Review Article


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# 1. Introduction

Over the past three decades, many controversial proposals have been forwarded in the search for an empirically and theoretically adequate account of the focus-prosody relation. While the fundamental questions - what is the relation between focus and intonation, and which principles determine its interpretation - have yet to receive a fully satisfactory answer, the picture which emerges shows that focus is a multidimensional concept characterized by the interrelatedness of syntax, argument structure, formal semantics and pragmatics.

Moreover, the linguistic literature systematically distinguishes between at least two different types of foci: presentational focus and contrastive focus, as proposed by Kiss (1995a, 1998), Kenesei (1999) and Drubig (1994, 1998). Presentational focus is pragmatically defined in terms of material that is not c(ontext)-construable (Rochemont 1986), or D-linked in Pesetsky's (1987) terminology, and allows a maximal projection of the focus feature. Contrastive focus, on the other hand, which is often also called operator focus, comprises the types in which focus is associated with focus sensitive particles like only, even, etc. or in which it forces the exclusion of contextually relevant alternatives.

Results of typological research on focus have convincingly shown that languages as diverse as Hungarian (Kiss 1998, Kenesei 1999), Aghem (a Grasfield Bantu language; Watters 1979, Hyman & Watters 1984), Vute (Thwing & Watters 1987), Kimatuumbi (Odden 1984), Akan (a Kwa language spoken in Ghana; Drubig

1998), and Kanakuru (a Chadic language; Tuller 1992) distinguish between presentational and contrastive focus either by overt movement to a contrastive focus position, as in the case of Hungarian, or by morphological marking, as in the case of some of the African languages. This distinction even seems to be active in English, as proposed by Drubig (1994). Drubig argues that each type of focus corresponds to a distinct syntactic analysis: presentational focus is licensed by a lower or sentence internal polarity phrase, while contrastive focus is licensed by a higher or sentence external polarity phrase at LF.

Based on this type of research, languages can be classified either as discourse configurational languages or as non-discourse-configurational languages. Discourse configurational languages are "languages in which the primary sentence articulation serves to express discourse-semantic functions" (É. Kiss 1995b: 5). The best known European example is Hungarian (Horvath 1985, Kiss, 1987), but other languages, such as Basque, Catalan, Bulgarian, Russian, Greek, Finnish, Turkish and Armenian have also been identified as discourse configurational (cf. Kiss 1999). If we take as the characteristic feature the fact that topics and, optionally, contrastive focus are encoded in distinct left-peripheral positions in the clause, while presentational focus is not subject to displacement, then Romance languages like Italian (Calabrese 1990, Rizzi 1997, Kiss 1998), Spanish (Zubizarreta 1998) and also Romanian (Ulrich 1985, Primus 1993, Göbbel 1995) can be grouped with the discourse configurational languages.

A straightforward non-discourse-configurational language is German, since the constituents at the left periphery of the sentence may correspond to different

pragmatic functions (cf. Molnár 1998). For English, the classification is more intricate: on the one hand, it behaves like German since the pragmatic function of constituents on the left periphery of the sentence is not clearly fixed. On the other hand, there is evidence from island effects that contrastive focus in English is realized by movement to a particular structural position at LF (Drubig 1994, Culicover 1991). Non-contrastive focus, however, is interpreted in situ. Research on discourse configurationality shows that a binary distinction will not suffice.

While typological research as well as semantic research (Rooth 1985, Kratzer 1991) on focus have concentrated on the contrastive focus type, language specific research on intonational languages like German and English (as well as Italian (Cinque 1993), Bengali (Hayes & Lahiri 1991), and Portuguese (Frota 1998, Costa 1998)) have concentrated on the question of what the relation between focus and intonation is, focus in these cases most often being understood as the presentational focus which arises under unmarked or "normal intonation" (Chomsky 1972).[1] The theory of presentational focus has at least two different instantiations: the so-called nuclear stress rule (NSR) accounts based on the seminal work by Chomky & Halle (1968) and the so-called argument-structural accounts, whose most notable proponents are Schmerling (1976), Selkirk (1984, 1995), Gussenhoven (1983, 1992), Drubig (1994, 1997) Ladd (1996), and Winkler (1996), among others.

In various publications (see Zubizarreta 1994a, 1994b), culminating with the present monograph on Prosody, Focus, and Word Order, Maria Luisa Zubizarreta has clearly positioned herself with those researchers who endorse a primarily if not exclusively syntactic NSR-based approach. Since Chomsky & Halle (1968) first

proposed the classical NSR for English, much ink has been spilt by both proponents in search of a refined version and opponents in search of refuting arguments (see Winkler 1996 for an overview). The issue seemed to be settled against the NSR, at least for Germanic languages, when Cinque (1993) initiated a revival of the old NSR on the basis of Italian in terms of the so-called null theory of phrase stress. The null theory of phrase stress claims that "stress prominence in a phrase is a mere reflection of depth of embedding" (Cinque 1993: 245). With this theory, the effects of the NSR need not be stipulated, but follow from the direction of syntactic embedding, which depends on the direction of the head parameter. Zubizarreta's (1998) work pursues the same goal, namely the formulation of an "adequate theory of nuclear stress" (p. 18). However, instead of a simple version of the NSR, she arrives at a "modularized NSR" (MNSR). This MNSR comprises both a positional NSR, which is sensitive to the constituent ordering (C-NSR) (see Chomsky & Halle 1968), and a rule which is sensitive to selectional ordering (S-NSR) and thus incorporates the insights of the argument structural account.

Throughout the book Zubizarreta handles the considerably intricate data in a highly competent and knowledgeable manner and is able to accommodate a large number of seemingly diverse facts within an essentially unified theory. Among the many positive aspects of this book, its most outstanding property is the extensive empirical coverage. Zubizarreta's work moves the focus-prosody relation of Romance languages into the center of attention, thus suggesting that a comparative dimension must be added to the theories that have been developed by concentrating primarily on Germanic.

However, the purpose of a critical review is not only to point out the strengths of a work, but also to consider where there is room for improvement. We will concentrate on the following three areas: first, the notions of focus and topic, which the author introduces as basic complementary notions, will be reconsidered with respect to the multidimensionality of these concepts. We will specifically address the question of how the pragmatic definition of topic and focus proposed in the book is represented in the grammar of the languages under discussion. Second, the exact formulation and status of the prosodic rules (MNSR, Focus Prominence Rule, p-movement) will be evaluated with respect to their independent motivation and their range of application. We will thereby concentrate on the question of how the rule system is integrated into the grammatical model and how the interaction of the syntactic component with the pragmatic component (assertion structure) is conceived of. Third, the goal of the book to provide a unified theory of the focus-prosody correlation will be evaluated with respect to its actual achievements.

The perhaps most striking stylistic property of the book is an unfortunate imbalance found in Zubizarreta's discussions of basic concepts. She provides single sentence definitions of historically complex notions (contrastive stress, emphatic stress, echo stress), while concepts whose applicability is questionable (metrical sisterhood, conventions for the application of the NSR) are given long, seemingly unmotivated definitions of little theoretical impact. The clarity and readability of the text could have been easily improved. We will spend some time in following up on some of the definitions for the reader's benefit.

Since each of the three chapters in <u>Prosody, Focus, and Word Order</u> is complex and contains many points of clear interest, our review will proceed through each of these in order of appearance, attempting to point out both their strengths and their apparent weaknesses. In section 2, we give a brief overview of the book. In section 3, we discuss the key concepts of focus and topic as they are understood in this book and look at how they are implemented in the theoretical framework of the Minimalist Program. In section 4, we review Zubizarreta's theory of the Nuclear Stress Rule and explore the key distinction that she draws between the selectionally-driven and constituency-driven instantiations of this rule. In sections 5 and 6, we will discuss Germanic and Romance, concentrating on German and Romanian data respectively. Section 7 contains a final appraisal of the book.

## 2. Overview

Zubizarreta organizes her monograph in three chapters. Chapter 1 functions as an introduction to her theory of focus, provides an outline of the results of her research program, and shows how it is to be implemented in the Minimalist Program.

Chapter 2 describes the correspondence between F-structure and phrasal prominence in Germanic (German and English) and in Romance (Spanish and French). On the basis of the German data, a modular version of the NSR (MNSR) is developed. The MNSR is formulated as a disjunction: either the NSR is sensitive to

selectional ordering (S-NSR), or it is sensitive to constituent ordering (C-NSR). In German, the S-NSR has primacy over the C-NSR, in English, either the S-NSR or the C-NSR can apply, and in Romance the C-NSR applies in all configurations. The first appendix of chapter 2 shows how the MNSR applies to wh-questions, and the second, how superiority effects can be partially attributed to prosodic considerations.

Chapter 3 first discusses the syntactic organization of clauses in Spanish and Italian and then continues with a detailed description of the relationship between information structure and word order. On the basis of Spanish data, two types of discourse-related movement operations are defined. Movement to sentence peripheral positions is argued to be feature-driven; this includes topics, (contrastive) focus and emphatic constituents. VP-internal reordering operations in Spanish are determined by the interaction of the C-NSR with the F-structure of the sentence. Differences in the focus structural organization between Spanish and Italian are shown to be due to the different syntactic operations which these two languages allow. The appendix to this chapter discusses phonological and syntactic aspects of right-dislocation in Spanish.

## 3. Focus, Topic and the Intonational Model of Grammar

3.1. Zubizarreta's definition and representation of focus

Zubizarreta takes a conservative view of focus-background structure (FBS).[2] Essentially following Chomsky (1972, 1976) and Jackendoff (1972), she defines focus in terms of presupposition: the focus is the nonpresupposed part of the sentence. Presupposition in turn is defined in terms of shared assumptions at the point at which the sentence is uttered in discourse. She claims that the notions focus and presupposition are grammatically relevant, whereas terms like new and old information, and definitions based on these notions, such as Rochemont's (1986) definition of focus in terms of c-construability, have no grammatical import. One of the reasons for rejecting the latter dichotomy is that old or c-construable information cannot be uniquely defined in linguistic terms, but involves other cognitive or perceptual modes as well. Furthermore, old information may also be focused, as the following example illustrates. Zubizarreta remarks that if the definition of focus is based on the new/old dichotomy this would necessarily lead to different types of focus, such as Rochemont's presentational/contrastive distinction (fn. 4, p. 160).[3]

(1)   John hit Mary, then SHE hit HIM.

Despite her rejection of Rochemont's dichotomy, Zubizarreta assumes different

types of focus as well. "Neutral" semantic focus is proposed to differ from contrastive and emphatic focus because different rule systems derive their interpretation at the interface levels. This distinction resembles the neutral and contrastive stress patterns of the early generative tradition. Contrastive and emphatic focus are systematically excluded from the study in this book, and they are only sporadically addressed (see the discussion of examples (7) to (10) below).

Also conservative is Zubizarreta's syntactic encoding of the focus-presupposition structure of a sentence in terms of F-marking of constituents. One of the main innovations of Prosody, Focus, and Word Order, however, is that this annotated syntactic structure (i.e. the F(ocus)-structure of a sentence) is interpreted at a post-LF level in terms of ordered assertions at an abstract level of representation. Zubizarreta calls this the Assertion Structure (AS) of the sentence. AS is derived from LF by a set of interpretive rules. The main motivation for rejecting the classic quantifier raising (QR) analysis of focus is the fact that the focus of a sentence need not correspond to a syntactic constituent. This is illustrated by the following pair of examples. In (2a) the focus is a single constituent, namely the object, but in (2b) both the subject and the verb are F-marked. The presupposition of a statement corresponds to the presupposition of the implicit or explicit context question represented in square brackets.


(2)    a.    [What did John eat?]

            [ John] [ ate [$_F$ the pie]]

b. [What happened to the pie?]

[ [$_F$ John] [[$_F$ ate] [the pie]]]

In order to deal with the constituency problem, Zubizarreta proposes that the F-structure of a statement be represented in terms of two ordered assertions: the background assertion ($A_1$), which incorporates the presupposition provided by a context question, and the main assertion ($A_2$), which is an equative relation between a definite variable and a value symbolized by the equation signs. The restriction of the definite variable is the presupposition of the context question. The assertion structures of the examples (2a) and (2b) are given in (3a) and (3b) respectively. The indefinite variable in $A_1$ is obtained by existential quantification of the context question.

(3) a. $A_1$: there is an x, such that John ate x

$A_2$: the x, such that John ate x = the pie

b. $A_1$: there is an x, such that x happened to the pie

$A_2$: the x, such that x happened to the pie$_i$ = [John [ate it$_i$]]

At AS the focus is specified by the equative predicate. In (3a), the focus is a single constituent, but in (3b) it is a proposition. In the latter example the equative relation specifies a value for the agent and the verb; the value of the theme is given by the presupposition and is picked up by the pronoun it in the main assertion. Zubizarreta points out that "the relation between the indefinite variable in $A_1$ and the definite

description in $A_2$ is comparable to the relation between an E-type pronoun and its antecedent" (p. 5). She further claims that in both cases the definite description in $A_2$ picks up the referent introduced by $A_1$. This is illustrated in the example (4) and its assertion structures in (5).

(4)      Some sailor walked into the room. He was wearing a red shirt.

(5)  a.  $A_1$: there is an x (x = a sailor), such that x walked into the room

      b.  $A_2$: the x (such that x = a sailor & x walked into the room) was wearing a
          red shirt

The correlation of the concept of double layered assertion structures ($A_1/A_2$) with the E-type pronoun puzzles leads the reader to expect that he will learn more about the interrelatedness of these processes in the ensuing discussion. An argument which might be anticipated - which Zubizarreta does not - is that the analogy between the relation of $A_1/A_2$ and E-type pronouns and their quantified antecedents interacts with the notion of topic. Specifically, the questions of how this comparison applies to her main argument for the existence of an independent level of AS and why every boy but not everybody can be constructed as a topic (discussed below in 3.3) is not given.[4,5] In absence of such an argument, the relation Zubizarreta describes turns out to be essentially similar to Chomsky's (1972, p. 92) focus-presupposition account and Jackendoff's (1972: 245) formalization of it: $A_1$ introduces an existential presupposition ($\exists x$), $A_2$ specifies the variable as the focus.

However, if we allow the construction of a referent from a quantified expression via an aboutness relation as in the case of E-type pronouns (see footnote 4), the constituency problem can readily be solved by only one additional assumption: namely, that the focus constituent can contain presupposed material. More explicitly, the analysis in (2b) would be equally compatible with an account which treats the variable x as an event variable, identified as the event of John eating the pie in $A_2$, as in (6).

(6)  $A_1$:   there is an event x, such that x happened, and a pie is prominent in the

   event

   $A_2$:   the event x, such that x happened = [John ate the pie]

Under this analysis, (2b) allows for a sentence focus which includes the NP the pie; however, this NP must be deaccented, pronominalized or marked otherwise as a concept which has already been introduced into the discourse, while the complete event has not been.

If Zubizarreta does not follow up on these questions, why, then, does she introduce the analogy of the relation between $A_1/A_2$ and E-type pronouns? The answer to this question is straightforward: by providing an essentially traditional definition of focus (Chomsky 1972, Jackendoff 1972), her theory is a priori limited to accounting for only a subsection of the complete range of focus types. Thus, from the analogy of the relation between $A_1/A_2$ and E-type pronouns the prediction can be derived that

sentences which do not allow the construction of an existential presupposition, as in (7), or sentences in which the variable $\underline{x}$ cannot be technically identified with a value, as in the <u>verum</u> focus example in (8), cannot be covered by the definition of focus in this book.

(7)    NOBODY lied to me.

    $A_1$:    there is no x, such that x lied to me.

    $A_2$:    ?

(8)   You are right. Mary DID lie to me.

    $A_1$:    there is an x, such that x (= Mary lied to me) happened.

    $A_2$:    ?

These examples are analyzed as cases of emphatic stress, which is claimed to have "a purely metagrammatical function" (p. 44). Along with the examples in (7) and (8), which do not conform to the double layered assertion structure definition of unmarked focus, the different instances of contrastive focus are also excluded from the core investigation of focus in this book. That is, Zubizarreta's focus definition excludes cases of contrastive focus which are associated with an overt focus-binding element (i.e. a focus-sensitive particle) like <u>only</u> as in (9):

(9)    a.    Only RAY knows how to cook shrimp.

    b.    Ray only knows how to cook SHRIMP.

Virtually all theories of focus agree that focus sensitive particles are associated with a focus (cf. Rooth 1992, Kratzer 1991, Kiss 1998, among others; but cf. Vallduví 1992 for a different view); in (9a), only is associated with the pitch accented subject Ray, and in (9b), with the object of the embedded sentence shrimp.

