
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 that has emerged over the last three decades shows that focus is a multidimensional concept characterized by the interrelatedness of syntax, argument structure, formal semantics, and pragmatics.

Results of typological research on focus have shown that languages as diverse as Hungarian (Kiss 1998; Kenesei 1999), Aghem (a Grasfield Bantu language; Watters 1979; Hyman and Watters 1984), Vute (Thwing and 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 (cf. Drubig and Schaffar 2002 for an overview). Presentational focus has been defined pragmatically 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 (Drubig 1994; Kiss 1998). While both typological research and semantic research (Rooth 1985; Kratzer 1991) on focus have concentrated on the contrastive-focus type, language-specific research on languages like German and English, as well as Italian (Cinque 1993), Bengali (Hayes and 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 that arises under unmarked or “normal” intonation (Chomsky 1972). 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 Chomsky and 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 (cf. 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 and Halle (1968) first proposed the classic 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 in terms of the so-called null theory of phrase stress. This theory claims that “stress prominence in a phrase is a mere reflection of depth of embedding” (Cinque 1993: 245). 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.

The question of whether a phrasal stress rule is needed to account for the focus-prominence relation in languages like English, German, and Dutch is still a matter of debate. However, for Romance there is ample evidence that such a rule is operative. Conversely, it is unlikely that the rules proposed by the adherents of the argument-structural approach can be applied successfully to all Romance languages (cf. in particular Cinque 1993; Ladd 1996 for Italian; Costa 1998; Frota 1998 for European Portuguese). At least one Germanic language, namely Swedish, has also been reported to not conform to these rules either (cf. Mörsjö 1999). Due to the less flexible character of Romance accentuation as compared to Germanic, one expects compensatory mechanisms to be at work. Where English has contextual deaccenting, Romance languages seem to
resort to word-order variation. However, there are considerable differences among the Romance languages themselves in the type of syntactic operations they employ: Catalan makes extensive use of right-dislocation (cf. Vallduvi 1992), while Spanish has both right-dislocation and leftward scrambling. Italian, under certain analyses (cf. Samek-Lodovici 1994; Belletti and Shlonsky 1995), has an additional focus position at the right periphery of the VP that allows further syntactic options in the realization of focus structure. French and Romanian resort either to deaccentuation or to scrambling. The picture that ensues is hardly a coherent one except for the fact that there seems to be a default accentuation rule that tends to place the nuclear accent on the last lexical constituent of the intonational phrase, and it is this rule that Cinque (1993) has formulated in syntactic terms.

Zubizarreta’s monograph pursues a similar 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 constituent ordering (C-NSR) (cf. Chomsky and Halle 1968), and a rule that is sensitive to selectional ordering (S-NSR) and thus incorporates the insights of the argument-structural account.

The monograph is organized into 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(ocus)-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 (the 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 takes precedence 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. Chapter 3 discusses the relationship between information structure and word order in Spanish, Italian, and French. On the basis of Spanish data, two types of discourse-related movement operation are defined: feature-driven movement to sentence-peripheral positions and prosodically conditioned movement (p-movement), which is the result of the interaction of the C-NSR with the F-structure. Differences in the focus-structural organization between Spanish and Italian are shown to be due to the different syntactic operations that these two languages allow. The appendix to this chapter discusses phonological and syntactic aspects of right-dislocation in Spanish.
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. One of the main shortcomings 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 easily have been improved. We will spend some time in following up on some of these definitions for the reader’s benefit.

