption that Top in German is a type of complementizer. The  $\Sigma$  head is

filled by a NEG/AFF term and *nicht/schon* occurs in the first spec,  $\Sigma$ P position (see Grewendorf 1990; Buring 1993) and must be assigned [+F] in order to license the proform *es*. Furthermore, we propose that the features of *es* are attracted to  $\Sigma$  and *es* itself is pied-piped to a higher spec,  $\Sigma$ P position, an analysis compatible with Chomsky (1995). López (1995) argues that elided predicates must be in the checking domain of  $\Sigma$  by LF.<sup>13</sup> The analysis in (46) suggests a parallelism between the empty categories in English and Spanish and the overt counterpart in German.

Notice that (46) accounts for the ungrammaticality of (39a) and the exclusion of the epistemic reading in (39b) and (39c). Koopman and Sportiche (1991) argue that auxiliaries are raising predicates, as opposed to root modals, which assign a  $\theta$ -role to an argument in their specifier position. Since *es* is an unstructured proform without a structural slot where the subject can be merged, it follows that (39a) is ungrammatical because the subject does not receive a  $\theta$ -role. The same reasoning applies to (39b) and (39c) if epistemic modals are also raising predicates, as proposed by Jackendoff (1972) and Brennan (1993: 71f.), among others.

Not only in matrix sentences is proverbal *es* moved out of its original position, but also in subordinate sentences. We assume that the proverbal *es* is scrambled to the left — a behavior identical to that of the *es* that replaces DPs, as analyzed by Lenerz (1993a, 1993b). This can be seen by the usual sentence-adverb test, which is based on the observation that sentence adverbs like *ja wahrscheinlich* mark the left edge of the VP (cf. Webelhuth 1989; Diesing 1992), as in (47):

- (47) Anna meint, sie könne die Aufgabe lösen, aber ich glaube,  
 Anna assumes she could the task solve but I believe
- a. dass sie es ja wahrscheinlich NICHT\ kann.  
 that she *es* indeed probably not can
  - b. dass es der /Peter ja wahrscheinlich NICHT\ kann.  
 that *es* the Peter indeed probably not can
  - c. dass der /Peter es ja wahrscheinlich NICHT\ kann.
  - d. \*dass der /Peter ja wahrscheinlich NICHT\ es kann.
  - e. \*dass ja wahrscheinlich sie NICHT\ es kann.
  - f. ?dass ja wahrscheinlich der Peter es NICHT\ kann.

The VPA *es* can scramble to a position following the pronominalized subject and preceding the sentence adverbs as in (47a), and it can precede the full subject NP *der Peter* as in (47b) or follow it as in (47c). The VPA *es* cannot remain within the VP projected by the modal verb as shown by the ungrammaticality of (47d) and (47e). The marked status of (47f) can be explained by the hypothesis based on Diesing (1992) that specific DPs like *der Peter* and also the propredicate *es* must be scrambled out of VP in German.

The following question arises: how can the assumption be motivated that preverbal *es* scrambles out of VP if scrambling of an overt VP as in (48a) is disallowed in German, as observed by Webelhuth (1988), von Stechow and Sternefeld (1988: 465), and Müller (1995: 150), among others.

- (48) a. \*dass [<sub>VP</sub> die Aufgabe lösen] der Peter nicht t konnte.  
           that    the task    solve the Peter not    could  
       b. dass [<sub>VP</sub> es] der Peter nicht t konnte.  
           that    *es* the Peter not    could

An alternative analysis would be to assume that VPA is derived from VP-topicalization as briefly hypothesized in Johnson (1997).<sup>14</sup>

- (49)       Kann Anna das Problem lösen?  
               ‘Can Anna solve the problem?’  
       a.    Nein, das Problem /lösen, kann sie NICHT\,  
               no    the problem solve can she not  
               (aber /bewältigen SCHON)  
               but overcome certainly  
       b.    Nein, das kann sie NICHT\  
               no    that can she not  
       c.    Nein, [<sub>VP</sub> e] kann sie NICHT\  
               no            can she not  
       d.    \*Nein, es kann sie NICHT\  
               no    *es* can she not

VP-topicalization of the full VP as in (49a) is grammatical. The deictic preverbal *das* can occur in topic position, as seen in (49b). The topicalized VP can optionally be dropped as in (49c). (49c) can be assumed to be an instance of the more general phenomenon of pronoun zap (deleting *das*), as first classified by Ross (1982) and extensively discussed for German in Fries (1988). Note, however, that the topicalization of the verbal proform *es* as in (49d) results in ungrammaticality. This ungrammaticality can be explained by the general restriction on the occurrence of the weak pronoun form *es* in sentence-pre-V/2 position, as observed by Lenerz (1993b), Zwart (1993), and Gärtner and Steinbach (1997).<sup>15</sup> A topicalization analysis of VPA, however, cannot explain the pattern of VPA in subordinate sentences. Even if we assume that *das* functions as the deictic variant of *es*, since it can occur in the same positions in (49a)–(49c) as *es* with respect to sentence adverbials, we still have to explain why *das/es* can occur in positions other than topic positions in embedded sentences.