Cases of contrastive focus which are not associated with an overt operator, as in (10), are given an idiosyncratic treatment by appealing to a special principle (Focus/Contrastive Stress Correspondence Principle, p. 45).

(10)  [John is wearing a blue shirt today.]

John is wearing a RED shirt today (not a blue shirt).

Example (10) has the assertion structure in (11):

(11)  $A_1$:   there is an x, such that John is wearing x today

$A_2$:   it is not the case that the x (such that John is wearing x today) = a blue

shirt & the x (such that John is wearing x today) = a red shirt

In contrast to most current research on focus (cf. the introduction of this review), Zubizarreta claims that contrastive focus is "partly metagrammatical and partly focus-related" (p. 45). She proposes that contrastive focus is like emphatic stress in that it negates part of the presupposition ($A_1$), and it is focus-related in that it introduces a variable for it. That is, the analogy between $A_1$/$A_2$ and the interpretation of E-type pronouns is used to define the cases of focus which can be treated by this

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theory. Like Chomsky (1972) in his early NSR-based study, Zubizarreta must assume that emphatic and contrastive focus and all other sentences containing operators which interact with focus, like negation and affirmation, constitute a completely different phenomenon from noncontrastive focus for which a completely different rule system - like free assignment of stress - must be assumed. The question, however, arises of whether it is justified to call a theory "a unified theory of focus" if most phenomena which are not covered by the NSR are excluded from the realm of the study in the first place.

In sum, Zubizarreta's study is mainly concerned with what in other frameworks is known as presentational focus or information focus (cf. our introduction). This type of focus is uniformly represented at AS by existential quantification and identification of the variable, while its phonological representation is determined by a uniform set of rules.

## 3.2. Zubizarreta's definition of topic

Zubizarreta adopts Reinhart's (1982) influential approach to sentential topics, an approach which we will shortly outline here. Reinhart's analysis draws on Stalnaker's (1978) definition of the context set (i.e. the set of propositions which the speaker and hearer accept as true at a given point in the discourse) and Strawson's (1964) discussion of truth value gaps. Reinhart proposes that each sentence be associated with a set of Possible Pragmatic Assertions (PPAs), the members of which are the

bare proposition, and all possible pairs of a referential entity and that proposition. A typical transitive sentence, as in (12), has three members in its PPA set (SVO, S/SVO, O/SVO).

(12)   Jason climbed the Matterhorn.

One of these members is selected relative to the context. Hence, SVO is selected when the sentence is uttered out-of-the-blue or in a what-happened-context, S/SVO is selected when the sentence is a statement about the subject, and O/SVO is selected when the sentence is a statement about the object. The first member corresponds to a topicless sentence, while the other two correspond to the traditional topic-comment articulation. Consequently, the truth value of a sentence is evaluated with respect to the sentential topic, and if the hearer accepts it as true, the proposition is added to the context set. Sentences in which the topic fails to refer have an undefined truth value. This is the case with the famous example (13) when the sentence is evaluated with respect to the subject.

(13)   The King of France is bald.

Zubizarreta proposes that the topic-comment partitioning be represented in the background assertion of the AS of the sentence. Example (14), first discussed by Jackendoff (1972), has the AS in (15). The representation in $A_1$ is supposed to embody a predicational relation between a pragmatic subject (i.e. the topic) and a

propositional predicate. This subject-predicate relation is then carried over to the main assertion $A_2$. One consequence of this representation, Zubizarreta contends, is that the topic <u>the beans</u> can never be identified with the focus, because by definition the topic is the subject of the propositional predicate and the focus is contained within that predicate.

(14)        [What about the beans? Who ate them?]

        [$_F$ Fred] ate the beans.

(15) $A_1$:    the beans$_y$ \ there is an x, such that x ate y

    $A_2$:    the beans$_y$ \ the x (such that x ate y) = Fred

In the remainder of this section we discuss whether it is justified to distinguish thematic from backgrounded or defocused constituents and we also consider how Zubizarreta's Spanish data reflects such a distinction. More specifically, we restrict our discussion to (i) the discrepancy between Reinhart's topic definition and what is generally encoded grammatically (syntactically, morphologically, and phonologically) as a topic in natural language, and (ii) the syntax of topics in Spanish and their representation at AS, as envisaged by Zubizarreta.

Sentential topics have received considerable attention within different theoretical frameworks and linguists seem to agree that there are languages which consistently encode sentential topics by word order and/or morphological means. Such languages are often designated as topic prominent. Well-studied cases are Japanese (Kuno 1972, 1973) and Korean (Choi 1995, Han 1996), which mark topics

both morphologically and syntactically. Among the Romance languages, Catalan and Romanian have been argued to be topic prominent (Vallduví 1992 and Göbbel 1995 respectively), in the sense that topics are obligatorily fronted to a sentence initial position. On the other hand, there are languages in which topics are not consistently identified by syntactic/morphological means. English, for example, makes heavy use of prosodic means (specific tunes and phrasing; cf. Steedman 1991 and Beckman 1996).[6] Other non-topic prominent languages are German and Hindi-Urdu (Kidwai 1999). Identifying topics in these non-topic prominent languages is not always an easy enterprise and is often subject to theoretical bias.[7] Reinhart's approach to sentence topics, which was developed on the basis of English, though interesting in itself, faces the problem of not being able to distinguish topics or thematic constituents from backgrounded constituents, especially if the latter are referential expressions. Yet such a distinction is consistently made in topic prominent languages. According to Choi (1995), Korean marks sentential topics with the particle (n)un. Backgrounded constituents are scrambled out of the VP like topics, but maintain their case marking. Choi refers to this distinction as contrastive vs. continuing topics. Whatever the labels one wishes to use, even in a language like English it seems that defocalized definite descriptions pattern with weak pronouns, rather than with topicalized/left-dislocated constituents or strong pronouns. Reinhart's approach is not fine-grained enough to capture this distinction. Consider (16) and (17). In these examples Reinhart would have to assume that the propositions are evaluated with respect to the pie/it and Melinda respectively. The pie/it and Melinda would then be the sentential topics. However, this does not reflect the fact that in (17) the topic

may also be topicalized, whereas in (16) it may not.[8] This distinction is nicely captured in Vallduví's (1992) instruction-based approach developed on the basis of Catalan. The additional contrastive component that often, but not always, characterizes topics has been argued by Choi (1995) to be at the heart of topic marking in Korean.[9]

(16)  Who ate the pie?

[$_F$ John] ate the pie/it.

(17)  I know what she told her mother. But what did she tell Melinda?

She told Melinda [$_F$ a lie].

Turning to the book under discussion here, Zubizarreta does provide us in chapter 1 with a mechanism which distinguishes thematic constituents (i.e. links in Vallduví's terms) from backgrounded referential constituents by assigning them different ASs. We saw in the AS for (2a) in (3a) and in the AS for (14) in (15) that backgrounded constituents are part of the presupposition, while thematic constituents are represented as the subject of a propositional predicate. Formally, focal and defocused constituents are assigned the features [±F], which play an important role in the application of the rules which compute prominence in Germanic and word order in Romance (see below). The overall picture that ensues from Zubizarreta's discussion of Spanish is the fact that defocalized constituents (e.g., arguments and VP-adjuncts) are scrambled VP-internally, while topics are moved to a sentence peripheral position. VP-internal scrambling and left-dislocation of a nonfocal

constituent generally has important consequences for the focus-background articulation of the sentence. Consider (18) and (19).


(18) Ana escondió [debajo de la cama] un libro.

Ana hid under the bed a book

[What did Ana hide under the bed?]

(19) [Debajo de la cama] Ana escondió un libro.

under the bed Ana hid a book

[What did Ana hide under the bed?]

[What did Ana do under the bed?]


In (18), the PP complement debajo de la cama has been moved in front of the object. This example is only compatible with narrow focus on the object. In (19), the PP is in topic position and this example is also compatible with a VP-focus reading, as the context questions in brackets indicate. Though the contrast in focus structure between (18) and (19) remains largely unexplained, the triggers for movement of the PP are decidedly different. The former is a case of phonologically-driven movement (p-movement), while movement of the PP in (19) checks a 'topic' feature, and is hence a core syntactic operation.

One would now expect there to be a correlation between the syntactic representation of thematic constituents and their representation at Assertion Structure. We believe that the question of the empirical basis for the representation of topics at AS is an important one, since the main evidence for the existence of this

level of representation comes from binding facts which cannot be dealt with at LF, and which are argued to interact with the topic-focus articulation of the sentence. We find, however, that Zubizarreta's treatment of the syntax of topics in chapter 3 does not necessarily reflect the theory she has advanced in chapter 1 of the book. Furthermore, we think that a discussion of the correlation between the syntactic expression of topical constituents and their representation at AS would be valuable.

Although chapter 3 also contains a discussion of VP-structure, we will concentrate on Zubizarreta's discussion of the left periphery of the clause, since it is here that thematic constituents are generally encoded in Romance. Zubizarreta adopts the theory of movement developed by Chomsky (1995, Ch. 4) and assumes a minimal array of functional projections which she can motivate empirically by resorting to ordinary word order facts. She analyzes the functional category T as a syncretic category, which can host different "discourse functional features" such as "topic", "focus" or "emphasis". Furthermore, wh-movement is also analyzed as targeting SpecTP. The empirical evidence for T as a "syncretic" category rests on the fact that focus fronting, wh-movement and negative preposing block movement of a subject to SpecTP. Topics, however, can precede a fronted focus, wh-phrase, or negative constituent. Two examples illustrating the position of topic and fronted focus are given in (20) and (21).

(20) * [F Las   ESPINACAS],   [Top Pedro] trajo    (y    no    las papas).

        the   spinach                Pedro    brought (and  not   the potatoes)

(21)  [Top Pedro], [F Las ESPINACAS]   trajo   (y   no   las papas).

         Pedro        the spinach          brought (and  not   the potatoes)

Since there can be more than one topic per sentence, Zubizarreta concludes that the "topic" feature appears on T, and optionally on some head that dominates T, as in the following examples with two topics. Note that both quantificational and referential constituents may be encoded syntactically as topics.

(22)  [Top Todos los días],    [Top Juan]   compra  el  diario.

         every day                Juan   buys    the newspaper

(23)  [Top El primer día de escuela],    [Top cada madre]  deberá   acompañar

      a su hijo.

         the first day of school,          each mother  must    accompany

      ACC her child

What is conspicuous about her analysis is that any preverbal subject which is not contrastively focused seems to be analyzed as a topic. This leads to the suspicion that Spanish does not have any "neutral descriptions" (in the sense of Kuno 1972) with SVO order. There are several reasons for this conclusion. First, she insists that VSO is still a grammatical option in Modern Spanish although the use of this construction is declining. Second, several examples can be found in her book in which preverbal subjects are part of a wide (sentential) focus. For instance, on p. 125 she states that both VSO and SVO are compatible with a "focus neutral interpretation";

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i.e. they can be readily interpreted as a possible answer to the question "What happened?". The relevant examples are given in (24).[10]


(24) a.    María    me        regaló    la botella de VINO.

        María    to-me    gave      the bottle of wine

    b.    me    regaló    María    la botella de VINO.


If we understand Zubizarreta correctly, she analyzes subjects in SpecTP as checking a "topic" feature if they are not emphatically accented. Sentences which do not have a lexical XP in preverbal position have an empty topic in SpecTP, which can either be a covert anaphoric temporal adverb controlled by the time of speech, or a phonologically empty pronominal that is doubled by a clitic within the clause. This analysis follows from her assumption that SpecTP is obligatorily filled in Spanish and that case-checking is always covert, except when checked as a "free rider".

We arrive at a contradiction: the head of TP hosts some discourse functional feature ("topic", "focus" or "emphasis") in Spanish, but a sentence such as (24a) above may have a focus neutral interpretation (i.e. the subject need not be a topic).[11] On the other hand, if a sentence such as (24b) above is analyzed with a phonetically empty pronominal in SpecTP which doubles the clitic, then, in view of our discussion above concerning the grammatical distinction between thematic and backgrounded constituents,[12] it is unclear whether the syntactic representation of such a sentence should also have an Assertion Structure associated with it in which the goal argument is represented as the subject of a propositional predicate.

There is one more case which seems to us to be problematic. In § 2.4 (p. 73f), Zubizarreta claims that typical out-of-the-blue sentences (i.e. thetic sentences which commonly, but not exclusively, occur with unaccusative verbs; cf. the corresponding English accentuation in (25)) may have main prominence on the verb. This means that the subject in the following examples need not be a topic, although it is in SpecTP. Recall from above that a topic can never be identified with a focused constituent. Since Spanish also seems to employ VS order to express thetic sentences, what then is the difference between VS and SV?[13]

(25) a.    El bebé LLORA

         The BABY's crying.

     b.    Mi bolso DESAPARECIÓ

         My BAG has disappeared.

It seems to us that the "topic" feature employed in the analysis of preverbal constituents has a purely positional function. Except for fronted internal arguments (i.e. clitic left-dislocated objects or PP arguments), a clear correlation cannot be established between what Zubizarreta assumes to be syntactically encoded as a topic in Spanish, and, given her theoretical framework in chapter 1, what is represented at AS as the subject of a pragmatic "aboutness"/predicative relation. In the syntax, a "topic" feature may occur on T whenever SpecTP does not host a (contrastive) focus, wh-phrase or negative constituent. A syntactically realized topic, however, may even correspond to a constituent which is part of the focus of the sentence, as in

(25). We believe that a more detailed analysis of the discourse status of preverbal subjects may shed further light on the syntax/AS relation.[14] At this point we can only conclude that a clear correspondence cannot be established. In fact Zubizarreta seems to favour this approach since nontopicalized defocused constituents in Spanish may be analyzed as topics at AS for the purpose of explaining the variable pronoun binding cases. We return to this issue in section 3.3.2.

3.3.   The architecture of the Grammar

3.3.1. The representation of focus and topic in the Grammatical Model

Since the beginning of the study of information structure there have been numerous proposals of how the notions of focus and topic should be defined and how exactly their interaction with grammatical structures should be conceived. Molnár & Winkler (in preparation) isolate two main research paradigms: those accounts which assume that the information structural notions topic and focus are integrated into the formal system of language, and those which assume that these notions are represented in the pragmatic component primarily governed by contextual factors. They term the former approach Inside Grammar Approach (IGA) and the latter Outside Grammar Approach (OGA). In terms of current grammatical models, the IGAs integrate the notions of topic and focus into some version of the T-model (Chomsky & Lasnik 1977) or into its direct descendent (cf. Chomsky 1995), given in (26):

26

(26)          Lexicon

                        (Spell-Out)
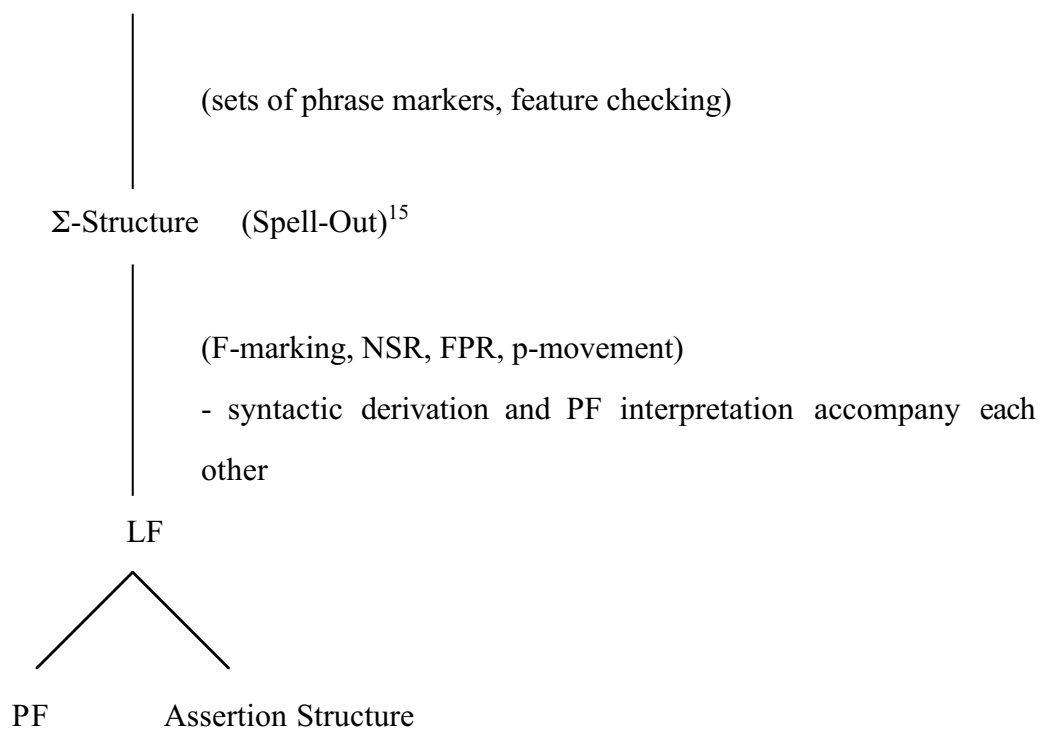
          PF          LF
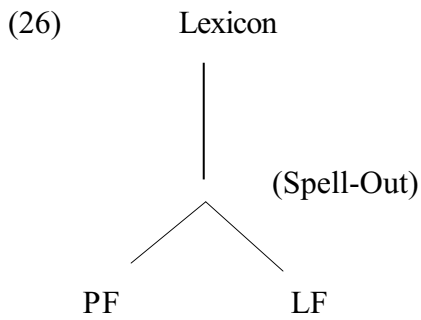

The OGAs, in contrast, assume that there is a separate pragmatic layer outside the syntactic component proper on which notions like given-new, theme-rheme, and topic-comment are represented. Within the IGA accounts, the starting point of the investigation has been either syntax (Chomsky 1972, Jackendoff 1972, Rochemont 1986, Kiss 1987, Drubig 1994, Rizzi 1997, Cinque 1993), or phonology (Selkirk 1984, 1995, Gussenhoven 1983, 1992, Uhmann 1991, Beckman 1996) or semantics (Jacobs 1988, Rooth 1992, Beghelli & Stowell 1997, Szabolcsi 1997) or semantico-pragmatic (Sgall et al. 1986, Büring 1997, Lambrecht 1994). With few exceptions (e.g. Rizzi 1997, Büring 1997) there is a preoccupation with focus in IGA models. The first proposals which count as precursors of OGA were developed by scholars in the 19th century (H. Weil 1844, H. Paul 1880, v.d. Gabelentz 1891). Their proposals were elaborated by the Prague School linguists (Mathesius 1928 and his followers), the British School (Halliday 1967, Crystal 1969), the American School of Pragmatics (Chafe 1976, Clark & Haviland 1977, Prince 1981, Ward 1985) and most notably by the interaction accounts (Vallduví 1992 and Molnár 1998).