Due to the complexity of the book, both from a theoretical perspective and in terms of empirical coverage, section 2 of this review provides an overview of the main topics. We consider the pragmatic definitions of focus and topic proposed by Zubizarreta and how they are represented in the grammar. We further discuss the formulation of the prosodic rules (MNSR, the focus-prominence rule [FPR], and p-movement) and their motivation and application in Germanic and Romance. Further notions like “metrical sisterhood” and “metrical invisibility” that are instrumental in the application of the prominence rules will be critically examined. The MNSR, in particular the joint application of the S-NSR and the C-NSR, is mainly developed on the basis of German data. Therefore, section 3 is devoted to a reexamination of the German evidence. The main question dealt with is whether the C-NSR rule is actually needed in this language. We argue that Zubizarreta’s approach does not present any advantage over previous approaches that were based solely on argument-structural considerations, and that a phrasal stress rule can be dispensed with in this language. Given the fact that the C-NSR is needed to account for the less flexible character of intonational patterns in Romance and for movement operations that cannot be attributed to morphosyntactic triggers, in section 4 we discuss additional evidence from Romanian for a phrasal stress rule. We argue that only p-movement, but not contextual deaccenting, can be subsumed under the effects of
such a rule and that the FPR can be canceled in its present formulation. Further questions that will be discussed are the level of representation at which p-movement applies and whether Zubizarreta’s revision of the Chomskyan T-model is justified. We conclude this review with an alternative formulation of the NSR and a final assessment of Zubizarreta’s book.

2. Overview of basic concepts and rules

2.1. Zubizarreta’s definition and representation of focus and topic

Zubizarreta’s study of the intricate relation between focus and prosody, on the one hand, and prosodic prominence and word order, on the other hand, is confined to what she terms “neutral semantic focus.” Since the prominence rules only apply to this type of focus, we will introduce her definition of focus in order to delineate the scope of her study.

Zubizarreta takes a conservative view of focus–background structure (FBS). 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(ontext)-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 (note 4, p. 160) remarks that if the definition of focus were based on the new/old dichotomy, this would necessarily lead to different types of focus, such as Rochemont’s presentational/contrastive distinction.

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

Despite her rejection of Rochemont’s dichotomy, Zubizarreta assumes different types of focus as well. It is argued that “neutral” semantic focus differs from contrastive and emphatic focus because they are subject to different interpretive rules at the interface levels. This distinction is strongly reminiscent of the normal and contrastive stress patterns of the early generative tradition (cf. Chomsky 1972). Contrastive and emphatic focus are systematically excluded from the core investigation in this book, being 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 an abstract post-LF level of representation, which she calls 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 (cf. May 1985; Rochemont 1986) 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* (A₁), which incorporates the presupposition provided by a context question, and the *main assertion* (A₂), 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 A₁ is obtained by existential quantification of the context question and the focus in A₂ is specified by the equative predicate.

(3) a. A₁: there is an x, such that John ate x
   A₂: the x, such that John ate x = [f the pie]

   b. A₁: there is an x, such that x happened to the pie
   A₂: the x, such that x happened to the pie = [John [ate it,]]

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 (p. 5) points out that the relation between the indefinite variable in A₁ and the definite description in A₂ is comparable to the relation between an E-type pronoun and its antecedent. She further claims that in both cases the definite description in A₂ picks up the referent introduced by A₁. 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. A₁: there is an x (x = a sailor), such that x walked into the room

b. A₂: the x (such that x = a sailor & x walked into the room) was wearing a red shirt

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 quantifier-binding facts as a motivation of AS (cf. section 4.2.2 below). Generally, it is assumed that some quantifiers allow the construction of a referent via an indirect aboutness relation (cf. Heim and Kratzer 1998: 283). That is, the listener who has just interpreted (4) and imagined it as true can guess that the intended referent of the pronoun he is the sailor who walked into the room. Note that, if we allow the construction of a referent from a quantified expression via an aboutness relation as in the case of E-type pronouns, the constituency problem for the representation of focus 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 that treats the variable x as an event variable, identified as the event of John eating the pie in A₂, as in (6).

(6) A₁: there is an event x, such that x happened, and a pie is prominent in the event

A₂: the event x, such that x happened = [John ate the pie]

Under this analysis, (2b) allows for a sentence focus that includes the NP the pie; however, this NP must be deaccented, pronominalized, or otherwise marked as a concept that has already been introduced into the discourse, while the complete event has not been. We only note here that Zubizarreta’s rules that compute the nuclear accent with respect to F-structure do not include the notion of F(ocus)-projection (i.e. transmission of the F-feature from lower to higher-order constituents; cf. Selkirk 1984, 1995; Rochemont 1986). These rules operate in the syntax and crucially rely on the fact that constituents that contain defocused material are unmarked for focus.