Therefore, we assume that the scrambling analysis of German VPA, as given in (46), is to be preferred. We adapt the idea by Cinque (1993), Reinhart (1995), Zubizarreta (1998), and Costa (1997) that scrambling is a type of focus construction that moves D-linked material away from a preferred focus position. Applied to German, specific DPs or pronominal elements are removed from the VP, which functions as the domain in which nominal elements receive an existential interpretation (Diesing's [1992] *mapping hypothesis*) and which coincides, according to Drubig (1994), with the domain of presentational focus.<sup>16</sup> Specific DPs denote a referent that can be uniquely identified; they are marked [–F] and are thus removed from the VP.

But why does proverbal *es* scramble? Let us assume Hardt's (1993: 40) hypothesis that a full VP has the function of an indefinite constituent, in the sense that it introduces an object, here an event, into the discourse model of Heim (1982). Let us further assume that Csúri's (1996: 277) proposal for *one* anaphora, that ellipsis does not classify as referential anaphora but as descriptive anaphora, extends to VPA and refers in this case to the type and not the token of an event. More specifically, in a coordinate structure, the VPA *es* refers to an event type that has been introduced into the discourse model in the first conjunct, which then counts as [–F] material. VPA *es* is therefore treated like other proforms that are scrambled out of VP. Thus, we assume that all D-linked elements, nominal or verbal, are moved out of the higher VP shell.

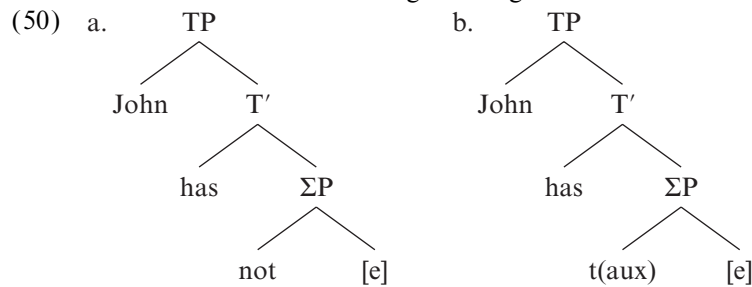
#### 4. The remnant in VPA

In the previous sections we discussed the crucial role that polarity focus plays in VPA. In this section we explore the discourse functions of the remnant in English and German, leaving Spanish for a separate section.<sup>17</sup> We find that in both languages the remnant can be a contrastive focus or a topicalized constituent; in other words, VPA *per se* does not impose any constraints on the information structure of the remnant. We will find, however, an interesting restriction in Spanish, which prevents Spanish VPE from including any contrastively focused material, and we will show that it follows from our assumptions on the syntax of contrastive focus and topic.

##### 4.1. English

The structure of VPE in English seems to include, at least, a  $\Sigma$ P and a TP. For the sentences in (1a) and (1b), repeated here, we propose the structures in (50a) and (50b):

- (1) a. Peter has seen “Wag the Dog” but John has not.  
 b. John has not seen “Wag the Dog” but Peter has.

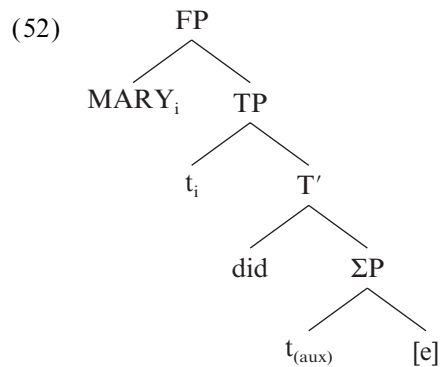


These structures give rise to a number of questions. How did the auxiliary end up in  $T^0$ ? How does the licensing mechanism for  $[e]$  actually work? Detailed alternative analyses of VPE in English can be found in Lobeck (1995) and López (1995). For our purposes, (50) suffices to show that VPE constructions in English include, at least, a  $\Sigma P$  and a TP.

Let us now discuss the information structure of the remnant. The remnants in (1) are clearly contrastive topics, as defined in section 2.2. Recall that we have concluded that contrastive focus is a syntactic feature that selects for TP. Since English VPE includes a TP, it should be possible for the latter to be selected by a focus feature and consequently the remnant should be able to include a focused constituent. This is indeed the case. Consider the examples in (51):

- (51) Those students didn't turn in their homework on time.  
 a. Only MARY\ *díd*.  
 b. Even MARY\ *dídn't*.