Zubizarreta's conception of the Grammatical Model clearly places her account within the IGA paradigm. Although she acknowledges that topic and focus are contextually dependent notions, she assumes that they can be adequately represented

at AS, a post-LF level. AS is conceived of as a separate interpretive level of grammatical representation which provides the interface to the conceptual-intensional (C-I) system (p. 165). AS is an innovation of former IGA models, which standardly assume that LF alone is responsible both for the representation of scopal relations and for the interpretation of the discourse notions topic and focus. The arguments for AS as a post-LF level are based on the observation that topichood interacts with quantifier binding facts (see section 3.3.2 below).

The assumption that AS is a post-LF level which is derived from LF by a set of interpretive rules and forms the interface to the C-I system has clear implications for the Grammatical Model in (26). In Zubizarreta's model, LF branches into AS and PF, as seen in (27):

(27)    Zubizarreta's Theoretical Model

                        (sets of phrase markers, feature checking)

$\Sigma$-Structure    (Spell-Out)[15]

                        (F-marking, NSR, FPR, p-movement)
                        - syntactic derivation and PF interpretation accompany each other

          LF

PF          Assertion Structure

Zubizarreta further proposes that the prosodic rules (the MNSR, the Focus Prominence Rule (FPR), and p(honological)-movement), which carry the burden of determining the assignment of primary stress on the basis of focus annotated constituent structures, operate in the syntactic component, more precisely on the stretch between Σ-Structure and LF. On this stretch, Zubizarreta also defines a type of movement, namely p-movement, which is not triggered by morpho-syntactic considerations as are movement operations before Σ-Structure. The trigger of movement, as she proposes, is a conflict between the NSR and the FPR. Therefore, all three rules have to apply at the same level of representation. Zubizarreta claims that the relevant level of representation is Σ-Structure, which is the output of the core syntactic operations (Merge and Attract). Morpho-syntactically driven movement, both overt and covert, occurs before Σ-Structure. Focus is also freely assigned to constituents at this level of representation. P-movement applies and Σ-Structure is mapped onto LF (which is virtually identical to PF).

Thus, we arrive at a model in which all feature checking driven movement (overt and covert) applies prior to Σ-Structure. The syntactic derivation - specifically p-movement - and PF interpretation of the focus feature accompany each other on the stretch between Σ-Structure and LF. The interaction between topic/focus and quantifier binding facts occurs on the derivation of Assertion Structure. If we interpret her correctly, she assumes, for example, that a quantifier with a topic feature is interpreted as the subject of a propositional predicate at AS. What exactly motivates the branch to PF is not explicitly discussed.

Two questions arise: first, how is the split LF representation motivated? Here we will specifically address the quantifier binding facts as an argument for AS. Second, where exactly does p-movement apply? This question brings the motivation of the stretch between Σ-Structure and LF, together with the question of where exactly discourse relevant features are assigned, into the center of attention. We will discuss the first question in section 3.3.2 and address the second question after the discussion of the facts in Romance in section 6.3.

3.3.2. Quantifier Binding Facts as an argument for Assertion Structure

The main argument for AS as a semantico-pragmatic post-LF interface level comes from the interaction of quantifier binding facts with focus and topic. The reasoning of this argument is as follows: if there are quantifier binding facts that are subject to the focus-topic distinction and if we further assume that focus and topic are essentially pragmatic notions, then there is good evidence that AS exists as a separate, independently motivated, level within the grammatical model in which these notions are represented.[16] Thus, the grammatical model proposed in (27) must be understood in such a way that both PF and AS are two different kinds of interpretive levels following the core semantic level of LF (in contrast to Hornstein 1988). Consider the data given in (28) and (29) (Zubizarreta, p. 11):

(28) A:   What will happen?

   B:   [F His mother will accompany every boy the first day of school.]

   - bound reading of pronoun: *

(29) A:   I would like to know who will accompany every boy the first day of

        school.

   B:   [F His MOTHER] will accompany every boy the first day of school.

   - bound reading of pronoun: OK

Zubizarreta's main claim is that "the object quantifier every boy may bind the pronoun within the subject if and only if the subject is focused in English as well as in other languages" (p. 11). That is, Zubizarreta links the difference between the two different readings in (28) and (29) to the focus status of the subject. Only in example (29) does the subject DP receive a focus interpretation, thus allowing the pronoun contained in it to be bound by the object quantifier. In contrast, the pronoun in the subject DP in (28) cannot be bound because the subject is not focused (i.e. it is included in the focus). Although this may seem counterintuitive because the complete sentence in (28B) is focused, the subject in Zubizarreta's theory does not provide a value for the variable introduced by $A_1$, as seen in the assertion structures in (30) below.[17]

(30) AS for (28):

   $A_1$:   there is an x, such that x happened.

   $A_2$:   the x such that x happened = [His mother will accompany every boy].

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(31)  AS for (29):

    $A_1$:    for each/every y, y a boy, there is an x, such that x will accompany y.

    $A_2$:    for each/every y, y a boy, the x such that x will accompany y = [ $his_y$

        mother]

The AS structures given in (30) and (31) reflect the intended readings of (28) and (29) respectively. In (28), the object quantifier every boy does not have scope over the subject. In the absence of a suitable binder, a referential reading of the pronoun his is required. In (29), the object quantifier does have scope over the subject and allows a bound variable reading of the pronoun. Zubizarreta's idea of bringing together raising of the quantified object and variable binding at LF originated in an earlier paper (Zubizarreta 1994a), in which she proposed that focused subjects in sentences like (29) must be reconstructed at LF into the specifier of VP. The quantified object ("which is topic") is simultaneously raised to a c-commanding position from which it can bind the pronoun in the subject DP (p. 202).

    This analysis has strong prima facie appeal because it provides a straightforward explanation of the clear semantic intuition that the pronoun in the subject DP (28) must receive a referential interpretation, while the pronoun in the subject DP in (29) allows a bound variable interpretation. The above data clearly show that information structure interacts with binding theory and quantification. Thus, Zubizarreta's argument for AS as a post-LF structure must be considered a strong one.

A note of caution, however, is in order. One could come up with various other explanations of the binding facts shown by the contrast in (28) and (29). For example, one could claim that the effects observed are not intimately tied to a focus/topic distinction represented on AS, but are essentially due to the connectedness effects which occur in cleft constructions and in question-answer contexts, as first observed in Higgins (1973) (see also Heycock & Kroch 1996):

(32)  A:    What did John find in the drawer?

      B:    [F A PICTURE of himself.]

The answer to the <u>what-happened</u> question in (28) above is unstructured in terms of focus-background structure. It requires an answer in which the complete sentence must be introduced as essentially new information. Example (29), on the other hand, occurs as an answer to a question that requires only the subject phrase <u>his mother</u> to fill in the gap left by the <u>wh</u>-element, as in (33).

(33)  A:    I would like to know who will accompany every boy the first day of

            school.

      B:    [F <u>His</u> MOTHER.]

Under the connectedness approach, Zubizarreta's data has to be explained within a larger set of sentences which all violate the general assumption on bound pronominals, namely that a pronoun can only receive a bound variable interpretation

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if it is c-commanded by its antecedent at S-structure. The crucial point here is that since connectedness effects are typical for question-answer contexts, the question arises of whether the data in (28) and (29) actually show a direct interaction with focus/topic structures in the broader sense, or whether it only shows that there is an interaction with those types of focus which can be filtered out by wh-questions (see Drubig 1998).

However, it is not at all clear how the connectedness account could explain the additional data provided by Zubizarreta in (34):

(34) A:  I would like to know who will accompany everybody the first day of
school.

    a.  Someone/A person will accompany everybody.
(distributive reading: OK)

    b.  His MOTHER will accompany everybody the first day of school.
(bound reading of pronoun: *)

While a distributive reading which requires that the object have scope over the subject is possible in (34a), binding of the object phrase into the subject is not possible in (34b). These facts suggest that quantifier scope and quantifier binding cannot be collapsed into one process (see also Heim & Kratzer 1998: 260ff). Therefore, Zubizarreta discards her earlier reconstruction analysis, in which she assumed that the subjects in sentences like (29) are reconstructed into VP and the quantified

objects are QRed. The analysis which replaces this older analysis is based on two requirements (see Zubizarreta 1998: 14):


(35) a.    There must be a distributive reading; that is, the QP object must have scope over the focused subject.

     b.    The QP object functions as a topic; as such, it can bind a pronoun within its scope.


(35a) incorporates the claim that the object quantifier must have been raised above the focused subject. In addition, the quantifier phrase must also be able to bind a pronoun in its scope. While the technical trick of binding is assumed to be done by a lambda-operator in semantic theory, Zubizarreta assumes that a quantifier phrase can only bind a pronoun if it functions as a sentence topic or if it c-commands the pronoun or its trace at the time of Spell-Out. That is, the quantifier every boy in (29) is analyzed as a topic phrase, whereas everybody in (34b) is not. Zubizarreta's argument for distinguishing these quantifying DPs is that "the former is descriptively richer than the latter" (p. 13/14). Within the framework of Montague (1974) and Barwise & Cooper (1981), both DPs are analyzed as being of the same semantic type ($<<e, t>, t>$). Therefore, the distinction drawn by Zubizarreta must be a pragmatic one, and the devision of labor between LF and AS crucially depends on the pragmatic character of the latter.

One could now object that universal quantifiers are not referential expressions and should in principle be excluded from the representation of the topic-focus

articulation. If it turns out that universally quantified NPs cannot be topics on independent grounds, then AS - as an independent level of grammatical representation - would remain largely unmotivated. The explanation of the binding facts would then have to tie in with the quantifier binding facts found in connectedness contexts.

The only test that supports Zubizarreta's claims is the grammaticality of left-dislocated universal quantifiers. First consider LF binding which does not depend on the topic-focus articulation of the sentence. Zubizarreta argues that in the Spanish examples in (36), the negative quantifier can bind the pronoun in the topicalized direct object only if it is in the VP-external position (SpecTP). Binding of the pronoun in (36b) is not possible because clitic-doubled direct objects are reconstructed to a CliticPhrase which dominates the VP-internal subject position. C-command of the object (or its trace) that contains the pronoun is sufficient to license the bound variable reading.

(36)  a.  A      $su_i$    hijo,    ningún  padre$_i$  lo            quiere   castigar.
          ACC    his      child    no      father    ACC.CL   wants    to punish
          'No father wants to punish his own child.'

     b. *? A    $su_i$    hijo    no     lo            quiere   castigar   ningún padre$_i$.
          ACC    his      child   not    ACC.CL   wants    to punish   no        father
          'No father wants to punish his own child.'

For negative quantifiers a topic analysis is not available, which is supported by the fact that they cannot be left-dislocated in Romance. Universally quantified NPs, on

the other hand, can be left-dislocated, and, as illustrated in the example (37a), may bind the pronoun contained within the subject. The binding configuration in (37a) is already available at LF because the quantifier c-commands the subject. In (37b) the quantifier can bind the pronoun in the subject only if the latter is narrowly focused, as in the English example (34) discussed above. The object can then be represented as topic at AS.

(37) a. A cada niño$_i$, su$_i$ madre lo$_i$ acompañará el primer día de escuela.

ACC each child, his mother ACC.CL will-accompany the first day of school

b. El primer día de escuela acompañará su$_i$ MADRE a cada niño$_i$ (y no su padre).

the first day of school will-accompany his mother ACC each child (and not his father)

Summarizing this section, we have seen that the main argument for a topic analysis of a universal quantifier is the possibility of left-dislocation in Romance.[18] To the extent that the equivalent of every/each N and all N can also be topic marked in Korean (Han 1996) and Japanese[19] such an analysis cannot be rejected, but needs further careful consideration. We conclude that Zubizarreta's claim that "the architecture of grammar must be slightly revised" (p. 30) is a slight understatement and that her suggestions result in a major reconstruction of the grammatical model.

# 4. Zubizarreta's Theory of the Modular Nuclear Stress Rule

4.1.  Main Motivation

The main goal of Zubizarreta's work is to provide a unified account of the focus-prominence relation in Germanic and in Romance. Her main observation is that the focus-prosody relation of Romance languages and that of Germanic seems to function in a parallel fashion: the well-known effect of the classical NSR as first formulated by Chomsky & Halle (1968) and as seen for English in (38a) can be also found in German (38b), Spanish (38c) and in French (38d):

(38)    What happened?

   a.    Jan swallowed a MARBLE.

   b.    Jan verschluckte eine MURMEL.

   c.    Juan se ha atragantado con una CANICA.

   d.    Jean a avalé une BILLE.

In each case, the NSR seems to predict that the main stress of the sentence will be realized at the right periphery of the sentence. However, while in Spanish and Italian the neutral accent is always realized at the right periphery of the sentence (cf. also Cinque 1993, Ladd 1996, Demonte 1995), this is not the case for English and German, as the following examples show:

(39)    What happened?

    a.    A CHILD fell out of the window.

    b.    Ein KIND ist    aus    dem Fenster    gefallen.

        a    child    is    out of    the window    fallen

(40)    Why did you call the police?

    a.    ... because he put a GUN on the table.

    b.    ... weil    er eine    PISTOLE    auf    den    Tisch    gelegt    hat.

        because he a    gun    on    the    table    put    has


Zubizarreta introduces a modularized theory of nuclear stress which accounts for the differences between Germanic (German and English) and Romance (Spanish and French). The starting point of her theory is that in both language families, the focus structure of a sentence is determined by phrasal prominence. Her basic claim is that the focus-prominence relation in these languages can be captured by a modular nuclear stress rule (MNSR) which consists of two parts: one is sensitive to constituent ordering (C-NSR), and thus corresponds to the classical NSR (Chomsky & Halle 1968); the other is sensitive to selectional ordering of constituents (S-NSR) and incorporates insights of the argument structural account whose major proponents are Gussenhoven (1983, 1992) and Selkirk (1984, 1995). Interestingly, the theory of the MNSR is developed on the basis of German data which is known to be sensitive to argument structural considerations (cf. Schmerling 1974, 1976, Krifka 1984, von

Stechow & Uhmann 1986, Rosengren 1997), and is then applied in a second step to English, Spanish and Italian data.