If Zubizarreta does not intend to further pursue the relation between A₁/A₂ and E-type pronouns, why, then, does she introduce this analogy? 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 subset 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 that do not allow the construction of an existential presupposition, as in (7), or sentences in which the variable $x$ cannot technically be identified with a value, as in the verum 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 $x$ ($x$ = Mary lied to me), such that $x$ 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 that are associated with an overt focus-binding element (i.e. a focus-sensitive particle), like only in (9). 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 see Vallduví 1992 for a different view); in (9a), only is associated with the accented subject Ray, and in (9b), with the object shrimp or with successively higher projections including the matrix VP.

(9) a. Only RAY knows how to cook shrimp.  
   b. Ray only knows how to cook SHRIMP.

Cases of contrastive focus that 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). Example (10) has the assertion structure in (11).

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

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

(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, 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 that can be treated by this theory. Like Chomsky (1972) in his early NSR-based study, Zubizarreta must assume that emphatic and contrastive focus and all other sentences containing operators that 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 that 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. section 1 above). 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.

A discussion of the representation of information structure would not be complete without addressing the complementary dimension of informational organization, namely the topic–comment articulation. Zubizarreta adopts Reinhart’s (1982) influential approach to sentential topics, an approach that we will shortly outline here. Reinhart’s analysis draws on Stalnaker’s (1978) definition of the context set (i.e. the set of propositions that 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 (e.g. Jason climbed the Matterhorn) has three members in its PPA set (SVO, S/SVO, O/SVO). One of these members is selected relative to 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 (a “neutral description” in the sense of Kuno 1972), whereas 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, as in the following famous example if this sentence is evaluated with respect to the subject.
The king of France is bald.

Zubizarreta proposes representing the topic-comment articulation in the background assertion of the AS of the sentence. Example (13) below, first discussed by Jackendoff (1972), has the AS in (14).

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 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.

(13) [What about the beans? Who ate them?]
    [Fred] ate the beans.

(14) $A_1$: the beans $\exists x$ such that $x$ ate $y$
    $A_2$: the beans $\exists x$ (such that $x$ ate $y$) = Fred

Since assertion structure is an interpretive level distinct from LF, and, as we shall see below, there is a grammatical rule, namely, the focus-priority rule (FPR), which refers to features of semantic import (i.e. focus) and phonological features (i.e. assignment of prominence), Zubizarreta revises the model of the grammar in such a way that it allows postcyclic operations that precede LF but follow all syntactically driven overt and covert movement operations. This is the derivation from $\Sigma$-structure to LF in the revised T-model, (15). Assertion structure is derived from LF by the interpretive rules presented above.

(15) (sets of phrase markers, feature checking)

$\Sigma$-structure (unique phrase marker)

(F-marking, NSR, FPR, p-movement)

LF

PF Assertion structure
The main empirical motivation for AS as a post-LF level of grammatical representation is the existence of bound variable configurations that presumably cannot be handled at LF. These data, to be discussed in a later section, require the representation of universally quantified expressions as topics at a post-LF level. The second important aspect in Zubizarreta’s grammatical model is the stretch of derivation from $\Sigma$-structure to LF. $\Sigma$-structure marks the end of all syntactic operations (merge and attract) and is the input to the NSR and the FPR. The main motivation for postcyclic operations is prosodically conditioned movement of backgrounded constituents. P-movement and the evidence that motivates the revision of the grammatical model will be discussed in section 4.2.

2.2. The modular nuclear-stress rule: motivation and application in Germanic and Romance

The main goal of Zubizarreta’s work is to provide a unified account of the focus–prominence relation in Germanic and Romance. Her main observation is that the focus–prosody relation of Romance languages and that of Germanic languages seems to function in a parallel fashion: the well-known effect of the classic NSR (Chomsky and Halle 1968) is illustrated for English in (16a) and can also be found in German, (16b), Spanish, (16c), and French, (16d).