(51a), with an H\* pitch accent on *Mary*, is a clear example of contrastive focus. (51b), where *Mary* is within the scope of *even*, also receives contrastive focus. Their analysis involves an A' chain between spec, TP and spec, FP, as shown in (52):





## 4.2. German

As was discussed in section 3.3, see example (46), German VPA resembles main clauses fairly closely. The VPA in (53a) and (53b) has the structure presented in (54):

- (53) a. Anna kann die Aufgabe lösen, aber /PETER kann es NICHT\  
 Anna can the task solve but Peter can *es* not  
 b. Anna kann die Aufgabe lösen, aber ich glaube, /PETER kann  
 Anna can the task solve but I think Peter can  
 es NICHT\  
*es* not
- (54) [<sub>TOPP</sub> Peter<sub>i</sub> [<sub>TOP</sub> kann<sub>j</sub>] [<sub>TP</sub> t<sub>i</sub> [<sub>SP</sub> es<sub>k</sub> nicht [<sub>VP</sub> t<sub>k</sub> t<sub>j</sub>]]]]]

As is evident from the analysis above, German VPA includes a TP, just like English VPE. Since both topic and focus features select for a TP and this is present in the structure, we do not predict any differences between the information structure of ordinary sentences and that of VPA clauses. This expectation is fulfilled. In (55) we present some sentences in which the remnant is either a contrastive focus or a topic (we use the subscripts T for topic and F for focus):

- (55) a. subject topic  
 What's new about your sons?  
 Ben kann schon laufen, aber [/JAN]<sub>T</sub> kann es noch NICHT\  
 Ben can already walk but Jan can *es* yet not  
 b. adjunct topic  
 Anna konnte gestern die Aufgabe lösen, aber [/HEUTE]<sub>T</sub>  
 Anna could yesterday the task solve but today  
 konnte sie es NICHT\  
 could she *es* not  
 c. subject focus  
 Alle können die Aufgabe lösen, nur [ANNA]<sub>F</sub> kann es  
 everybody can the task solve only Anna can *es*  
 nicht  
 not  
 d. adjunct focus<sup>18</sup>  
 Anna kann sonst fast immer alle Aufgaben lösen, nur  
 Anna can almost always all tasks solve only  
 [GESTERN]<sub>F</sub> konnte sie es nicht.  
 yesterday could she *es* not

## 5. The remnant in Spanish

### 5.1. Introduction

As we saw in section 1, Spanish VPE consists of a negative or affirmative word and a remnant, which can be any XP. An example is (2), repeated here:

- (2) a. Susana leyó *Guerra y Paz* pero María no.  
       Susana read War and Peace but Mary not  
       b. María no leyó *Guerra y Paz* pero Susana sí.  
       Maria not read War and Peace but Susana yes

It is important to note that auxiliaries are ungrammatical in this construction:<sup>19</sup>

- (56) \*Susana fue vista con un hombre desconocido, pero María no  
       Susana was seen with a man unknown, but María not  
       fue.  
       was  
       ‘Susana was seen with an unknown man, but Maria was not.’

At first sight, it looks as if (1) and (2) instantiate different constructions because the English construction includes an auxiliary whereas the Spanish one prohibits it. Given this, it could be said that (2) actually instantiates stripping, an example of which is in (57a). However, it does not. Since at least Jackendoff (1972) it has been assumed that VPE is different from other types of fragmented discourse such as stripping, gapping, and conjunction reduction because it can appear in a wider set of environments and can be connected with a relatively distant antecedent. For instance, (57b) shows that stripping cannot appear in a subordinate clause:

- (57) a. Sam read many books but not novels.  
       b. \*Sam read many books but I think that not novels.

(58) shows that Spanish VPE can appear in subordinate clauses and across sentences in a discourse and can even precede its antecedent, provided that it does not c-command it (as Brucart 1986 first showed); in other words, it obeys the *backwards anaphora constraint* (cf. Langacker 1966):

- (58) a. Sam leyó *Guerra y Paz*.  
       Sam read War and Peace  
       Sí, pero *Crimen y Castigo* no [e].  
       yes but Crime and Punishment not

- b. Sam leyó *Crimen y Castigo* pero creo que *Guerra*  
 Sam read Crime and Punishment but I think that War  
*y Paz* no [e].  
 and Peace not
- c. Aunque creo que *Guerra y Paz* no [e], Sam ha leído  
 although I think that War and Peace not Sam has read  
 muchas  
 many  
 novelas rusas.  
 novels Russian