Below we will discuss the formulation of the MNSR and keep the question in mind of whether it can be considered an instantiation of UG, that is, a universal rule (cf. p. 91). In sections 5 and 6, we will investigate Zubizarreta's claim that language specific differences can be explained by different rule orderings of the two components of the MNSR: in German, the S-NSR has primacy over the C-NSR, in English, either the S-NSR or the C-NSR can apply, and in Spanish the C-NSR applies in all configurations. We will see that although Germanic and Romance differ with respect to these rule applications, the predicted systematic difference between English and German with respect to the subject-prominent sentences does not exist.[20] We will draw the conclusion that the MNSR is not modular in the real sense, but consists of the disjunctive formulation of two different rule systems: the one for Romance corresponds to the classical NSR and explains the data at hand. The one for Germanic, which is based on both the NSR and argument structure based rules, involves unnecessary complications with respect to rule application and does not fare better with respect to observational adequacy than strict argument structure based accounts.

Two more general questions will guide our discussion in the following sections: First, what is the empirical value of a monostratal theory of focus vis-à-vis the vast amount of data from typological studies which show that crosslinguistically languages distinguish at least two different types of focus, namely presentational and contrastive focus. Second, the MNSR is based on the assumption that primary

stresses can be dissociated from the assignment of subsidiary stresses (p. 17) and that only primary stresses are relevant for focus. Can such a theory achieve descriptive adequacy in the face of the vast amount of linguistic literature on autosegmental phonology which shows that sentences or intonational phrases are made up of complex accent patterns?

## 4.2.  The formulation of the MNSR: a disjunctive rule

Zubizarreta revises Chomsky and Halle's (1968: 17) classical NSR in (41) as in (42).

(41)  Assign primary stress to a primary-stressed vowel in the context

$$1$$

$$V...\underline{\quad\quad} ...]_\alpha$$

(42)  Revised NSR

    a.    <u>S-NSR</u>: Given two sister categories $C_i$ and $C_j$, if $C_i$ and $C_j$ are selectionally ordered, the one lower in the selectional ordering is more prominent.

    b.    <u>C-NSR</u>: Given two sister categories $C_i$ and $C_j$, the one lower in the asymmetric c-command ordering is more prominent. (p. 19/56)

While the classical NSR was designed for English, Zubizarreta's MNSR is designed to account for Germanic and for the differences between Germanic and Romance. The S-NSR establishes relative prominence in terms of selectional ordering. The C-NSR establishes prominence in terms of asymmetric c-command. The prediction is that Germanic languages compute prominence in terms of the S-NSR and the C-NSR, the Romance languages compute it in terms of the C-NSR only.

In addition to the NSR, Zubizarreta proposes the <u>Focus Prominence Rule</u> (FPR), given in (43), which captures the intuition that there is a direct relation between focus assignment and accent realization.

(43)  FPR

Given two sister nodes $C_i$ (marked [+F]) and $C_j$ (marked [-F]), $C_i$ is more prominent than $C_j$.

In the best of all cases the results of the FPR coincide with those of the NSR. If they do not, it is assumed that the conflict between these rules triggers additional grammatical processes (e.g. p-movement) which resolve the contradictory prominence assignment. This conflict hypothesis will be discussed with respect to Spanish in section 6 below.

Let us begin with the C-NSR. The core notions that are crucial for the understanding of definition (42b) are metrical theory enriched in terms of the notions asymmetric c-command, metrical sisterhood, metrical invisibility and metrical nondistinctness. The C-NSR is modeled after the metrical theory of Liberman (1975)

and Liberman & Prince (1977), which, couched in nonlinear phonology, introduces metrical trees which are represented as hierarchically organized binary branching syntactic trees in which each sister relation is labeled s̲ for strong and w̲ for weak. The features s̲/w̲ encode a purely local relative prominence relation that expresses the fact that in each sister relation, one branch is stronger than its sister. The effects of the NSR are derived by (44):

(44)   In a configuration [$_C$ AB $_C$]

If C is a phrasal category, B is strong. (Liberman & Prince 1977: 257)

The intuition underlying (44) is straightforward: if you consider two sisters forming a phrase, the right one is more prominent.
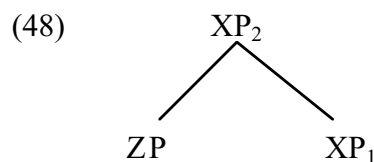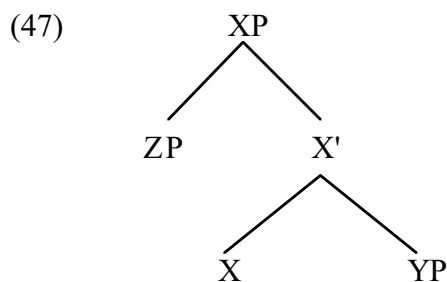
The concept of metrical sisterhood has entered into the definition of the C-NSR, the exact meaning of this notion, however, has undergone a radical change: the C-NSR does not apply to syntactic sisters dominated by the same node as in the original metrical theories, but to nodes which are hierarchically ordered. Ultimately, Zubizarreta's C-NSR is designed to achieve the result that the pairs of nodes in (45) circled with solid lines, bold-face lines and dotted lines respectively are metrical sisters:

(45)

$C_1$
$C_1$  $C_e$
$C_e$  $C_e$
$C_4$  $C_e$
$C_4$  $C_e$  $C_e$  $C_2$
$C_2$  $C_3$
$C_3$  $C_e$
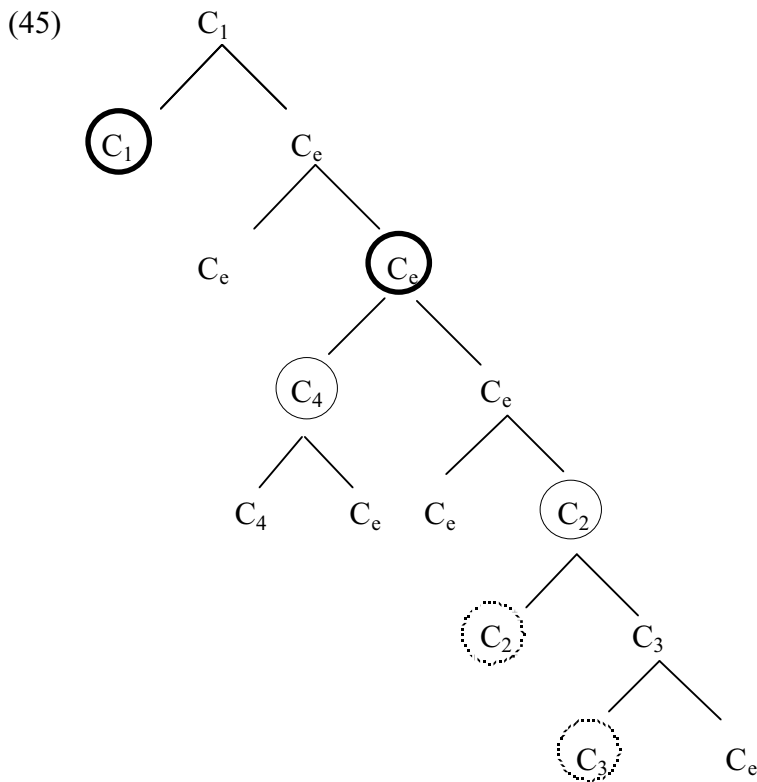
Just by looking at (45), it is not at all clear how these pairs of nodes could ever be analyzed as metrical sisters. A severe revision of the original concept of metrical sisterhood would be necessary. In addition, the C-NSR makes use of the notion of asymmetric c-command. Asymmetric c-command in Kayne's (1994) theory is used, among other things, to derive the general left-right asymmetry of natural languages by interlocking precedence with hierarchical relations like c-command. Zubizarreta uses Kayne's (1994: 4) first approximation of asymmetric c-command, and reformulates it as in (46):[21]

(46)  $\alpha$ asymmetrically c-commands $\beta$ =$_{def}$ $\alpha$ c-commands $\beta$ and $\beta$ does not c-command $\alpha$. (p. 35)

Zubizarreta's reformulation of asymmetric c-command in (46) should ultimately serve the purpose that the C-NSR can apply between a specifier and its sister, thus assigning stronger prominence to the X' node. That is, (46) is designed to predict that a specifier asymmetrically c-commands its sister and all the categories contained within it. As noted by herself, the requirement of the C-NSR that a sister relation should be asymmetric is contradictory (p. 34). As a remedy, she introduces the notion of <u>metrical invisibility</u>, which is meant to resolve the contradiction between the syntactic sisterhood requirement and the asymmetric c-command requirement postulated in (42b). Metrically visible nodes for syntactic derivation are restricted to heads and maximal projections (excluding segments). That is, since X' in (47) and $XP_1$ in (48) are neither heads nor maximal projections, they are invisible for the purpose of the application of the C-NSR, and it can be said that ZP asymmetrically c-commands X' in (47) and $XP_1$ in (48).

(47)

```
            XP
           /  \
         ZP    X'
              /  \
             X    YP
```

(48)

```
            XP_2
           /    \
         ZP     XP_1
```

As is obvious from the discussion of (45), (47) and (48), much of the technical apparatus hinges on the notion of metrical invisibility. Not only are intermediate projections metrically invisible, but nodes which have been treated as <u>weak</u> in metrical theories (Liberman 1975, Liberman and Prince 1977, Ladd 1980) are claimed

to be metrically invisible in Zubizarreta's theory as well (see (49b)). The relevant observations are summarized in (49):

(49) a.  All phonological material is metrically visible for the NSR in Spanish. (p. 76)

b.  Defocalized and anaphoric constituents are metrically invisible for the NSR in English and in German, and in French. (p. 74)

c.  Empty categories are metrically invisible. (p. 49).

Since the notion of metrical visibility or invisibility is not independently defined, the status of the rules in (49) is unclear. If metrical visibility is a notion of metrical theory then only (49a) and (48c) are intuitively accessible, in the sense that if there is phonological material it is metrically visible.[22] If there is no material, it is not. The notion referred to in (49b), however, is not intuitively accessible. Since Zubizarreta does not motivate the concept of metrical invisibility, her proposal that the NSR is blind to overt but unfocused elements, anaphoric constituents and functional categories in Germanic is tantamount to saying that the NSR does not apply in this language family.[23]

The question, then, arises of why the concept of metrical invisibility is needed. Specifically, metrically invisible nodes allow us to conceive syntactic nonsisters as metrical sisters. In (45) above, it was claimed that the three pairs of circled nodes are metrical sisters. To bring home this point an additional notion is needed, namely, the notion of metrical nondistinctness. That is, the boldface circled nodes C1 and Ce are

defined as metrical sisters since the circled Ce and its dominating Ce are defined as metrically nondistinct. The same reasoning applies to the nodes C4 and C2. Note, to compute the dotted circled nodes, C2 and C3, as metrical sisters, the notion of metric sister must again be extended. They are metrical sisters in a derivative sense. Thus, the notion of metrical nondistinctness is used to define metrical sisters in a derivative sense. That is, metrical sisterhood of C2 and the cicled C3 is derivative since the noncircled C3 and the constituent [C3 Ce] are metrically nondistinct. We will not repeat the definitions (cf. p. 42 and p. 56/57) here. To our mind, definitions in general are only allowed to become complex for one reason: when the complexity is needed to make the theory more restrictive and achieve explanatory adequacy. The definitions and conventions given for the computation of metrical sisterhood, however, are stipulative and do not achieve this goal.

In section 5 we address the questions of how the MNSR is applied to German data and in section 6 to Spanish data. In the case of German, we will specifically address the question of why the concept of metrical invisibility is needed in Zubizarreta's theory and how it is applied to the German data. In the case of Spanish, the question of the motivation of the p-movement rule in relation to the application of the MNSR will be focused on.

# 5.	Application of the MNSR to Germanic

## 5.1.	An overview of the data

Let us consider briefly Zubizarreta's core data from English and German. The examples in (50) show that in English the nuclear accent occurs on the rightmost constituent, irrespective of its lexical category or its complement/adjunct status. Thus, for this set, the C-NSR applies.

(50)	a.	A boy has DANCED.

　　	b.	Mary VOTED.

　　	c.	Mary's READING.

　　	d.	Our dog mysteriously DISAPPEARED.

　　	e.	John ate the PIE.

　　	f.	John ate the pie in the KITCHEN.

　　	g.	John ate the pie in the kitchen NUDE.

However, the set of examples in (51), generally known as subject-prominent sentences (Sasse 1987), cannot be explained by the C-NSR. This prominence pattern regularly occurs with unaccusative verbs whose internal arguments are realized in subject position at Spell-Out in English, as many authors have observed (Jacobs

1991, 1992, Drubig 1992, Rosengren 1997, Winkler 1996). The S-NSR, as defined in (42) above, is responsible for prominence assignment to the subject in these cases.

(51)  a.      Our DOG's disappeared.

       b.      The SUN is shining.

       c.      JOHN's arrived.

Interestingly, Zubizarreta subsumes examples like (52) under the class of stressed-subject presentatives, and attributes the absence of the alternative prominence pattern in the case of the unaccusatives in (51) to the "pragmatic lightness" of the predicates. The deaccentuation of unaccusative verbs is related to examples like (53) first pointed out by Bolinger (1972).

(52)  a.      A BOY has danced.

       b.      MARY voted.

       c.      MARY's reading.

(53)  a.      The end of the chapter is reserved for various problems to

              COMPUTERIZE.

       b.      The end of the chapter is reserved for various PROBLEMS to solve.

There is no question that the accent patterns in (52) are possible patterns of English sentences, but only with contextual manipulation. However, Zubizarreta proposes that the examples in (52) are "compatible with a wide focus reading (i.e., as an answer

to What happened?)" and they only "differ with regard to what aspect of the information is highlighted." (fn 28, p. 164). This greater freedom - which other native speakers do not not readily allow[24] - motivate her claim that "in English the S-NSR and the C-NSR are on equal footing, with either one applying at any given point in the computation [...] generating ambiguous prosodic patterns for a given focus structure in many cases" (p. 68).

In German, she claims, the facts are different. Here she differentiates two cases with respect to the position of the inflected verb. In V2 sentences, as in (54), the main accent is realized on the phrase final constituent irrespective of whether this constituent is an argument or an adjunct. This is captured by the C-NSR.[25]

(54) a.  Das Taxi    kommt  SPÄT.

        the taxi      arrives   late

    b.  Karl  arbeitet im    GARTEN.

        Karl  works   in-the garden

    c.  Karl  arbeitet an einem    AUFSATZ.

        Karl  works    on a        paper

For verb-final sentences, she assumes that selectional restrictions always take precedence over depth of embedding for the assignment of the nuclear accent, essentially following insights of Schmerling (1976), Gussenhoven (1983) and others. In the resultative transitive sentence (55a) and the ditransitive (55b), the accent is

realized on the argument in preverbal position. That the complement/adjunct distinction plays an important role in German can be observed by the position of nuclear stress in (55c).

(55)  a.  weil      Jan    ein AUTO      kaputt  gemacht hat.

         because Jan    a     car           broken  made      has

      b.  weil      Ben   das Auto    seinem BRUDER    gegeben hat.

         because Ben   the car       his       brother     given    has

      c.  weil      er      im      Garten      GEARBEITET   hat.[26]

         because he     in-the  garden      worked                has

Furthermore, Zubizarreta acknowledges for German the differentiation of the unaccusative/unergative verb patterns, seen by the contrast between (56a) and (56b, c). Her observation that there is an option in prominence assignment in the case of unergatives will be further discussed in section 5.4.

(56)  a.  Es heißt,   daß   ein JUNGE        kommt.

         It is-said    that   a     boy              comes

      b.  Es heißt,   daß   ein JUNGE    gelacht      hat.

         It is-said    that   a     boy         laughed     has

      c.  Es heißt,   daß   ein Junge     GELACHT hat.

The fact that the S-NSR is not "forced" to apply with unaccusatives, but reflects its systematic application, is supported by the lack of Bolinger-type contrasts, as in (57). The nuclear stress goes on the relativized object irrespective whether the verb is predictable or not.


(57)  a.     Hans hat    ein PROBLEM   zu lösen.

           Hans has    a   problem       to solve

      b.     Hans hat    ein PROBLEM   zu digitalisieren.

           Hans has    a   problem       to computerize


These observations lead to the generalization that in German, the "S-NSR has primacy over the C-NSR" (p. 56). The idea is that the C-NSR in German applies if and only if the S-NSR does not. The difference between German and English is that in the latter the S-NSR and the C-NSR are on an equal footing.