(16) 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; Demonte 1995; Ladd 1996), this is not the case for English and German, as the following examples show:

(17) 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
Zubizarreta introduces a modularized theory of nuclear stress that accounts for the differences between Germanic (German and English) and Romance (Spanish, Italian, and French). The modular nuclear-stress rule (MNSR) consists of two parts: one is sensitive to constituent ordering (C-NSR), and thus corresponds to the NSR (Chomsky and 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). Furthermore, the position of the nuclear accent in an utterance is the result of the interaction of these rules with the focus-prominence rule (FPR).

Before we discuss the formulation of the MNSR and the FPR we have to address the feature configuration on which these two rules operate. Zubizarreta distinguishes two types of discourse-related feature: (i) morphosyntactic features, which are relevant for the core syntactic operations and are assigned to lexical and functional heads when they are drawn from the lexicon, and (ii) features on which the MNSR and the FPR operate. These are assigned to constituents at Σ-structure.

Morphosyntactic features like “focus” and “topic” are features of functional heads at the left periphery of the clause. For example, the feature “topic” is argued to be a feature of T in Spanish and Top⁰ in Italian. It attracts a lexical constituent with a matching [+topic] feature (e.g. a direct object in a clitic left-dislocation construction). For the purpose of the application of the FPR (see below), a topic constituent is marked [−F] at Σ-structure. The following conventions then regulate feature assignment at this level of representation:

(18) 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).

Assignment of [±F] reflects Zubizarreta’s definition of focus as the nonpresupposed part of a sentence. The convention (18c) reflects her assumption that the focus of a sentence need not correspond to a constituent in the syntax and at the same time her rejection of F-projection as feature sharing between heads and maximal projections (as proposed by Selkirk 1984, 1995; Rochemont 1986; Winkler 1996, among others).

Zubizarreta proposes the MNSR in (19), which is sensitive either to selectional ordering or to asymmetric c-command. The second condition
for the computation of prominence with respect to F-structure is the focus-prominence rule in (20), which captures the intuition that there is a direct relation between focus assignment and accent realization. Both rules operate on *metrical sisters*, a notion to which we return below. They are designed to conjointly determine the “intonation center” of an utterance. Prenuclear accentual patterns are attributed to rhythmical principles and, therefore, do not bear any relation to the informational status of constituents.

(19) Modular nuclear-stress rule (MNSR)

a. S-NSR: 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. C-NSR: Given two sister categories $C_i$ and $C_j$, the one lower in the asymmetric c-command ordering is more prominent (p. 19).

(20) Focus-prominence rule (FPR)

Given two sister nodes $C_i$ (marked $[+F])$ and $C_j$ (marked $[-F]$), $C_i$ is more prominent than $C_j$ (p. 21).

Selectional ordering in the definition of the S-NSR is to be understood as the sequence of selectionally ordered heads and arguments in the lexicosemantic representation of lexical items, a representation developed by the proponents of the configurational approach to thematic licensing (cf. Hale and Keyser 1993; Chomsky 1995). In this theory different subcategories of verbs have different constituent structures. Unaccusative verbs (e.g. *appear*, *die*, *fall*) project a simple VP structure, in which the argument is selected by the lexical verb. Transitive verbs (e.g. *make*, *build*) are decomposed into two Larsonian shells (cf. Larson 1988); the lexical verb selects the internal argument and a light verb $v$ (or a voice head; cf. Kratzer 1994; Sternefeld 1995) introduces the external argument into the derivation. Unergative verbs (e.g. *laugh*, *cough*) are generally denominal and exhibit the structure of transitives; a lower (empty) verb incorporates a cognate object while the light verb licenses the external argument. In other words, they are cases of zero derivation (cf. the derivation in [21]). Triadic constructions (e.g. *John put the book on the shelf*, but also denominal location and locatum verbs like *shelve* and *saddle*) are represented by a selectional chain of three heads $v$–V–P. Each of these heads licenses an argument: $v$ the external argument, V the direct object, and P the oblique.7 In Zubizarreta’s terminology an argument will always be lower than its selecting head in the selectional ordering of constituents.8
The main idea underlying the modular, or rather disjunctive, formulation of the NSR is the fact that in Germanic languages like English and German the position of the nuclear stress in neutral contexts (e.g. *what-happened* contexts) is not always assigned to the most deeply embedded constituent (or, alternatively, to the last lexical item of an intonational phrase). Here Zubizarreta follows insights by Schmerling (1976), Gussenhoven (1983) and Selkirk (1984, 1995). Examples of this type are subject-presentatives like (22), which usually occur with unaccusative verbs. In these cases the S-NSR applies because the subject is an argument of the lexical verb.