It seems that Spanish instantiates the structure in (4) for VPA in its pure form, since it is formed in just two steps: first the head  $\Sigma$  merges with the empty category, and then the resulting  $\Sigma P$  merges with the remnant. Crucially, the fact that auxiliaries are sharply ungrammatical is evidence that there is no tense node in Spanish VPE. This has clear consequences concerning the discourse functions and syntax of the remnant constituent(s): if focus and/or topic are distinct functional heads that select for a TP, as is clearly the case in German and English (at least with respect to focus in the latter case), then focus and/or topic shouldn't be found in VPE contexts. We find the following to be the case: (i) Spanish contrastive focus is a head that selects for tense and, consequently, contrastive focus is absent from VPE, and (ii) topic can be associated with several functional categories, including  $\Sigma$ , so it can be found in VPE.

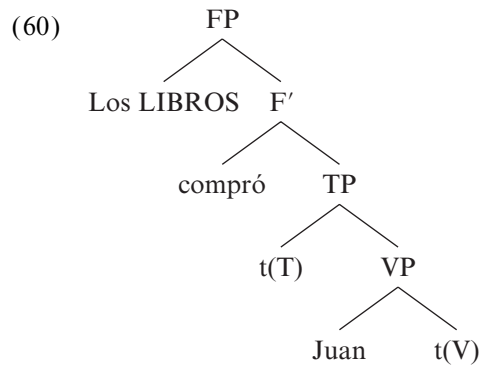
In section 5.2 we discuss the grammar of focus and topic in Spanish, and in 5.3 the remnant in VPE.

## 5.2. Focus and topic

In Spanish, as in English, contrastive foci can remain in situ or can raise overtly to some pre-TP position. If they raise, they also trigger V-raising:

- (59) a. Juan compró los LIBROS.  
 Juan bought the books
- b. Los LIBROS compró Juan.

It seems that the most natural analysis of (59) is to assume that the syntactic feature F(ocus) merges with TP to project a phrase: FP. This has already been proposed by Laka (1990) and developed in detail by Howard (1993). Thus, we propose the following analysis for (59b):



Before we go on, let us make sure that other analyses are not available:

- (61) a. [<sub>TP</sub> LOS LIBROS [<sub>TP/T</sub> compró [<sub>VP</sub> Juan t(v) t(OBJ)]]]  
 b. [<sub>TP</sub> [<sub>FP</sub> LOS LIBROS [<sub>VP</sub> t(SUBJ) compró] Juan]]

According to (61a), focus would be a sublabel of tense (as proposed by Zubizarreta 1998) rather than an independent functional category. This analysis would raise the question of why a direct object in spec, TP, or adjoined to TP, a position in which it can check a feature with a sublabel of T, does not agree with the main verb and receive nominative case. (61b) proposes that focus selects for VP rather than TP. Under this assumption, unmotivated rightward movement of the subject must be posited. Further, T would presumably merge with FP. The problem with this is that it is generally agreed that Spanish verbs raise to T overtly (following Belletti's 1990 arguments for Italian; see Suñer 1991); this gives us two possibilities: (i) either we obtain the word order V–focused phrase–subject, which is ungrammatical, or (ii) we somehow inhibit attraction of V by T. We conclude that (60) is to be preferred and that FP is higher than TP.

Let us now turn to in situ focus. We can use Drubig's (1994) tests to see if the in situ contrastive focus is sensitive to islands. (62) shows an example with a weak island:

- (62) Juan no sabía cómo arreglar el coche DESPACIO  
 Juan not knew how to-fix the car slowly  
 a. \*sino deprisa.  
     but quickly  
 b. √sino cómo arreglar el coche deprisa.  
     but how to fix the car quickly

The fact that the negative-contrastive construction must embrace the entire embedded CP, as in (62b), and not just the accented constituent,

as in the ungrammatical (62a), strongly suggests that *in situ* focus is sensitive to island constraints, which in turn suggests that *in situ* contrastive focus in Spanish involves movement, just like moved focused phrases. Thus, Spanish focus receives the same analysis as English contrastive focus.