    The analysis of the English unaccusatives, which is intended to motivate the assumption of different rule orderings for English and German, did not convince us. Note that the paradigm can be extended to other cases in which the surface subject is arguably an internal argument, and the predicate is hardly predictable. Inchoatives, perception verbs, predicates that denote a transcient property also require the stressed subject pattern.


(58)  a.     The BUTTER melted.

      b.     Not here, darling! That VICAR's listening.[27]

c. Your EYES are red.

To the extent that subject prominence is predictable from the type of argument or predicate casts doubt on Zubizarreta's proposal to derive the presumed difference between English and German by different rule orderings of C-NSR/S-NSR.
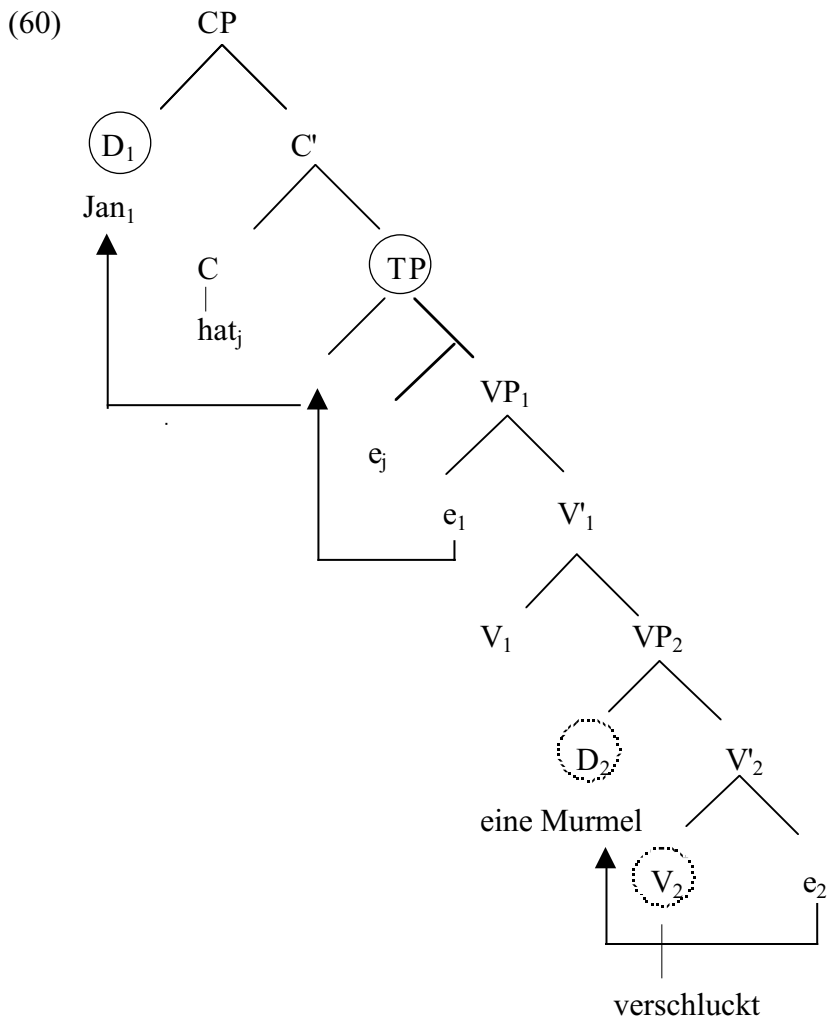
In the following subsections, we want to consider the analysis of German more closely. In section 5.2 we discuss how prominence assignment is computed by the MNSR. We then discuss some empirical problems concerning German directional ditransitives in section 5.3. Section 5.4 concentrates on the ambiguous prominence patterns allowed by the extension of the S-NSR to include external arguments within its domain. We show that so-called ambiguous accent patterns do not have identical focus structures.

## 5.2. German transitive sentences

The generalization in (49b) above states that unfocused and anaphoric constituents are metrically invisible for the NSR in German. Recall that in German the accent pattern of thetic sentences as in (59a) must be explained along with the accent patterns of regular matrix sentences as in (59b) and those occurring in subordinate sentences, as in (59c). (Examples repeated from above.)

(59) a.    Ein BAUM    ist    umgefallen.

           a    tree    is    down fallen

     b.    Jan    hat    eine MURMEL    verschluckt.

           Jan    has    a    marbel    swallowed

     c.    weil    er eine PISTOLE    auf den Tisch  gelegt hat.

           because  he a    gun    on the table  put    has


In each of the examples in (59) the accent falls on a constituent which is not the rightmost. Thetic (subject prominent) sentences like (59a) are explained by the assumption that in German the S-NSR has primacy over the C-NSR. Further assuming that in (59a) the constituents [Ein Baum] und [ist umgefallen] are metrical sisters, the S-NSR assigns primary stress to the constituent lower in the selectional ordering, in this case Baum. The notion of metrical invisibility is essential for the S-NSR and C-NSR to fulfill the goal of explaining accent assignment which is not rightmost. We will discuss the transitive V2 sentence in (59b) in order to exemplify the interaction of the S-NSR and the C-NSR in detail. (59b) has the structure in (60):[28]

(60)

$CP$

$D_1$    $C'$

$Jan_1$

$C$    $TP$

$hat_j$

$e_j$    $VP_1$

$e_1$    $V'_1$

$V_1$    $VP_2$

$D_2$    $V'_2$

eine Murmel

$V_2$    $e_2$

verschluckt

An analysis of (60) requires the notions introduced in relation to the structure (45).

First, the computation applies to $[D_1]$ (Jan) and $[D_2\ V_2]$ (eine Murmel verschluckt), which are claimed to be metrical sisters. It is assumed that $[D_2]$ and $[V_2]$ are metrical sisters since they are metrically nondistinct and that $[D_1]$ and $[D_2\ V_2]$ are metrical sisters since all the intervening nodes between $[D_1]$ and $[VP_2]$ that are asymmetrically c-commanded by $[D_1]$ are metrically invisible. Second, the C-NSR applies to the metrical sisters $[D_1]$ and $[D_2\ V_2]$ since the subject is not selected by the lexical verb $V_2$ (cf. the definitions in (57) and (58) p. 52-53) and assigns prominence to the rightmost constituent $[D_2\ V_2]$. Third, the S-NSR applies to the metrical sisters $[D_2]$

(eine Murmel) and [V$_2$] (verschluckt).[29] Again, the base position of [D$_2$] is metrically invisible. The S-NSR then assigns prominence to the nominal argument of [V$_2$], the [D$_2$] Murmel, according to rule (43a) above.[30]

5.3.   German directional ditransitives

The application of Zubizarreta's theory causes a difficulty with respect to the treatment of directional ditransitives. Instead of deriving an accent pattern as indicated in (59c) with the accent on the direct object, Zubizarreta's C-NSR and S-NSR derive the accent pattern given in (61):

(61)  Karl  hat    ein Buch   ins    REGAL     gestellt. (p. 50)

      Karl  has    a    book   on-the shelf        put

In her account, the C-NSR is responsible for assigning prominence to the metrical sister of the external argument of the verb, whereas the S-NSR assigns prominence to the lowest internal argument of the verb, namely to the directional argument. She proposes the following generalization: "If the verb selects an object and a PP (directional) complement, NS falls obligatorily on the PP complement (if it is not defocalized)" (p. 50). Note, however, that exactly for the directional ditransitives, the most natural intonation would be with a fall (H*) on the direct object, as seen in

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examples listed in (62). This is also the pattern documented in publications on focus in German.

(62)    Why do you think he is crazy?

    a.    Weil    er    ein LOCH    in    die Wand    geschlagen  hat.

        because he    a    hole    into the wall    hit    has

    b.    Weil    er    eine  PISTOLE    auf    den Tisch    gelegt    hat.

        because he    a    gun    onto  the table    put    has

(62a) is taken from Jacobs (1991: 22) who calls it "a perfect neutral stress pattern". Our own intuitions concur with his judgements. Since this accent pattern does not require that the PP be c-construable or defocalized, it poses a problem for Zubizarreta's account. Jacobs notes that the accent on the direct object in directional ditransitives can only be explained by the assumption that "the direct object somehow 'ignores' the presence of the PP-argument" (p. 22).

    In von Stechow and Uhmann (1986: 315ff) it has been observed that only (63a) allows a neutral, or wide focus reading. (63b) through (63e) are marked providing only narrow focus readings.

(63) a.    weil Ede  mit der Hacke    dies LOCH    ins    Eis    gehackt  hat.
        (wide Focus)
        since Ede   with the ax    this   hole    into-the ice   cut    has

    b.    weil Ede mit  der Hacke dies Loch ins EIS gehackt hat.   (narrow Focus)

c.	weil Ede mit  der Hacke dies Loch ins Eis GEHACKT hat. "

d.	?  weil Ede mit der HACKE dies Loch ins Eis gehackt hat.

e.	?? weil Ede mit der Hacke ins Eis  dies LOCH gehackt hat.

The analysis of this set of examples is closely connected to word order facts in German. In Winkler (1996) these cases are analyzed on a par with resultative secondary predications, as in (64a), basically assuming that they form a complex predicate with the matrix predicate, (p. 303-305 and 382-388). The reading for (64a) can be paraphrased that he bought so many things that as a result of it the shop became empty. The accent pattern in (64b) results in a depictive reading where the predicate <u>leer</u> has adjunct status. The prevalent reading is that he bought the shop at a time <u>t</u> and the shop was empty at <u>t</u>.

(64) a.	weil	er	den LADEN	leer	gekauft	hat.

	because he	the shop	empty	bought	has

b.	weil er den Laden LEER gekauft hat.

We do not intend to settle the issue here. However, even if (61) were possible as an answer to a neutral focus inducing <u>wh</u>-question (perhaps Q: "What did you observe?" A: "Well, nothing special. Only that "Karl ein Buch ins ReGAL gestellt hat"), it is clearly marked. The example becomes better when instead of the indefinite DP "ein Buch", a definite DP "das Buch" were used. Then (61) would correspond to the Höhle-type examples (see Höhle 1982 and discussion of examples (73) and (74)

below) and we would assume that the definite DP has been scrambled out of VP (Haider & Rosengren 1998). The relevant observation is that the discussion of focus in German is intricately related to word order facts. That is, if Zubizarreta's assumption that the NSR applies to German should turn out to be correct, a separate mechanism would have to be found, which accounts for its interaction with word order, focus, specificity and scrambling. In the case of directional ditransitives, the blind application of the MNSR does not seem to be possible. What is required is a discussion of the interaction between word order facts and argument structure.

### 5.4.   Zubizarreta's ambiguity analysis of nuclear stress in German

A second difficulty arrises with the analysis of German unergatives, as in (65):

(65)       daß   ein Junge   gelacht   hat.

             that   a   boy       laughed   has

For (65), Zubizarreta proposes that "such a structure gives rise to an ambiguity in the position of NS; it can fall either on the subject or on the past participle" (p. 58). Firstly, it is not completely clear how a position can be "ambiguous". Secondly, this quote amounts to the claim that the focus structure of (66a) and (66b) is identical (see fn. 26, p. 175 where a similar claim is forwarded for examples (70-72) below):

(66) a.　　daß　ein Junge　GELACHT　　hat.

　　　　that　a　boy　　laughed　　　has

　　b.　daß ein JUNGE gelacht hat.


We, however, believe that neither the focus structures, nor the situations in which these sentences can be used, are identical. No two sentences with different focus structures can be uttered in identical situations and still adhere to the conversational maxims. Moreover, it is not exactly clear what empirical considerations could have led Zubizarreta to assume that these sentence pairs can be equally considered as neutrally stressed sentences. Neither of these sentences reflects the native speaker intuitions for the intended neutral focus reading as an answer to a what-happened question. (66a) can only be an answer to the question What did you hear? if the context provides a situation in which we already talked about a set of boys, for example, in a boys school. The answer Ich glaube, daß ein Junge GELACHT hat can then treat the indefinite DP as presupposed material, as further discussed below. (66b), on the other hand, can only answer the question Who laughed?, and does not derive the intended wide focus reading. If the modularized version of the NSR predicts different focus structures of a single sentence, the notion of "neutral focus" lacks an adequate definition. Furthermore, Zubizarreta's claim is completely surprising, since the rule system (C-NSR/S-NSR) introduced above in (42) cannot even derive this pattern. Further stipulations must be introduced to derive the different positions of nuclear stress in (66a,b), such as those given in (67):

(67) Auxiliary to converion (19[=68]) for application of NSR (optional)

If some projections of the verbal components $V_i$ and $V_j$ of the lexical verb are metrically nondistinct, then $V_i$ and $V_j$ are analyzed as metrically nondistinct for the purpose of applying the interpretive convention (19[=68]). (p. 59)

(68) Convention for the application of the NSR

Given two analyses of the syntactic tree $C_i,..., C_j....$ and ... $K_i, ..., K_j, ...$ such that .... $C_i,..., C_j$ and .... $K_i,..., K_j, ...$ are metrically nondistinct at $(C_i, K_i)$ and at $(C_j, K_j)$ and $(C_i, C_j)$ meets some condition P of the structural description of the NSR in the standard sense, then $(K_i, K_j)$ is taken to meet P as well. (p. 43)

The proposal here is again based upon the concept of metrical nondistinctness. The reason why Zubizarreta arrives at an ambiguous analysis of German intransitive or transitive sentences is that she assumes that in cases in which two or more metrically nondistinct analyses are available, the structural description of the rule will apply to all of them or to none of them. The representation in (69) illustrates which nodes are considered metrically nondistinct in the derivation of (66a) and (66b):

(69)
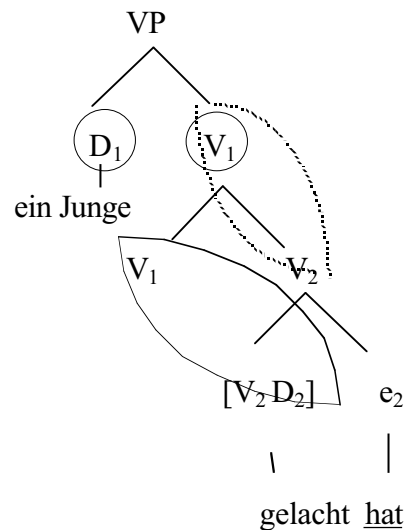


For the derivation of (66a), the C-NSR applies to [$D_1$] and [$V_1$] and assigns prominence to [$V_1$], which is realized on <u>gelacht</u>. For the derivation of (66b), it is assumed that the convention in (67) applies, according to which [$V_1$] and [$V_2$ $D_2$] are metrically nondistinct (enclosed by a solid line) because their projections [$V_1$] and [$V_2$] (enclosed by a dotted line) are metrically nondistinct. Therefore, [$D_1$] and [$V_1$] (solid circles) are interpreted as being selectionally ordered. The S-NSR applies to these nodes and assigns major prominence to [$D_1$].

Were it just the intransitive German cases which receive a counterintuitive interpretation, we could have just bypassed this point. However, the "ambiguity analysis" is applied to further examples. In particular, it is claimed that the a- and b-examples in (70) through (72) are alternative realizations of the NS. Zubizarreta explicitly claims that they have identical focus structures (fn. 26, p. 175).[31]

(70) a. weil ihn/Hans ein VERWANDTER angerufen hat.

because him/Hans a relative called has

'because a relative called Hans/him.'

b. weil ihn/Hans ein Verwandter ANGERUFEN hat.

[Why is Hans happy?]

(71) a. Hans hat gestern eine FRAU geküßt.

Hans(ACC) has yesterday a woman(NOM) kissed

'A woman kissed Hans yesterday.'

b. Hans hat gestern eine Frau GEKÜSST.

[Why is Hans happy?]

(72) a. Ich glaube, daß ein JUNGE das Buch genommen hat.

I believe that a boy the book taken has

'I believe that a boy took the book.'

b. Ich glaube, daß ein Junge das Buch GENOMMEN hat.

[What happened to the book?]

We do not agree with Zubizarreta's analysis that the a-sentences and the b-sentences of the examples in (70) to (72) are felicitous answers to the same fide focus inducing question. They cannot be analyzed as prosodically ambiguous in the sense that the accent either falls on the subject or alternatively on the verb. In each case, the b-sentence is marked (or even ungrammatical as in the case of (72b)), and clearly needs contextual manipulation to which we will turn now.

The basic data for German is well known. Höhle (1982: 77) already provides the relevant pattern, pointing out that the examples in (73) contain the normal accent patterns, whereas those in (74) are marked.