(22)  a. Our DOG’s disappeared.

b. The SUN is shining.

c. A LETTER has arrived.

In (23), nuclear stress is assigned to the most deeply embedded constituent, regardless of whether that constituent is a predicate, argument, or adjunct.a In these cases the C-NSR applies. Zubizarreta argues that the
S-NSR and the C-NSR are on equal footing in English. Either rule can apply, as shown by the prominence pattern in (24), which is also claimed to be possible in broad-focus contexts.

(23) a. A boy has DANCED.
    b. Mary VOTED.
    c. Mary’s READING.
    d. John ate the PIE.
    e. John ate the pie in the KITCHEN.

(24) a. A BOY has danced.
    b. MARY voted.
    c. MARY’s reading.

The absence of the alternative accentual pattern with unaccusative verbs (i.e. nuclear stress on the verb in [22] above) is attributed to the “pragmatic lightness” of these predicates. Their accentuation is related to examples like (25), discussed by Bolinger (1972). The accent on the relativized object in (25b) is supposed to be due to the relative predictability of the predicate. Consequently, with unaccusative verbs the S-NSR is forced to apply, whereas with unergatives either the S-NSR or the C-NSR may apply.\(^{10}\) We note here that we have serious misgivings about Zubizarreta’s ambiguity analysis of nuclear-stress assignment. Particularly the accent pattern in (24b) and (24c) does not seem possible in neutral *what-happened* contexts.\(^{11}\) This topic will be discussed in section 3.3 with respect to German, in which a similar situation is claimed to be the case.

(25) 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.

In German, Zubizarreta argues, the situation is slightly different. Sentences with unaccusative and unergative verbs pattern like their English counterparts (cf. [26a]–[26c]), but prominence on the subject in (26a) is not due to the “pragmatic lightness” of the predicate because the type of contrast discovered by Bolinger does not exist in this language.

(26) 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.

Zubizarreta provides the examples in (27) in order to show that nuclear
stress is assigned to the relativized object irrespective of whether the verb is predictable or not. She concludes that in German the S-NSR takes precedence over the C-NSR. The latter only applies if the former cannot.

   Hans has a problem to solve

b. Hans hat ein PROBLEM zu digitalisieren.
   Hans has a problem to computerize

In Romance, Bolinger’s contrast is not attested either. Nuclear stress is invariably assigned to the verb, as in the French examples in (28). Zubizarreta argues that only the C-NSR is operative in Romance.

(28) a. J’ai un problème à RÉSOUDRE.
   I have a problem to solve

b. J’ai un problème à DIGITALISER.
   I have a problem to computerize

However, nuclear stress does not invariably occur at the right periphery of the intonational phrase in all Romance languages. While French allows deaccentuation of sentence-final constituents if they are part of the presupposition (cf. [29]), Spanish and Italian do not. The focus in the Spanish example (30) can only be interpreted contrastively, according to Zubizarreta. Consequently, French patterns with English and German in this respect. Recall that contrastive stress does not fall under the domain of the MNSR. It is a case of free stress assignment.

(29) [fJEAN] a téléphoné.
   Jean has phoned
   [Who phoned?]

(30) a. *JUAN comió una manzana.
    [Who ate an apple?]

b. JUAN comió una manzana (no Pedro).
   Juan ate an apple (not Pedro)

In the French example (29) prominence assignment by the FPR conflicts with prominence assignment by the C-NSR. The subject has the feature [+F] and the verb has the feature [−F]. The C-NSR assigns prominence to the verb and the FPR determines main prominence on the subject. Zubizarreta proposes that languages that allow contextual deaccenting resolve this conflict by analyzing presupposed material as metrically invisible. Once defocused material is analyzed as metrically invisible, the NSR, which is defined as operating on metrical sisters, can reapply and assign nuclear stress to the subject in (29). In other words, defocused material is invisible for the application of the NSR.
A language like Spanish, which does not allow contextual deaccenting
and in which the nuclear accent invariably occurs at the right periphery
of the intonational phrase, resolves a conflict between the two rules by
removing defocalized constituents from the position to which the nuclear
accent is assigned. In (31), for example, the defocused adverbial has to
scramble in front of the direct object. Movement here is phonologically
conditioned, therefore the term p-movement.