Topics in Spanish appear displaced with a rise intonation. In (63) are several examples. (63a) involves an adjunct PP, (63b) an indirect object, and (63c) a direct object. Interestingly, notice that the topicalized object in (63c) is doubled by a clitic. A construction with left-peripheral topics is usually referred to as left dislocation. We represent left-dislocated examples in brackets:

- (63) a. [Por la mañana]<sub>T</sub> puedo traerlo.  
           in the morning, I-can bring-it  
           [Por la tarde]<sub>T</sub>, no creo que pueda salir del taller.  
           in the afternoon not I-think that I-can leave the shop  
       b. [A Pedro]<sub>T</sub> se le puede dar trabajo.  
           to Peter one him can give a job  
       c. [A María]<sub>T</sub> la quise ver el otro día, pero su padre  
           to Maria her I-wanted to-see the other day but her father  
           no me dejó.  
           not me allowed

As is well known, left-dislocated constituents can be found in several positions within the clause (Suñer 1991; Howard 1993). In (64) we use a direct object to show this point (for maximum felicitousness, these sentences should be read with fall-rise intonation [H\*LH%] on the left-dislocated constituent). As a matter of fact, a topic constituent can even be right-dislocated, (64d). Given this freedom, the ungrammaticality of (64e), different from (64c) only in absence of negation, comes as a surprise:

- (64) a. Me preguntó que [a María]<sub>T</sub> por qué Pedro no la saludó.  
           me s/he-asked that Maria why Pedro not her greeted  
           'S/he asked why Peter did not greet Maria.'  
       b. Me preguntó que por qué [a María]<sub>T</sub> Pedro no la saludó.  
       c. Me preguntó que por qué Pedro [a María]<sub>T</sub> no la saludó.  
       d. Me preguntó que por qué Pedro no la saludó, [a María]<sub>T</sub>.  
       e. \*Me preguntó que por qué Pedro [a María]<sub>T</sub> la saludó.  
           me s/he-asked that why Pedro Maria her greeted

The Spanish generative tradition has it that (64a)–(64d) provide evidence that left-dislocated constituents are adjoined to some maximal category. Zubizarreta (1998), within a different theoretical framework, proposes

that topic is a syntactic feature that can appear associated with several functional categories. Either solution is fine for our purposes here. The only important idea is that Spanish topics are not associated with an independent projection that dominates tense.

The contrast between (64c) and (64e) is of particular interest to us. Why is (64e) ungrammatical? Assuming that there is only one functional category here, TP, it would seem that left-dislocated constituents cannot adjoin to a projection of T. Correspondingly, (64c) suggests that left-dislocated constituents do adjoin to a projection of  $\Sigma$  ([64c] would still be grammatical if we had *si* instead of *no*).

Two predictions follow from the above discussion: (i) left-dislocated constituents, which can be found in several adjoined positions, should be available in VPE constructions, and (ii) focus constituents, which depend on a focus operator/feature that selects for TPs, should not be available, since there is no TP that focus could select. Both predictions will be confirmed. Below we show that from both a syntactic and a discourse perspective the remnant in Spanish VPE constructions must be construed as a left-dislocated topic constituent and not as a topicalized focus one. This also provides indirect evidence for hypothesis (29) that the focus of VPA is realized on  $\Sigma^0$ .

### 5.3. The remnant

As we saw in the previous section, in English VPE, the remnant can bear contrastive focus, as is apparent in the examples in (65). In (65a) the subject has a strong accent and the negative tag shows that it has an adversative meaning. (65b) and (65c) show that the remnant goes easily with the operators *only* and *even*, which further shows that it can be associated with a focus operator:

- (65) A: Some frat guys will bring the booze.  
       a. No, MARY\ will (not the frat guys).  
       b. Even JOHN\ will.  
       c. No, only JOHN\ will.

In contrast, contrastive focus in Spanish VPE does not seem to be possible:

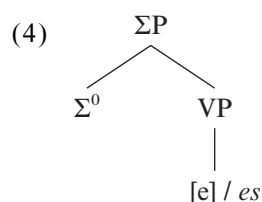
- (66) a. A:     Unos chicos traerán    las bebidas.  
               some boys will-bring the drinks  
       B1: \*No MARIA\ sí.       [cf:–No, pero María sí.]  
               no Maria    yes-will    no but Maria yes-will

- B2: \*Incluso JUAN\ sí.  
       even Juan yes-will  
 B3: \*No. sólo JUAN\ sí.  
       no only Juan yes-will  
 b. A: Pedro no traerá bebidas, ¿verdad?  
       Pedro not will-bring drinks right  
       B1: \*MARIA\ no.  
       B2: \*Incluso MARIA\ no.  
       B3: ??Sólo MARIA\ no.  
 c. A: Pedro traerá bebidas, ¿verdad?  
       Pedro will-bring drinks right  
       B1: Pedro no [e]. Las traerá María.  
       Pedro not them will-bring Mary

Example (66aB1) shows that when another constituent — in this case *pero* — takes over the contrastive function, the sentence is fine. This shows that what makes the answers in (66a) ungrammatical is not a semantic restriction but a syntactic one. (66c) allows us to control for a possible distracting variable: the clause that contains the elliptical predicate can contradict the previous proposition; so the ungrammaticality of (66a) and (66b) seems to arise exclusively as a consequence of focusing the remnant.