(73) Es heißt,   daß   die Theorie   den FACHLEUTEN   gefallen   hat.

that   the theory   the   experts           pleased   has

daß   der Junge   dem PFARRER   begegnet   ist.

that   the boy   the   reverend         met         is

daß   der JUNGE   getanzt   hat.

that   the boy           danced   has

daß   der JUNGE   kommt.

that   the boy           comes

(74) Es heißt,   daß die Theorie den Fachleuten GEFALLEN hat.

daß der Junge dem Pfarrer BEGEGNET ist

daß der Junge GETANZT hat.

daß der Junge KOMMT.

Note, however, that Höhle's examples are constructed with definite referential DPs. Reconsidering Zubizarreta's data, it turns out that all her critical examples in German (70b-72b) contain a deaccented indefinite subject in a VP-internal position. Let us assume, following Kratzer (1988), Diesing (1992), Krifka (1992), Drubig (1994), Kondrashova (1996) among many others, that the VP demarcates the domain of presentational focus mapping VP internal material to the nuclear scope. Then, it may

be the case that her examples, which are taken from an inaccessible manuscript by Prinzhorn (1994), are designed to determine whether the domain of presentational focus may contain deaccented nonspecific DPs. Consider for example the following sentence pair from Büring (1994: 80):


(75)  a.    weil     sie     immer   [$_{VP}$ BÜCHER     stehlen]$_F$.

            because  they  always      books         steal

      b.    weil sie immer [$_{VP}$ Bücher [STEHLEN]$_F$].

      c.    weil sie Bücher immer [STEHLEN]$_F$.


Büring proposes that (75a) is unproblematic and allows a wide focus reading (VP focus), while the focus domain in (75b) is smaller than VP, namely only V. (75c) is an alternative realization of (75b) where the indefinite Bücher is scrambled out of VP. The issue at stake in this discussion is the controversy between Diesing's (1992) claim that the semantic partitioning of the proposition correlates to phrase structural distinctions and Krifka's (1992) claim that the semantic partitioning follows from the focus-background structure of the sentence.[32] The examples in (75) are relevant because in (75a) the VP and the domain of focus are identical, while in (75b) they are not. In (75b) the indefinite NP is within VP, but it is not part of the focus domain. According to Krifka it is not mapped into the nuclear scope at LF. This type of example corresponds to Zubizarreta's examples (70-72), since in both cases an unfocused indefinite NP occurs in a VP internal position. Assuming that scrambling governs word order variation in German, it is irrelevant that in (75) the indefinite is an

object, while in (70-72) the indefinites are subjects. Both can occur VP-internally or VP-externally. The result of the application of the usual sentence adverb test to Zubizarreta's examples is that the deaccented indefinite occurs VP-internally, as illustrated for (76) and (77) below.[33] In the b-examples we have marked the alternative (and preferred) adverbial position by an X.

(76) a.    weil  ihn/Hans [ja wahrscheinlich] ein VERWANDTER angerufen   hat.
            because him/Hans   perhaps        a  relative         called      has

     b.    weil ihn/Hans [ja wahrscheinlich] ein Verwandter [X] ANGERUFEN hat.

(77) a.    Ich glaube,  daß [ja wahrscheinlich] ein JUNGE das Buch genommen hat.
            I  believe  that  perhaps          a  boy    the book  taken     has

     b.    Ich glaube, daß [ja wahrscheinlich] ein Junge das Buch [X]

            GENOMMEN hat.

Recall that Zubizarreta's ambiguity hypothesis predicts for both sentences a wide focus reading. Such an interpretation is possible (contra Büring) even for the b-examples under the proviso that the deaccented indefinites ein Verwandter, eine Frau, and ein Junge introduce a new discourse referent. The crucial question then is how should this be possible? Indefinites in VP are deaccented if they refer like other descriptional anaphora to a new entity which is of the same type of a previously introduced or otherwise contextually available entity (Csúri 1996, Drubig 1999). For example, (71b) is only felicitous with a wide focus reading, if the concept women is

familiar, such as the one given by the second question in (78A). (71b), however, is not possible as an answer to a plain <u>why</u> question.

(78) A: Warum ist Hans so glücklich? Hat das etwas mit einer Frau/Frauen zu tun?

'Why is Hans so happy? Has that something to do with a woman/women?'

B: Ja, ihn hat gestern [<sub>VP</sub> eine Frau GEKÜSST].

A test of the status of the indefinite DP in VP is the pronominalization test. While <u>eine</u>-pronominalization (which corresponds roughly to <u>one</u>-pronominalization in English) in (79a) is perfect, pronominalization with a referential personal pronoun as in (79b) is ungrammatical.

(79) A: Why is Hans so happy? Has that something to do with a woman/women?

a. Ja, ihn hat gestern [<sub>VP</sub> eine [<sub>NP</sub> ~~Frau~~] GEKÜSST].

b. * Ja, ihn hat gestern [<sub>VP</sub> sie GEKÜSST].

On the assumption that <u>eine</u>-pronominalization in German is a case of ellipsis in DP, where the head of the DP <u>eine</u> is overt and the NP complement <u>Frau</u> is deleted, it can be argued that <u>eine</u>-pronominalization is an anaphora of sense, which does not refer to a salient referent, but introduces a new discourse referent. The semantic

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interpretation of (78B)/(79a) is that there exists a woman who kissed Hans. That is, the subject of (78B)/(79a) is a deaccented existentially quantified expression. Deaccentuation is triggered by previous mention of the same type, a woman or women in general (cf. Csúri 1996).[34] Referential identity between the DP <u>eine Frau</u>/<u>Frauen</u> in (79A) and <u>eine Frau</u> in (79a) cannot be established, as seen in (79b).[35]

This analysis implies that an unfocused indefinite DP can occur within VP if and only if it is a descriptional anaphora. That is, it can be deaccented by virtue of previous mention of the relevant type, and it can occur within the VP by virtue of introducing a new discourse referent, a specific instance of that type. If this is what Zubizarreta intends to show with these examples, then the issue raised boils down to the following controversially discussed question: are the deaccented DPs, such as the postverbal DPs in the well-known default accentuation cases in English or per analogy, the deaccented pre- or postverbal DPs in German/Dutch integrated into the focus domain (Ladd 1980, Gussenhoven 1992, Selkirk 1995), or are they excluded (Diesing 1992, Krifka 1992, Büring 1994)? As the above discussion shows, Zubizarreta's ambiguity hypothesis would clearly position her with the first group.[36]

The indepth discussion of examples (66, 70, 71, 72) can be summarized in three points: First, the examples are not prosodically ambiguous. They are uttered in different contexts and mean different things. The b-versions cannot be answers to a plain what-happened/why question. Second, the issue with these examples (66, 70, 71, 72) is not whether the MNSR can derive the primary accent on the VP-internal element or alternatively on the verb. The issue is whether deaccented VP-internal phrases are integrated into the domain of presentational focus or not. Third, the

examples present a special case in which the indefinite DPs can be interpreted as descriptional anaphors (anaphora of sense) and may, as such, introduce a new discourse referent in the discussion.

Before we continue with the discussion of the application of the MNSR to Spanish data, we would like to address the following overall questions: What is the empirical and theoretical value of the MNSR? More specifically, can the computational cost of the derivation be justified for the derivation of the standard cases in German? This question ties in with the more general question of the theoretical status of the MNSR raised above.

## 5.5.  Summary

German linguists who work on focus-background structures fall into two groups: the proponents of the first group claim that presentational focus can be derived by subscribing to an argument structural account supplemented with a theory of scrambling (Schmerling 1974, 1976, Lenerz 1977, also Krifka 1984, von Stechow & Uhmann 1986, Lenerz & Klein 1988, Rosengren 1991, Krifka 1992). The proponents of the other group believe that some version of the NSR is also active in German (Höhle 1982, Jacobs 1991, Jacobs 1992, among others).[37] Zubizarreta's proposal of a modularized nuclear stress rule which contains two components, the S-NSR, which is sensitive to selectional ordering, and the C-NSR which is sensitive to constituent ordering could be conceived of as uniting the two opposing theories. However, the

details of the analysis of focus-background structures in German are intricately tied to word order facts, the explanation of which depends on theories of deaccentuation (of which scrambling is one) and cannot be easily reduced to notions such as constituent ordering and selectional ordering alone. Since Zubizarreta's theory of stress considers only these two factors, many additional and seemingly unmotivated concepts have to be introduced in the course of the discussion. For example, the algorithms which are introduced to account for the German data have as their goal the computation of the nuclear accent, which - according to Zubizarreta - is realized ambiguously on either the verbal head or its adjacent argument (p. 50, 58, FN16). The key concepts of this computational derivation are metrical sisterhood, defined in terms of metrically visible sisters, and asymmetric c-command. Each of these concepts is subject to various redefinitions with the goal of applying the term metrical sisterhood to syntactic nonsisters. Thus it happens that the term metrical invisibility becomes the key concept of the MNSR, which itself seems theoretically unmotivated. We therefore conclude this section by assuming that had Zubizarreta acknowledged the interrelatedness of word order, theories of focus and theories of givenness and deaccentuation in German, the relevance of notions like metrical invisibility would have been predicted, and the generality of MNSR more obvious.

# 6. Application of the MNSR to Romance

As mentioned in the introduction, one of the greatest merits of this book is an attempt to deal with comparative evidence. The result is the formulation of the modularized NSR, which incorporates insights of the argument structural approach and which can also handle word order variation in Romance in an elegant way. And indeed evidence seems to accrue for movement operations which lie outside the domain of what Chomsky (1998) calls "narrow syntax", the computation that leads to the LF interface. Needless to say, we observe a revival of PF operations, which were covered by the "stylistic rules" in pre-GB syntax.

The reasons for this shift in perspective are manyfold. First, there is the general scepticism concerning the particular formulation of Case Theory in GB syntax which is completely divorced from morphological case. The development of alternative theories, such as the theory of dependent case (cf. Marantz 1991 and his followers), has diminished the role case checking and AgrPs, as positional instantiations of this idea, play in the Grammar. Furthermore, case checking could only be evoked as a trigger for DP movement. PP-scrambling and reorderings involving adverbial phrases can hardly be handled in a Minimalist framework, in which movement operations in the syntax need clearly defined triggers. Zubizarreta seems to be aware of this problem and delegates case checking to abstract syntax. She also aptly demonstrates that scrambling in Romance, unlike in German, does not necessarily correlate with specificity effects or relative scope of quantified expressions, but seems to be an operation solely induced by focus structure. These problems are elegantly solved by

the formulation of p-movement, an operation which applies after the core syntactic

operations (overt and covert) have been performed.[38]

As repeatedly mentioned above, Zubizarreta argues that only the C-NSR is

active in Spanish, and in Romance generally. Whenever the NSR and the FPR

conflict, Spanish has recourse to movement. The definitions of the FPR and the C-

NSR are repeated in (80) and (81) for convenience.

(80)  FPR

Given two sister nodes $C_i$ (marked [+F]) and $C_j$ (marked [-F]), $C_i$ is more

prominent than $C_j$.

(81)  C-NSR

Given two sister nodes $C_i$ and $C_j$, the one lower in the asymmetric c-command

ordering is more prominent.

Due to the fact that all lexical constituents are metrically visible for the NSR

irrespective of informational status, Spanish has to resort to a different strategy from

that employed by Germanic languages. The C-NSR operates blindly and assigns main

prominence to the most deeply embedded of two sister constituents; a [-F] marked

constituent is removed from the domain of its application in examples with "neutral"

(i.e. noncontrastive) focus. Since contrastive focus does not fall under the domain of

the NSR, any constituent can be contrastively focused.[39] We illustrate the different

focusing possibilities with the paradigm in (82). Of the three examples, only (82c) is

compatible with a focus neutral interpretation (i.e. it may answer a question such as

"Who gave you the bottle of wine?"); the prominent subject in SpecTP (82a) and the subject in its canonical VP-internal position (82b) can only receive a contrastive interpretation, as indicated by the tags in brackets. Zubizarreta contends that (82c) is derived by adjunction of the lower $VP_2$ to $VP_1$ from an underlying structure, roughly as in (83). This particular analysis is supposed to follow from her treatment of the locality of p-movement. Hence p-movement is essentially a syntactic operation which maps Σ-Structure onto LF, but the trigger is phonological in nature.

(82) a.    MARÍA me       regaló    la botella de vino      (no Juan).

           María    to-me    gave      the bottle of wine    (not Juan)

     b.    Me       regaló    MARÍA     la botella de vino (no Juan).

     c.    Me       regaló    la botella de vino      MARÍA.

(83)        [$_{TP}$ me regaló$_i$ [$_{VP1}$ María [V$_1$ [$_{VP2}$ V$_{2/i}$  la botella de vino]]]]

Two questions with regard to p-movement arise here. The first one is more technical in nature: why does p-movement target the lower $VP_2$ instead of the defocalized object in an example such as (82c)? The second question is of more general import and has consequences for the Model of the Grammar: is there any evidence that p-movement occurs in the syntactic component, or does it occur in the derivation of PF? If the latter is the case, then the level of Σ-Structure can be dispensed with. In the following sections we address these questions and we provide further evidence for the plausibility of an NSR-based approach in Romance.

## 6.1.  The locality of p-movement

P-movement is argued to be a Last Resort operation which resolves a conflict between two different assignments of prosodic prominence. It is said to be governed by the rule in (84), where _affect_ is to be understood in the most general syntactic terms - that is, a change in the c–command relation between two nodes. A contradictory prosodic structure is defined as in (85), where [ph*] represents a strong node in metrical terms (cf. p. 139f).

(84)  P-movement

Affect the nodes $\alpha$ and $\beta$ iff these nodes have contradictory prosodic properties.

(85)  ... [$_\delta$[$_\alpha$ ph*] ... [$_\beta$ ph*]], where $\alpha$ and $\beta$ are metrical sisters.

Since both the NSR and the FPR are defined in terms of metrical sisters, a conflict in prominence assignment by the two rules changes the c-command relation between the respective nodes. Consequently, application of p-movement gives the following structure, on the assumption that movement can only be leftward (Kayne 1994). After p-movement, the rules can reapply and main prominence is assigned to $\underline{\alpha}$ by both rules.

(86)  ... [$_\delta$ [$_\beta$ ph*] [$_\delta$[$_\alpha$ ph*] ... [$_\beta$  ]]]

Why is p-movement local? Why can the backgrounded material not adjoin to a category χ which dominates δ̠, as in (87)? The answer is surprisingly simple and circular: because prosodic contradiction is defined in terms of the configuration (85) above, and (87a) does not meet the structural description of this rule. In particular, the derivation in (88) from (83) above is excluded.

(87)  a.  $[_\chi \gamma [_\delta [_\alpha ph^*] ... [_\beta ph^*]]]$

    b.  $[_\chi [_\beta ph^*] [_\chi \gamma [_\delta [_\alpha ph^*] ... [_\beta ]]]]$

(88)  $* [_{TP}$ la botella de vino$_i$  $[_{TP}$ me  regaló  $[_{VP1}$ MARÍA ... t$_i$]]]

          the bottle of wine  to-me  gave  María

The formulation of p-movement then accounts for two facts: p-movement adjoins the moved constituent to the phrasal node that immediately dominates the focused constituent, and it disallows adjunction to a higher node irrespective of whether this node immediately dominates metrically visible material or not. It is, however, not clear why local scrambling should always result in narrow focus, and how this follows from the interaction of the NSR and the FPR. More precisely, it does not follow in any straightforward way that a wide focus interpretation is generally associated with "canonical" word order.[40]

Let us now consider how the rule system determines the target of movement. Recall that in Spanish VOS clauses with a focused subject the word order is supposed to be derived by adjunction of VP$_2$ to VP$_1$. In the sentence (82c) above with the underlying

structure (83), the subject is marked [+F] and the object is marked [-F]. The NSR would place main prominence on the object, which conflicts with the prominence assignment of the FPR. In Zubizarreta's system María is a metrical sister of $V_1'$. $V_1'$ is not a maximal projection, hence it cannot be moved. It is, however, metrically nondistinct from $VP_2$, which can be moved: VP scrambling would then be an option. But note that $VP_2$ is metrically nondistinct from the DP la botella de vino. This means that the DP is also a candidate for p-movement. In the absence of any independent empirical evidence, it is unclear what determines pied-piping of the whole VP, since it does not seem to follow from the Last Resort formulation of p-movement.[41]

## 6.2.  Further evidence for the NSR approach from Romanian

Zubizarreta advocates an approach in which the C-NSR applies uniformly in both Germanic and Romance. The C-NSR has the same domain of application: nuclear stress is assigned to the most deeply embedded constituent within the clause. Word order differences and differences in focus structure among Romance languages are the result of language specific restrictions on movement operations. The difference between Spanish and Italian focus structure, for example, follows from different syntactic operations. Consider the examples in (89) and (90). Spanish allows a wide focus in (89), while Italian can only focus the subject in (90). The NSR applies in both cases, but the source structures for (89) and (90) differ. In Spanish only the

object is left-dislocated, but in Italian a sequence of syntactic operations is needed to derive the narrow focus and the surface structure of (90). First, the focused subject moves to a sentence peripheral focus position which dominates TP, namely SpecFP. This operation achieves the narrow focus effect. Then, the TP is adjoined to FP, as in (91). The derivation may stop here resulting in a somewhat marginal construction, which can be improved if the focused subject bears heavy stress or if it is lexically more complex. The heaviness effect disappears if the object in (91) is "removed" by left-dislocation, which Zubizarreta analyzes as movement to a dominating TopP, as in (92).