(31) Juan plantó en el jardín [un ROSAL].
Juan planted in the garden a rosebush
[What did John plant in the garden?]

2.3. The notions “metrical sisterhood” and “metrical invisibility”

The two rules in the formulation of the MNSR are said to operate on
metrical sisters. Let us consider the C-NSR more closely. The core notions
that are crucial for an understanding of its definition (cf. [19b] above)
are metrical theory enriched in terms of the notions asymmetric
command, metrical sisterhood, metrical invisibility, and metrical non-
distinctness. The C-NSR is modeled after the metrical theory of Liberman
(1975) and Liberman and Prince (1977), which, couched in nonlinear
phonology, introduces metrical trees that are represented as hierarchically
organized binary-branching syntactic trees in which each sister relation
is labeled $s$ for strong and $w$ for weak. The features $s/w$ 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 (32). The intuition underlying (32) (Liberman and
Prince 1977: 257) is straightforward: if you consider two sisters forming
a phrase, the right one is more prominent.

(32) In a configuration $[C AB C]$
If $C$ is a phrasal category, $B$ is strong.

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 sisters dominated by the
same node, as in the original metrical theories, but to nodes that are
hierarchically ordered. Ultimately, Zubizarreta’s C-NSR is designed to
achieve the result that the pairs of nodes in (33) circled with solid lines,
bold-face lines, and dotted lines, respectively, are metrical sisters:
Just by looking at (33), 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 adopts Kayne’s (1994: 4) first approximation of asymmetric c-command and reformulates it as in (34):

\begin{equation}
\alpha \text{ asymmetrically c-commands } \beta =_{\text{def}} \alpha \text{ c-commands } \beta \text{ and } \beta \text{ does not c-command } \alpha \text{ (p. 35).}
\end{equation}

Zubizarreta’s reformulation of asymmetric c-command in (34) 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, (34) is designed to predict that a specifier will asymmetrically c-command its sister and all the categories contained within it. As
Zubizarreta notes 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 metrical invisibility, which is meant to resolve the contradiction between the syntactic-sisterhood requirement and the asymmetric c-command requirement postulated in (19b). Metrically visible nodes for syntactic derivation are restricted to heads and maximal projections (excluding segments). That is, since X' in (35) and XP₁ in (36) 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 (35) and XP₁ in (36).

\[
\begin{align*}
(35) & \quad \text{XP} \\
& \quad \text{ZP} \\
& \quad \text{YP} \\
& \quad \text{X'} \\
& \quad \text{X} \\
(36) & \quad \text{XP₂} \\
& \quad \text{ZP} \\
& \quad \text{XP₁} \\
& \quad \text{YP} \\
& \quad \text{X} \\
\end{align*}
\]

As is obvious from the discussion of (33), (35), and (36), much of the technical apparatus hinges on the notion of metrical invisibility. Not only are intermediate projections metrically invisible, but nodes that have been treated as weak in metrical theories (Liberman 1975; Liberman and Prince 1977; Ladd 1980) are claimed to be metrically invisible in Zubizarreta's theory as well (see [37b]). The relevant observations are summarized in (37):

\[(37) \quad \begin{align*}
\text{a.} & \quad \text{All phonological material is metrically visible for the NSR in Spanish (p. 76).} \\
\text{b.} & \quad \text{Defocalized and anaphoric constituents are metrically invisible for the NSR in English, in German, and in French (p. 74).} \\
\text{c.} & \quad \text{Empty categories are metrically invisible (p. 49).}
\end{align*}\]