With this, we confirm the hypothesis forwarded above: focus is a syntactic feature that selects for a TP. This provides further evidence that contrastive focus is a syntactic, not a purely semantic phenomenon and shows how the study of information structure in VPA can shed light on theoretical issues.

In the following, we present further evidence that the ellipsis remnant is a left-dislocated topic constituent (see López 1999 for more details). This is not surprising: recall that Spanish VPE instantiates the basic structure (4) in its purest form, since it does not include any tense nodes. We repeat (4) here for the reader's convenience:



Additionally, we have shown that (64c) is evidence that left-dislocated constituents can be adjoined to  $\Sigma P$ . Again, we repeat (64c) here, with glosses and additional brackets for extra clarity:

- (64) c. Me preguntó que por qué Pedro [<sub>ΣP</sub> [a María]<sub>T</sub> [<sub>ΣP</sub> no la  
to-me I wonder that why Pedro [to Maria] not her  
saludó]].  
greeted  
'I wonder why Pedro did not greet Mary.'

Given (4) and (64c), we are forced to conclude that the remnant in Spanish VPE must be a left-dislocated constituent.

Let us start with the syntax. If there is a focused constituent there can't be another peripheral constituent in the same sentence. In the sentences in (67), we use a definite DP *los libros* without a resumptive clitic as a focused constituent. (67a) is a grammatical sentence with one fronted constituent, (67b) has two fronted constituents, and (67c) has the same constituents in a different order:

- (67) a. [LOS LIBROS]<sub>F</sub> le dio Susana antes de irse de viaje.  
the books to-her gave Susana before going on a trip  
b. \*[LOS LIBROS]<sub>F</sub> [a María]<sub>T</sub> le dio Susana antes  
the books to Maria to-her gave Susana before  
de irse de viaje.  
going on a trip  
\*[A María]<sub>T</sub> [LOS LIBROS]<sub>F</sub> le dio Susana antes de irse  
de viaje.

In contrast, left-dislocated constituents can be iterated:

- (68) a. Los libros Susana se los dio a María antes de irse  
the books Susana to-her them gave to Maria before going  
de viaje.  
on a trip  
'Susana gave the books to Maria before going on a trip.'  
b. [Los libros]<sub>T</sub> [a María]<sub>T</sub> Susana se los dio antes  
the books to Maria Susana to-her them gave before  
de irse de viaje.  
going on a trip  
c. [A María]<sub>T</sub> [los libros]<sub>T</sub> se los dio antes de irse  
to Mary the books to-her them gave before going  
de viaje.  
on a trip

If we look at VPE, we will see that remnants can be iterated, as (69) demonstrates. This is evidence that remnants are left-dislocated:<sup>20</sup>

- (69) Yo podría regalarle los pendientes a mi madre, pero [el  
I could give-to-her the earrings to my mother but the



collar]<sub>T</sub> [a mi padre]<sub>T</sub> no.  
necklace to my father not

A second piece of evidence that the remnant is left-dislocated comes from coordinate sentences. Contrastively focused constituents in coordinate sentences are not acceptable in Spanish, but left-dislocated constituents are, as shown in (70) and (71) respectively:

- (70) \*[GUERRA Y PAZ]<sub>F</sub> leí el verano pasado y [CRIMEN Y CASTIGO]<sub>F</sub> leí el anterior.  
'War and Peace I read last summer and Crime and Punishment I read the year before.'
- (71) \*[Guerra y Paz]<sub>T</sub> lo leí el verano pasado y [Crimen y Castigo]<sub>T</sub> lo leí el anterior.  
'War and Peace I read it last summer and Crime and Punishment I read it the year before.'

VPE typically takes place in coordinate sentences. Again, this is evidence that the remnant is a left-dislocated topic:

- (72) Leí *Guerra y Paz* el verano pasado, pero [*Crimen y Castigo*]<sub>T</sub> no  
I-read War and Peace last summer but Crime and Punishment not

From a discourse-functional perspective, we can see that the remnant is a topic. The remnant can link with an element already mentioned, that is, it can be an anaphoric topic:

- (73) A: Susana trajo las galletas.  
'Susana brought the cookies.'  
B: No, las galletas no. Trajo las bebidas.  
'No, the cookies not. She brought the drinks.'

Or it can be a contrastive topic, particularly in coordination:

- (74) A: ¿Dónde guardó Juan los libros?  
where put away Juan the books  
'Where did Juan put the books away?'
- B: *Guerra y Paz* lo guardó en el armario,  
War and Peace it s/he-put in the wardrobe  
pero [*Crimen y Castigo*]<sub>T</sub> no.  
but Crime and Punishment not  
'S/he put *War and Peace* in the wardrobe, but s/he didn't *Crime and Punishment*.'