(89) La manzana    la            comió    JUAN.

  the apple      ACC.CL    ate        Juan

  [What happened to the apple?]

  [Who ate the apple?]

(90) La mela,    l'ha            mangiata    GIANNI.

  the apple    ACC.CL has    eaten          Gianni

  [*What happened to the apple?]

  [Who ate the apple?]

(91) ?[$_{FP}$ [ $e_i$ ha    mangiato    la mela]$_j$ [$_{FP}$ Gianni$_i$ [$_{TP}$ $e_j$]]]

(92)  [$_{TopP}$ la mela$_k$ [$_{FP}$ [$e_i$ l'ha mangiata  $e_k$ ]$_j$ [$_{FP}$ Gianni$_i$ [$_{TP}$ $e_j$]]]]

Rather than discussing the plausibility of such complex derivations,[42] we want to address the question of whether the C-NSR itself is a uniform rule which infallibly

assigns nuclear stress to the most deeply embedded constituent in the clause. We will briefly consider some facts of word order variation in Romanian, a language which shares many common properties with Spanish, and we will argue that certain differences between Spanish and Romanian VP-internal scrambling follow if the NSR applies to different domains. Rather than invalidating an NSR-approach, the data presented below provide additional evidence for the plausibility of such an approach, at least in syllable-timed languages. The main argument for defining different domains for the NSR is based on the observation that in Romanian the NSR fails to apply in certain contexts in which one would expect it to apply if the rule were invariant in Romance.

Like Spanish, OVS word order in Romanian allows sentential focus. Application of the NSR in the context of (93a) requires "removal" of the object from within the VP, either by cliticization (93b) or left-dislocation (93c). In a VP-focus context with a focal object, as in (94), the backgrounded subject may remain VP-internal (94a), or optionally move to SpecTP (94b), because it is not the target of the NSR.

(93)  a.    Nu găsesc ziarul.

            'I can't find the newspaper.'

      b.    [F L-a    aruncat        GEORGE].

              it-has thrown-away  George

            'George has thrown it away.'

c. Ziarul　　　　　[$_F$ l-a　　aruncat　　　GEORGE].

newspaper-the　　it-has thrown-away　George

d. #[$_F$ A aruncat GEORGE ziarul].

(94) A: Ce le-a făcut doctoriţa celor doi fraţi?

'What did the doctor do to the two brothers?'

a. [$_{Top}$ Celui mic]$_k$ [$_{TP/F}$ i-a　　　făcut$_j$　[$_{VP}$ doctoriţa t$_j$　　o INJECŢIE t$_k$]].

(to)-young one　　him-has　made　　　doctor-the　　　an injection

'To the young one, the doctor gave an injection.'

b. [$_{Top}$ Celui mic]$_k$ [$_{TP}$ doctoriţa$_i$　[$_{T'/F}$ i-a　făcut$_j$ [$_{VP}$ t$_i$　t$_j$ o INJECŢIE t$_k$]]].

Yet the NSR does not seem to have any effect on word order in Romanian if (non-contrastive) focus in VP is narrow, as the following contrast between the Spanish and Romanian V-object-adverbial sequences indicates. In the Spanish example in (95) the given adverbial is scrambled in front of the object. In the Romanian example (96) the object occurs in its canonical position following the verb.[43]

(95)　　Juan plantó　　en el jardín　[$_F$ un ROSAL].

Juan planted　　in the garden　　a rose-bush

[What did John plant in the garden?]

(96) A: Ce ai plantat în grădină?

What did you plant in the garden?

B: Am　　　plantat un TRANDAFIR　în grădină.

have.1SG　planted a rose-bush　　　in garden

We believe that this difference in word order follows if the domain of the NSR is restricted to the focused phrase in Romanian, as determined by rule (97).

(97)  NSR (Romanian)

Assign main prominence to the rightmost lexical item of a focused phrase.

In (96B) above, the rule applies trivially to the direct object itself, hence no reordering of constituents occurs. This example, with narrow focus on the object, contrasts with (98) and (99). In (98a) and (99a), the VP is focused and the adverbial is "scrambled" in front of the direct object. If the adverbial is "given" in the context, as in (98), it has to scramble in front of the object. The accentual pattern in (98b) can only signal narrow focus on the object. This, however, does not fit the context in (98A).

(98)  A:    A fost cineva la piață astăzi?

'Has anyone been to the market today.'

a.    Da, mama. [_F  A    cumpărat   din piață      o GĂINĂ].

yes, mother.  has    bought      from market   a hen

'Yes, mother. She bought a hen from the market.'

b.    # Da, mama. A cumpărat o GĂINĂ din piață.

(99)  A:    Ce ai făcut aseară?

      What did you do last night?

      B:    [_F Am       cîntat  Mariei       sub   balcon      o SERENADĂ].

            have.1SG  sung    Mary.DAT    under balcony     a serenade

            'I sang a serenade for Mary under her balcony.'


Note that it does not make sense to approach Romanian as a language which optionally analyzes defocused constituents as metrically invisible, since the question would then arise as to why the adjunct should be analyzed as metrically invisibile in (96), but not (98a), where reordering is sensitive to the phrasal stress rule.  Rule (97) captures the fact that wide focus is possible with "noncanonical" word order, which is generally associated with narrow focusing strategies in a wide range of languages, including Spanish. If our analysis is correct, then the higher phrasal node, to which the NSR applies (VP or TP in the examples above) must be marked as focus. Consequently, a wide focus may contain defocused material contrary to what Zubizarreta assumes.[44]


In this section we have provided further evidence for the plausibility of an NSR approach in Romance, but we have suggested that the domain of application of this rule might vary. We formulated the NSR for Romanian in terms of linear order of constituents, which is consistent with the idea that this rule is a phonological rule as proposed by Selkirk (1984, 1995).[45] Clearly, further research on the phonology of

focus and phrasing and its relation to syntax is necessary in order to decide in favor of one or the other approach.[46]

## 6.3.   Where does p-movement apply?

The main reason for the postulation of an (intermediate) level of syntactic representation like  Σ-Structure is the fact that there is a rule like the FPR which refers to both prosodic features (i.e. assignment of prominence) and features of syntactic and semantic import (i.e. [±F]). Yet Generative Grammar has always advocated a strict separation of levels, and rules are expected to be formulated in terms of these levels. Specifically, phonological rules should not refer to  a semantic contrast such as [±F]. Zubizarreta's solution is to have a stretch of derivation in the syntactic component in which a rule like the FPR can apply. Moreover, the NSR is formulated in terms of selectional ordering and asymmetric c-command, and p-movement is the result of the interaction of this rule with the FPR. Consequently, the operation of these rules and p-movement must apply  in the syntax and not  in the derivation of PF (i.e. after Spell-Out). However, the NSR and the FPR are theoretical constructs and empirical evidence is essential for consolidating this revised Model of the Grammar where LF is derived from  Σ-Structure. After a detailed examination of binding configurations in both Spanish and French, Zubizarreta concludes that p-movement neither feeds nor bleeds the possibility of variable pronoun binding in these languages, and the only way to deal with the binding facts is to resort to a post-

LF interpretive level, as discussed in section 3.3 above. Evidence is then adduced from the licensing of negative operators after p-movement in Italian.

In Italian and most other Romance languages (cf. Martins 1998 for an excellent overview), a postverbal negative operator must be licensed by the negative particle only if it occurs in postverbal position. Zubizarreta assumes that NegP is located between TP and VP, and that the emphatic operator moving to NegP (and further to SpecTP in Spanish or to SpecEmphasis in Italian) morphologically merges with the negative particle. If the operator is postverbal, neg adjoins to T. Consider now the sentences in (100).

(100) a.　Nessuno ha　　mangiato　la mela.

　　　　　nobody has　　eaten　　　the apple

　　 b.　*(Non) ha　　mangiato　la mela　　nessuno.

　　　　　　not　has　　eaten　　　the apple　nobody

Sentence (100b), with VOS order, also requires the negative particle for the operator to be licensed. However, this word order is derived by first moving the operator into SpecEmphasis and subsequently adjoining TP to EmphasisP, similar to the derivation of VOS order with a focused subject (cf. the discussion in the previous section). Zubizarreta concludes that since neg is necessary here to license the negative operator at LF, then "it must be that p-movement feeds LF" (p.146). In (101) we have given the phrase structure of (100b) as we understand it from the discussion in the book.

(101)     $[_{EP} \ [_{TP} \ \text{non-ha} \ [_{NegP} \ t_{neg} \ [_{VP} \ t_i \ \text{mangiato la mela}]]]_j \ [_{EP} \ \text{nessuno}_i \ [_{E'} \ [_{TP} \ e \ ]_j]]]$

It is obvious that this single argument is not sufficient to motivate a revision of the original Model of the Grammar. Furthermore, it is not clear whether this particular analysis of (100b) can be defended upon closer scrutiny. Note that the same data can easily be used against Zubizarreta's analysis of VOS in Italian. Assuming that neg does not surface if the negative operator moves to (or through) NegP, why then is it obligatorily spelled out in just this example? Given Zubizarreta's theory of movement, the occurrence of nessuno in SpecEmphasisP is motivated by an "emphasis" feature. Hence, movement of nessuno is feature-driven, and the negative operator is expected not to skip NegP on its way to SpecEmphasis, as is the case in (100a).[47]

Having noticed that the motivation for p-movement as mapping Σ-Structure onto LF rests on shaky foundations, we will now consider whether the postulation of Σ-Structure and its role in the Model incurs additional problems. Recall from section 3.3.1 above that Σ-Structure marks the end of the core syntactic derivations (i.e., Merge and Attract). In fact, Zubizarreta assumes two types of features that are relevant for the focus structural articulation of sentences. The first set are morphosyntactic features which are responsible for movement operations to the left periphery of the clause, like "focus", "topic" and "emphasis", and which are part of the initial feature array drawn from the lexicon.[48] The second set are those features upon which the NSR and the FPR operate. These are assigned at Σ-Structure under the following conventions:

(102) a.   A constituent C is marked [+F] iff C is focused or part of the focus.

    b.   A constituent C is marked [-F] iff C is presupposed or part of the presupposition.

    c.   A constituent C is unmarked for the feature [F] if it dominates both [+F] and [-F] constituents. (p. 94)

Let us clarify the distinction between the feature configuration drawn from the lexicon and the feature configuration assigned at $\Sigma$-Structure. If we interpret Zubizarreta correctly, the feature "topic" on $T^0$ in Spanish or on $Top^0$ in Italian triggers movement of a [+topic] marked constituent, for example a direct object in a clitic left-dislocation construction. A [+topic] constituent, however, is marked [-F] for the purpose of application of the FPR. Hence, the features introduced at different levels of the derivation must be distinct. The question now arises as to what the feature "focus" on $T^0$ in Spanish and on $F^0$ in Italian and many other languages attracts. It cannot attract a [+F] constituent since this feature is only assigned after the core syntactic operations are completed, including focus movement. Do we need a third type of focus feature that duplicates [+F] in the relevant syntactic configurations? We believe that if Zubizarreta had considered focus assignment to lexical constituents when they are drawn from the lexicon, the problems of a level like $\Sigma$-Structure for which no independent constraints are formulated could be obviated. Such a move would not seriously affect the formulation of the FPR, but it would probably require the elimination of the distinction between [-F] and unmarked for [F] in the notational conventions in (102) above. Since we have not found any clear

evidence that p-movement occurs on the stretch that leads to LF, the alternative possibility that it occurs in the PF component cannot be excluded either. We have already noted that the issue of the grammatical level at which the NSR applies has not been settled yet, and for the application of the FPR at PF one would have to ensure that the focus feature is not eliminated in the syntactic component. We close this section with the remark that the last word on word order variation induced by prosodic rules and its place in the grammar has not yet been said, but we are optimistic because Zubizarreta's study presents a good starting point for future research.

## 7.   Conclusion

<u>Prosody, Focus and Word Order</u> is an ambitious and novel re-exploration of the complex interplay between focus and prosody in Germanic and Romance which both introduces new and significant data into the debate on how each language family implements primary stress (Germanic allows deaccentuation, whereas the Romance languages are split along the dimension of whether they allow it or not) and argues for a set of general theoretical conclusions relating to the implementation of focus, prosody and prosodically motivated movement in an intonational model of grammar.

Zubizarreta implements an NSR-based account, an approach which has gained considerable influence ever since Cinque (1993) reformulated the original NSR of

Chomsky & Halle (1968) within a more articulate theory of phrase structure and pointed out the advantages of such an approach for comparative studies of Germanic and Romance. While Cinque's theory was conceived of as a theory of neutral stress assignment dissociated from focus structure, Zubizarreta's study is an attempt to directly relate prominence assignment and word order variation to the focus-presupposition articulation of sentences. The geatest merit of this study is its attempt to deal with a vast amount of data from several languages within an essentially unified theory of the focus-prosody relation.

Though we could not deal with all aspects discussed in the book, we have addressed the main theoretical questions and the empirical data on which they are based. For English and German we have shown that there are no strong arguments for the application of a NSR formulated in terms of depth of embedding. We have also pointed out some shortcomings of the metrical theory employed by Zubizarreta and some problems for the ambiguous application of the MNSR. As far as Romance languages are concerned, the arguments for an NSR-based approach are much stronger and we have discussed some additional data in support of Zubizarreta's theory. Although it remains an open question whether an NSR-based account can be extended to further languages, there is no doubt that linguists dealing with word order variation in languages in which intonation also plays an important role in the focus-presupposition articulation will find this book a welcome contribution in search for an adequate theory of information packaging.

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[1] Instead of the terms unmarked or normal intonation, some authors also use the term "neutral stress". However, we follow Bolinger (1961), who argues for a terminological separation of <u>stress,</u> which applies to word stress, and <u>accent</u>, which applies to phrasal prominence assignment.

[2] The term focus-background structure is the synonym for focus-presupposition structure which is used in the German tradition as a translation of <u>Fokus-Hintergrund Gliederung</u> (cf. Jacobs 1991).

[3] We indicate focus related prominence by capital letters.

[4] The puzzle observed by Evans (1980) is that there is a class of pronouns that have quantifier expressions as antecedents, but which are not bound by these quantifiers, receiving instead a referential interpretation, as in (i).

(i)     a.  <u>Only one boy</u> was invited. <u>He</u> had a good time.

        b.  <u>Few boys</u> came to the party but <u>they</u> had a good time.

Thus, the idea is that $A_1$, like the antecedent of the original E-type pronouns, introduces an existential presupposition. $A_1$ does this directly, employing existential quantification ($\exists x$). This is the straightforward case. The antecedent of an E-type pronoun, however, is a quantifying DP whose semantics does not provide a built-in existential presupposition. However, Evans' observation is that in sentences like (ia), the quantifying phrase <u>only one boy</u> allows the construction of a set by intersection which includes exactly one element. This element can serve as the antecedent of the referential pronoun <u>he</u>. The same analysis holds true for (ib), in which the cardinality of the intersection of the set of party goers and boys is small, but bigger than one, and is therefore referred to by the plural pronoun <u>they</u>. The question of how it is possible for a quantifier to serve as an antecedent of a referential pronoun is not addressed by Zubizarreta, although the problem comes up again in the discussion of the quantifier binding facts as a motivation of assertion structure. Generally, it is assumed that some quantifiers allow the construction of a referent via an indirect aboutness-relation (see Heim & Kratzer 1998: 283). That is, the listener who has just interpreted (ia) and imagined it as true can guess that the intended referent of the pronoun <u>he</u> is the boy who was invited. It remains unclear, however, whether these considerations motivated Zubizarreta's suggestion

that the definite description in $A_2$ can pick up the referent introduced in $A_1$, just as the E-type pronouns in (ia, b) can pick up the intended referents.