Since the notion of metrical visibility or invisibility is not independently defined, the status of the rules in (37) is unclear. If metrical visibility is a notion of metrical theory, then only (37a) and (37c) are intuitively accessible, in the sense that if there is phonological material it is metrically visible. If there is no material, it is not. The notion referred to in (37b), 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
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 (33) 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 $C_1$ and $C_e$ are defined as metrical sisters since the circled $C_e$ and its dominating $C_e$ are defined as metrically nondistinct. The same reasoning applies to the nodes $C_4$ and $C_2$. Note that, to compute the dotted-circled nodes, $C_2$ and $C_3$, as metrical sisters, the notion of metrical sister must again be extended. They are metrical sisters in a derivative sense. That is, metrical sisterhood of $C_2$ and the circled $C_3$ is derivative since the circled $C_3$ and the constituent $[C_3 C_e]$ are metrically nondistinct: they dominate the same set of metrical visible nodes. We will not repeat the definitions (cf. p. 42 and p. 56f.) 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 here for the computation of metrical sisterhood, however, are stipulative and do not achieve this goal.

In section 3 we address the question of how the MNSR is applied to German data and in section 4 to Romance. 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 data. In the case of Romance, we will focus on the motivation of the p-movement rule in relation to the application of the MNSR.

3. Application of MNSR to German

3.1. Is there a C-NSR in German?

The question of whether the classic NSR (C-NSR) is needed for an explanation of the data in German is answered in the affirmative by Zubizarreta. She differentiates two cases with respect to the position of the inflected verb. In non-V-final sentences, the nuclear stress (NS) is realized on the phrase-final constituent irrespective of whether this constituent is an argument or an adjunct. 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. The proposed generalizations are given in (38):

(38) a. C-NSR: in all non-V-final sentences, NS is realized on the last constituent in the sentence (generalization, p. 52).
   b. S-NSR: in V-final sentences, NS will be realized on the verb-adjacent argument (cf. revised NSR, p. 56).

Let us look at the data provided by Zubizarreta (taken from Truckenbrodt 1993, and attributed to Krifka 1984) in (39):

(39) a. Peter hat an einem kleinen Tisch GEARBEITET.
   Peter has at a small table worked
   b. Peter hat an einem AUFSATZ gearbeitet.
   Peter has on a paper worked
   c. Peter arbeitet an einem TISCH.
   Peter works at a table (Zubizarreta pp. 51–52)

She proposes that all three examples in (39) allow a wide-focus reading. The examples differ along two dimensions, namely, word order and selectional restrictions: first, (39a) and (39b) are V-final (in the sense of Zubizarreta), whereas (39c) is non-V-final, with movement of the finite verb to $C^0$. Second, the PPs in (39a) and (39c) are not selected (i.e. the PPs are adjuncts), whereas the PP in (39b) is selected.

If, indeed, Zubizarreta’s interpretation were right, then all three sentences should be felicitous answers to a wide-focus-inducing question, such as *What happened?* However, this is not correct. In fact, (39a) allows only a narrow-focus reading on *gearbeitet* ‘worked’. It either serves as an answer to a question like *What did Peter do at the table?*, or it gives rise to a contrastive interpretation, such as *He didn’t SLEEP at the table, he WORKED there*. In order to allow a wide focus reading in (39a), the adjunct PP and the verb must carry a pitch accent (a rise on the PP and a fall on the verb), as has been observed by Winkler (1996) for German.

However, even if the reader agrees that (39a) requires an additional accent on the PP-adjunct, the data in (39) still don’t seem to show a clear pattern. Particularly, one may wonder why a wide-focus reading is possible in (39c) with the accent solely on the PP. A closer look at the accent assignment in these types of sentences, however, shows that an additional rising accent is also needed on the verb. If it is not present (that is, if there is flat intonation up to the last element), the reading in which the PP is selected and Peter actually works on the table, perhaps as a craftsman, is enhanced. If attention is also paid to nonfinal accents, the following pattern in the minimal pairs in (40) and (41) emerges
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(rising slashes signal rising pitch accents, falling slashes falling pitch accents):

(40) a. Peter hat im \GARten \geArbeitet.
    Peter has in-the garden worked
    ‘Peter worked in the garden.’

b. Peter hat im \GARten gearbeitet.

(41) a. Peter /ARbeitet im \GARten.
    Peter works in-the garden
    ‘Peter is working in the garden.’

b. Peter arbeitet im \GARten.