To summarize section 5: we have shown that the remnant in Spanish VPE cannot be contrastively focused and we have correlated this observation to the absence of a TP. Further, we have shown that the remnant

is left-dislocated, which coincides with the fact that  $\Sigma P$  can have an adjoined left-dislocated constituent.

## 6. Conclusion

In this paper we have investigated the information structure of VPE in English and Spanish, and of the *es* construction in German, all of which we have treated as instances of the broader phenomenon of VP-anaphora. We have concentrated (i) on the focus properties of the term that realizes the affirmative/negative features of the sentence, and (ii) on the focus and topic properties of the remaining XP, referred to as the remnant. Our conclusions are (i) the pitch accent on the element that realizes the NEG/AFF features signals polarity focus, which licenses VPA at PF, and (ii) the remnant is free to take either a topic- or a contrastive-focus function; however, contrastive focus requires a TP structure, and when a TP is absent, contrastive focus is too, as we have shown to be the case for Spanish. Therefore we have argued that VPA presents evidence that contrastive focus is a syntactic phenomenon that involves a functional category and the formation of a syntactic chain at LF.

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## Notes

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1. See Brucart (1986) and López (1995, 1999) for arguments that (2) represents VPE and not gapping or stripping. See also section 5.2 of this paper.
2. Pesetsky’s (1987) notion of D-linking refers to the ability of most *wh*-words to select an entity or set of entities from a set of alternatives that is present in the minds of both

speaker and hearer. For instance, Chris can ask Pat, “Which one do you like?” only if both Chris and Pat know what set of elements Pat is expected to choose from. D-linked questions are opposed to out-of-the-blue questions, which are not uttered on the basis of shared knowledge. For instance, the question of an answering service, “What can I do for you?” can be asked with or presupposing a set of things that can be done for the interlocutor. Following Pesetsky’s differentiation, we use the notion of discourse linking to refer to elements that are *given* (cf. Prince 1981, Schwarzschild 1999).

3. The focus on the verb *bought* in (7B) is both contrastive and presentational. It contrasts with *read* in (7A), but it also introduces new information. See Rochemont (1986) for the complementary definitions of presentational and contrastive focus.
4. The list of questions is given in (i)–(iv):
  - (i) What did Anna watch a rerun of?
  - (ii) What did Anna watch?
  - (iii) What did Anna do?
  - (iv) What happened?
5. Although the discourse status of referents like *Anna* in (9a) is not uncontroversial, we follow Selkirk (1995: 557) and assume that sentences like (9a) can answer a *What happened* question. However, this is possible only in contexts in which *Anna* has the discourse status of *new* in the sense of *unused* in Prince’s (1981) terms.
6. As in other cases of potential focus ambiguity, (10a) and (10b) may be interpreted as contrastive foci. The contexts that enhance a contrastive reading are given in (i) and (ii) respectively:
  - (i) A: I heard that Anna didn’t watch a rerun of Casablanca.  
B: No, that’s wrong. Anna [DID]<sub>F</sub> watch a rerun of Casablanca.
  - (ii) A: Anna watched a rerun of Casablanca yesterday.  
B: No, Anna [DIDN’T]<sub>F</sub>.

We consider the contrastive reading to be the uncontroversial reading, which is always available in VPE.

7. Martin’s (1992) *stress condition on proper governors* is the direct precursor of our condition (29):
  - (i) Stress condition on proper governors:  
A lexical (phonetically realized) head must be [+stress] to properly govern at PF (Martin 1992: 264).
8. See Csúri (1995, 1996) for a discussion of the type–token distinction of events.
9. Languages that morphologically mark focus use affirmative or negative particles to signal polarity focus (Marchese 1983; Hyman and Watters 1984).
10. Note that German *es* cannot be considered the equivalent of English *so* or *it*. *So* cannot be selected by an auxiliary or modal, including an epistemic modal, unless it is topicalized, as seen in (i) and (ii). *It* is ungrammatical in both instances:
  - (i) John can swim across the river and Peter can \*so/\*it.
  - (ii) John can swim across the river and so/\*it can Peter.

Moreover, English *so/it* can be selected by the light verb *do*, as in (iii), whereas *es* cannot be:

- (iii) Susan promised to buy the tickets, but she didn’t do so/it.
- (iv) \*Susanne hat versprochen die Tickets zu kaufen, aber sie hat es nicht.

See López (1995) for an analysis of *so*, where it is argued that its distribution is complementary to that of VPE in English.