[5] Considering Zubizarreta's definition of focus and anticipating her discussion of quantifier binding and topics as a motivation for AS, we arrive at a contradiction: focus is defined over two ordered assertions where $A_1$ provides an existential presupposition and $A_2$ specifies the variable as focus, like the E-type pronoun. The analogy between $A_1/A_2$ and the E-type pronouns and their antecedents suggests that there is no binding involved. However, in the discussion of quantifier binding and topics, the argument is as follows: only a quantifier that can be construed as a topic can bind a focused pronoun to the left (i.e. every boy in (ic)).

(i)    a. Every boy she invited came to the party. They had a good time.

       b. Everybody came to the party. They had a good time.

       c. His mother accompanied every boy.

       d. His mother accompanied everybody.

[6] For example, in (14) above the topic, the beans, is set off in its own intonational phrase and has a (rise)-fall-rise (an L+H* L-H%) associated with it.

[7] Compare the current debate on scope inversion in German sentences with a hat pattern like (i) (Büring 1997, Jacobs 1997, Krifka 1998, Molnár & Rosengren 1996, van Hoof 1999, among others), where one of the questions at issue is whether the quantified expression with a typical topic accent (L*+H) is actually a topic or not.

(i)    /Alle  Politiker    sind   nicht\  korrupt.

       all    politicians  are    not     corrupt

       'It is not the case that all politicians are corrupt.'

[8] Note that in a topic prominent language like Romanian a contrastive topic has to be left-dislocated. Hence, in the context of (17) only (i) is acceptable.

(i)    Melindei  i-a spus    o minciună.

       Melinda.DAT   her-has   told    a lie.

(ii)    #I-a spus Melindei o minciună.

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[9] An example from Choi (1995) which has both a continuing topic and a contrastive one is (i). The continuation in the gloss disambiguates between the contrastive (topic-marked) and the noncontrastive (case-marked) arguments.

(i)    Mary-ka    John-un    ecey    manna-ss-ta.

Mary-NOM    John-TOP yesterday  meet-PST-DCL

'Mary met John yesterday (and Bill today).'

[10] Another example is (104), p. 134. This example has SVO order and is explicitly associated with a "what-happened-context".

[11] Note that the "focus" feature is only employed by Zubizarreta to trigger movement of a narrow focus, which is contrastive in Spanish but may be presentational in Italian (cf. section 6 below).

[12] We assume that deictic pronouns are backgrounded for the purpose of information packaging.

[13] Zubizarreta suggests that VS thetic sentences have a covert locative phrase in SpecTP. She further argues that French exhibits the same pattern as Spanish. It is, however, well-known that French employs a cleft construction to express thetic judgments (cf. Sasse 1987). In Italian, Catalan and Romanian VS order seems to be the only option (cf. Calabrese 1990, Cinque 1993 for Italian, Vallduví & Engdahl 1996 for Catalan, and Ulrich 1985, Göbbel 1997 for Romanian). Modern Greek (Sasse 1992) and Russian (Eugen Helimski, p.c.) also exhibit a similar pattern. We leave it for Spanish speakers to verify whether SV indeed gives rise to thetic judgments in Spanish.

[14] Not only subjects which are plausibly part of a larger focus weaken the correlation between syntax and AS, but also examples like (19) and (22) with two syntactic topics. The question whether both the left-dislocated constituent and the preverbal subject should be represented as topics at AS (i.e. whether these sentences should be evaluated with respect to both constituents) remains open.

[15] Spell-Out occurs at Σ-Structure in Germanic, but after p-movement in Spanish.

[16] We do not consider the alternative interpretation that focus and topic motivate a two-level LF (see Hunyadi 1986).

[17] This is exactly parallel to <u>wh</u>-questions, in which the subject by itself does not provide a value for the variable left by the <u>wh</u>-element.

In Romanian, for instance, the condition for felicitous left-dislocation of a universal quantifier seems to be the D-linked status of the noun. In an example like (ia) a set of patients is inferable from the mention of the hospital. However, unlike referential topics, left-dislocation is optional because (ib) is also acceptable in the same context. Obviously, further research is necessary in order to determine whether a covert topic analysis is the correct one. We tend to associate the possibility of left-dislocation in (i) with the possibility of topicalization in examples like (ii). In none of these examples is the topicalized constituent a referential expression, yet mention of the indefinite NP, some praiseworthy action or a discussion of fast-running horses in the preceding discourse facilitates topicalization of these constituents. Consequently, it is sufficient for the topicalized constituent to be D-linked in order to occur in "topic" position.

(i)       Aş vrea să ştiu care sînt datoriile unui medic în spitalul acesta.

          I would like to know what the duties of a doctor in this hospital are.

    a.  Pe fiecare pacient trebuie    să-l              examineze    cel puţin de două ori    înainte
        de a-l interna.
        pe every pacient  (he-)must SUBJ-CL.ACC  examine        at least twice            before
        of to-him admit
        'He must examine every pacient at least twice before admitting him to hospital.'

    b.  Trebuie să examineze pe fiecare pacient cel puţin de doua ori înainte de a-l interna.

(ii)   a.  [O injecţie]  [i-a          dat      doctoriţa       celui    mic].
          an injection   him-has   given  doctor-the     (to)-young one
          'The doctor gave an injection to the young one.'

    b.  [Lăudabilă]  [a fost     intervenţia     şefului].
        praiseworthy  has been   intervention   boss.GEN
        'The boss' intervention was praiseworthy.'

    c.  [Repede]  [a fugit   calul    lui Ion]
        quickly    has run   horse  GEN John
        'John's horse ran quickly.'

[19] Caroline Heycock (p.c., 1996) pointed out that the equivalent of <u>all N</u>, but not of <u>everybody</u>, can be topic-marked in Japanese, an observation she attributed to Hajime Hoji. This would provide further crosslinguistic support for Zubizarreta's analysis. As for Korean, Lee (1989) argues that the equivalent of <u>every N</u> can only be topic-marked if it occurs with an individual-level predicate.

[20] We thank Juliane Möck (p.c.) for bringing this point to our attention. We also owe much to her discussion of Zubizarreta (1998) in Möck (in preparation).

[21] Kayne's definition of asymmetric c-command, in which the linear ordering of terminal elements reflects asymmetric c-command, is given in (i):


(i)       Let X, Y be nonterminals and x, y terminals such that X dominates x and Y dominates y. Then if X asymmetrically c-commands Y, x precedes y. (Kayne 1994: 33)


[22] That weak nodes are metrically visible is well-known from the analysis of rhyme and rhythm in poetry (see Hayes 1984, 1989).

[23] Note that Zubizarreta's account is reminiscent of Jacobs' (1991) analysis of German neutral focus in many respects. First, he assumes that some notion of nuclear stress is necessary for the derivation of the focus exponent in German. Second, he also incorporates argument structural notions based on Fuchs (1987), which he terms integration. Third, Jacob introduces specific rules to form a relational prosodic tree from a syntactic tree. Interestingly, even Zubizarreta's notion of metrical invisibility has a predecessor in Jacobs' feature [-ns] which is assigned to nodes in the syntactic tree marking them as "not neutrally stressable" (see rule R2 on p. 15).

[24] For an example like (52b), a neutral <u>wh-happened</u> question is not sufficient to trigger the accentual pattern in question, but requires pitch accents on both the subject and the verb. (52b) could occur in the following context:


(i)       (Remember I told you about the upcoming elections.) Do you know what happened? MARY voted.


If this example is considered to be a case of wide focus, it can only be surprise information, for example, if it is known that Mary generally boycotts elections. If we re-think this example in

Zubizatteta's terms, the assertion structure cannot be represented by existential quantification ('there is an x such that x happened') followed by the identification of the variable, but has to incorporate the denial of a presupposition which is best rendered as a context statement <u>Mary always boycotts elections</u> / <u>Mary does not vote</u>. This scenario is close to Zubizarreta's definition of contrastive/emphatic focus. Another explanation is deaccentuation of the verb due to mention of <u>elections</u>. In Zubizarreta's framework this would no longer constitute a case of sentential focus.

[25] In fact (54c) falls under the domain of the S-NSR. Cf. the detailed derivation of a V-argument sequence in section 5.2 below.

[26] In contrast to Zubizarreta, we observe a focus related accent on the adjunct and the verb in (55c). We disagree with her assumption that "the assignment of primary stress can be dissociated from the assignment of subsidiary stresses" (p. 17). Nonfinal accents should not be ignored, particularly not if they are systematic.

[27] (58b) is taken from Faber (1987: 348).

[28] Zubizarreta assumes for transitives, ditransitives and unaccusatives that "in German, as in English, the complement is uniformly projected to the right of its selecting head and that it subsequently moves leftward for licensing reasons" (p. 55). She attributes this idea to Zwarts (1993).

[29] $[D_2]$ and $[V_2]$ are metrical sisters by virtue of the fact that $[V'_2]$ is metrically nondistinct from $[V_2\ e_2]$.

[30] Note that selection is defined over metrical sisters. This is not immediately obvious in the example in the text, but Zubizarreta argues that if a defocused constituent intervenes between the argument and the verb, as in (i), the constituent [<u>spät gekommen</u>] is metrically nondistinct from [<u>gekommen</u>] due to the metrical invisibility of <u>spät</u>, and the S-NSR can apply in this context. If the adverb is not given in the context, the C-NSR has to apply assigning nuclear stress to the verb.

(i)     Why are you late?

        Das TAXI     ist      <u>spät</u>    gekommen

        the taxi      is       late     arrived

A similar analysis applies to Gussenhoven's (1983) example in (ii), which contrasts with (iii). The different accentual patterns are due to the newness/givenness of the adverb.

(ii)    (Talking about mysteries) Our DOG's mysteriously disappeared.

(iii)   (What happened?) Our dog's mysteriously DISAPPEARED.

Besides the problematic character of the definition of selection in terms of metrical sisterhood, it can be easily shown that Zubizarreta's rule system derives the wrong accentual pattern in (ii). In order for the S-NSR to apply the adverb must be analyzed as metrically nondistinct. The analysis of a constituent as metrically nondistinct is to resolve a conflict between the application of the FPR and the initial application of the MNSR (the same logic applies to p-movement, which is the analog to metrical invisibility in Spanish, cf. section 6.3 below). Yet such a conflict does never arise in (ii). The MNSR first applies to the sisters [our dog] and [mysteriously disappeared]. These constituents are not selectionally ordered and the C-NSR assigns main prominence to [mysteriously disappeared]. The FPR does not apply to these sisters because the constituent [mysteriously disappeared] is unmarked for F (it dominates both [+F] and [–F] material). In a second step the C-NSR applies to the constituents [mysteriously] and [disappeared], assigning main prominence to [disappeared]. The FPR also applies to these constituents assigning prominence to [disappeared] as well. Hence no conflict arises in the application of these rules. Zubizarreta's rules simply determine main prominece on the verb in this example.

[31] Metrically invisible material is set in italics.

[32] Diesing's tree splitting procedure is based on the mapping hypothesis given in (i):

(i)     Material from VP is mapped into the Nuclear Scope, material from IP is mapped into a
        restrictive clause. (Diesing 1992, p. 10).

The material in the nuclear scope receives an existential interpretation, while the material in the restrictive clause receives a presuppositional or generic interpretation.

[33] The sentence adverb test is based on the observation that sentence adverbs like immer ('always'), ja wahrscheinlich ('perhaps') or gestern ('yesterday') mark the left edge of the VP (cf. Webelhuth 1989, Diesing 1992).

[34] Csúri argues that the elliptical counterpart in English, namely <u>one</u>-pronominals, are descriptional anaphora.

[35] A second test are strong and weak determiner forms in colloquial German, adopted from Gutknecht & Panther (1973):

(i)     A: Warum ist Hans so glücklich? Hat das was mit 'ner Frau zu tun?

         Why is Hans so happy? Has that something to do with a woman?

     B: *Ja, ihn hat gestern [$_{VP}$ 'ne Frau GEKÜSST].

The test shows that a weak determiner form can be used when the concept <u>woman</u> is introduced in (iA). However, in (iB) the full form <u>eine</u> is required if <u>Frau</u> is deaccented.

[36] Note, however, that she classifies the relevant default accent cases as metagrammatical (p. 48) and excludes these specific cases from her discussion of focus.

[37] A third position is defended by Hetland (1992) and Krifka (1998), who assume that there is a focus position in German, as e.g. in Hungarian, which is the position to the left of the verb in subordinate clauses.

[38] This shift in perspective is also observable in recent accounts of object shift in Scandinavian (cf. Holmberg 1997), an operation which has traditionally been analyzed as a core syntactic operation and which has had considerable consequences for the theory of movement, particularly in the early stages of the Minimalist Program.

[39] Cf. section 3.1 above for discussion of the distinction between "neutral" and contrastive focus.

[40] On the relevance of canonical word order for a wide focus interpretation, cf. Haider (1992) for German, Demonte (1995) for Spanish, and Costa (1998) for Portuguese.

[41] The structure she assigns to the sentence after p-movement is given in (i). There are actually two movement steps represented within VP$_2$, which are not discussed.

(i)       [$_{TP}$ me regaló [$_{VP1}$ [$_{VP2}$ la botella de vino$_k$ [e$_k$ [V$_2$ e$_k$ ]]]$_i$ [$_{VP1}$ María [V$_1$ [e$_i$ ]]]]]  (p. 127)

The only case which is plausibly movement of the lower VP and which also follows from the interaction of the NSR and the FPR is triadic constructions with VOPPS order (subject focused).

Successive movement of the complements would probably give the wrong word order, namely VPPOS.

(i)    Puso    la valija      sobre la cama      [F la camarera del hotel].
       put     the suitcase   on    the bed         the hotel's attendant

[42] Since rightward movement is not available for Zubizarreta, such complex derivations are unavoidable. Note that (92) exhibits a classical topic island configuration, and should therefore be ungrammatical. The narrow focus effect also follows from those accounts which assume a right-peripheral focus position in Italian (Samek-Lodovici 1994, Belletti & Shlonsky 1995). For an approach which accommodates rightward A'-movement under Kayne's LCA, see Laenzlinger (1996).

[43] Repetition of the adverbial or of any other backgrounded (non-topical) argument is somewhat marked in Romanian. The reader is adviced to pronounce the focused object with an H*+L accent and deaccent the adverbial completely. If the nuclear accent falls on the last stressable constituent of the intonational phrase, as in the (93b) or (94a), it is canonically realized as an H+!H* tone (Göbbel, in preparation).

[44] We have chosen to formulate the rule in terms of linear arrangement of constituents rather than depth of embedding. The choice between these two formulations depends on one's analysis of the hierarchical position of objects with respect to adverbials. Gierling (1996) argues that overt object shift in Roamnian applies only to clitic-doubled direct objects (i.e., human, specific objects). The question that has to be settled here is whether the adverbials in (98) and (99) have moved or whether focus structure can influence the adjunction site of the adverbial. Note that in (99B) the adverb is not right adjoined because it is defocused.

[45] Zubizarreta discusses the possibility of formulating the NSR in Spanish in terms of intonational phrases (p. 83f), but rejects the validity of such an approach because Romance languages which allow contextual deaccenting (i.e. neutral stress in nonfinal position in the clause), like French and Brasilian Portuguese, do not show any sign of the application of the S-NSR (e.g. the absence of subject-prominent sentences). The possibility of retracting the nuclear stress in these languages is attributed to the fact that defocalized material may be analyzed as metrically invisible. We have already discussed the problematic character of this notion in section 4 above.

[46] Note that the term "nuclear stress" itself has been subject to redefinition in the literature. While it has traditionally been used to refer to the last accentual prominence in an intonational phrase, recent intonational notation conventions, such as the ToBI system (Beckman & Ayers 1994, Beckman & Hirschberg 1994), and studies of the phonological representation of focus structure based on these conventions (cf. Beckman 1996), define nuclear stress as the last accentual prominence in an intermediate phrase.

[47] To our minds the analysis of (100b) proposed by Zubizarreta would only be supported if the negative particle could be suppressed in this construction. Also note that in the structural representation in (101), neg does not c-command the negative operator and thus would probably not be able to license it anyway.

[48] The focus feature responsible for movement to a S-peripheral position is characterized as follows (fn. 3, p.182):

"'Focus' is a morphosyntactic feature with no semantic import. Its presence is optional, at least in the languages under discussion, and its function is to characterize the syntactic position of a fronted F-marked constituent in certain structures. In effect, when present in the structure, the functional feature 'focus' attracts an F-marked constituent in certain structures."