11. McDowell (1987: 230f.) makes similar observations for English VPE and for VP-topicalization constructions.
12. Focus on the complementizer in German has often been analyzed as a variant of polarity focus or Höhle's (1992) *verum focus*, which he claims allows only a narrow-focus reading of the truth of the proposition in the embedded sentence.
13. The checking domain of a head *H* consists of the constituents adjoined to *H* and *HP* and specifiers of *H* (Chomsky 1995).
14. Johnson (1997: 7) hypothesizes that English VP ellipsis is licensed by VP topicalization and could then be subsumed under just the kind of topic-drop phenomenon that, for example, German shows in cases like (49c). Thereby he is trying to account for the restricted distribution of VPE in English, which allows VPE in finite clauses that are in subject position as in (i) but not with infinitival clauses that are in subject position as in (ii).
  - (i) That Betsy won the batting crown is not surprising,  
but [that Peter didn't [e]] is indeed surprising.
  - (ii) \*You shouldn't play with rifles because [to [e]] is dangerous.  
(cf. You shouldn't play with rifles because it's dangerous to [e].)

The contrast between (i) and (ii) is explained by the suggestion that VPE in English might be a case of VP topicalization followed by topic drop as in German. Since VP topicalization in English is, like topicalization more generally, constrained so that it topicalizes VPs to the front of finite clauses only, the ungrammaticality of (ii) can be explained as an island effect that occurs when the topicalized VP moves out of the infinitival clause to find a finite clause host. Although Johnson's analysis seems intriguing, we claim that German topic drop and VPA cannot be analyzed as the same phenomenon. Another argument that supports our hypothesis that not VP topicalization but  $\Sigma$  licenses VPA comes from the fact that (ii) improves under focused negation (see also Zwicky 1982 and Lobeck 1987 for previous discussions of the interaction of VPE and *not*):

- (iii) You shouldn't play with rifles because [NOT to [e] is dangerous].
15. Lenerz (1993a) and Gärtner and Steinbach (1997) note that there are some exceptions to the generalization that the personal pronoun *es* cannot occur sentence-initially, such as those given in (i) and (ii):
  - (i) Ihr Geld ist ja nicht weg, meine Damen und Herren. Es haben jetzt nur  
your money is not gone my ladies and gentlemen it have now only  
andere (Lenerz 1993a).  
others
  - (ii) Es (das Rumpelstilzchen) hat der Wolf gefressen.  
it (the Rumpelstiltskin) has the wolf eaten

We have not found any exception to the restriction that the verbal proform *es* cannot occur in pre-V/2 position.

16. In addition to the semantically motivated proposals, phonologically motivated proposals with similar conclusions have been forwarded by Zubizarreta (1998) and Reinhart (1995). They explore the idea that scrambling removes constituents to the left so that presentational focus can be assigned to the most deeply embedded constituent as proposed by Cinque (1993). Note that Krifka (1998) independently proposes that

focus assignment in German is not free but is assigned to the preverbal position at D-structure.

17. The remnant must include the subject in English and German, although other constituents can be topicalized, for instance “The knife he put in the cupboard, but the forks, he didn’t.” In Spanish, the subject does not need to be part of the remnant. An analysis of this difference appears in López (1999).
18. We thank an anonymous reviewer for pointing out that the interaction with respect to the relation between topic and contrastive focus of the remnant and the focus of the polarity item that we observed for English (see [35] to [37]) also applies to German. Only a topic accent on the remnant requires that the [+F] on  $\Sigma^0$  be realized as an H\*L accent in German. Consider the following contrast:
  - (i) Anna kann sonst fast immer alle Aufgaben lösen, nur [GESTERN]<sub>F</sub>  
 Anna can usually nearly always all tasks solve only yesterday  
 konnte sie es nicht.  
 could she *es* not
  - (ii) \*Anna kann sonst fast immer alle Aufgaben lösen, nur [GESTERN]<sub>T</sub>  
 Anna can usually nearly always all tasks solve only yesterday  
 konnte sie es nicht.  
 could she *es* not

The ungrammaticality of (ii) can be explained as a straightforward violation of (29): the element in  $\Sigma$ , *nicht*, is not focused and hence does not licence *es*. To explain the grammaticality of (i), however, we need the additional assumption that the contrastive focus on the subject overrides the intonational realization of focus on the polarity item. The idea that contrastive focus can override “normal intonation” can already be found in Chomsky (1972), who notes that “[q]uite possibly, these processes are to be described in general as superimposing a new contour on the normal one” (1972: 89).

19. See López (1999) for an explanation for the ungrammaticality of (56).
20. A separate but important issue — for which we have no answer — is why a focused element does not allow for another peripheral. Interestingly, *wh*-words in spec, CP do not have this restriction:
  - (i) Los libros ¿a quién se los diste?  
 the books to whom her/him them you-gave  
 ‘Who did you give the books to?’

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