The example ‘Peter is working in the garden’ has two different readings: one is that Peter is working, for example, on his paper and that event is taking place in the garden, where \im Garten is clearly a locative PP, as in (40a) and (41a); the other is that Peter is doing gardening work, where the PP \im Garten is selected by the verb arbeiten, as in (40b) and (41b).

The observation is that German has means of intonationally disambiguating these readings. The complement reading is available with a single accent on the selected PP (as in [39b], [40b], [41b]), whereas the adjunct reading requires a second accent on the verb (as in [39c], [40a], [41a]).

The conclusion of our discussion of the two dimensions — word order and complement/adjunct distinction in (39) to (41) — is that the data are not without a pattern as might appear at first sight. Rather, the following picture has evolved: the S-NSR in (38b) is operative in German, but the C-NSR in (38a) is not.

3.2. The S-NSR operates in German unaccusatives, transitives, and ditransitives

In this section we continue to investigate the operation of Zubizarreta’s MNSR in German. Having formulated our initial doubts about the necessity of the C-NSR in German above, we eventually want to arrive at an answer to the questions summarized in (42):

(42) i. Is the C-NSR needed?
    ii. Is the notion of metrical sisterhood needed?
    iii. Is the notion of metrical invisibility needed?

The generalization in (37b) above states that unfocused and anaphoric constituents are metrically invisible for the NSR in German. Recall that in German the accent pattern of wide-focus readings with an unaccusative
verb, as in (43a), must be explained along with the accent patterns of
regular transitive V-final sentences, as in (43b), and ditransitive V-final
sentences, as in (43c).

(43) a. Ein BAUM ist umgefallen.
   a tree is down-fallen
b. Jan hat eine MURMEL verschluckt.
   Jan has a marble swallowed
c. Karl hat ein Buch ins REGAL gestelt.
   Karl has a book on-the shelf put (Zubizarreta p. 50)

In each of the examples in (43) the accent falls on a constituent that is
not the rightmost. Thetic (subject-prominent) sentences like (43a) are
explained by the assumption that in German the S-NSR has primacy
over the C-NSR.16 Further assuming that in (43a) the constituents [Ein
Baum] and [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 that is not
rightmost. We will discuss the transitive sentence in (43b) in order to
exemplify the interaction of the S-NSR and the C-NSR in detail. (43b)
has the structure in (44).

(44) An analysis of (44) requires the notions introduced in relation to the
structure (33). First, the top-down computation applies to [D1] (Jan)
and [D2 V2] (eine Murmel verschluckt), which are claimed to be metrical
sisters. It is assumed that [D2] and [V2] are metrical sisters since they
are metrically nondistinct and that [D1] and [D2 V2] are metrical sisters
since all the intervening nodes between [D1] and [VP2] that are asymmet-
rically c-commanded by [D1] are metrically invisible. Second, the C-NSR
applies to the metrical sisters [D1] and [D2 V2] since the subject is not
selected by the lexical verb V2 (cf. Zubizarreta’s definitions in her exam-
pl e s [57] and [58], pp. 52–53) and assigns prominence to the rightmost
constituent [D2 V2]. Third, the S-NSR applies to the metrical sisters [D2]
(eine Murmel) and [V2] (verschluckt).18 Again, the base position of [D2]
is metrically invisible. The S-NSR then assigns prominence to the nominal
argument of [V2], the [D2] Murmel, according to rule (19a) above.

Let us return to the questions formulated in (42i)–(42iii). It is immedi-
ately obvious that if we assume an argument-structural approach (in
Zubizarreta’s terms an approach that rests solely on the S-NSR together
with a detailed analysis of argument-structural and prosodic relations),
the C-NSR is an unnecessary rule for German. Moreover, if the C-NSR
goes, the other unmotivated notions like metrical sisterhood and metrical
invisibility, as a consequence, may equally well go with it.
In sketching the basic assumptions of the argument-structural approach, we follow Selkirk’s (1984, 1995) proposal, which is based on the observation that accent location within a phrase is rule-governed. In particular, we will make the assumptions (45a)–(45c) regarding focus assignment:

(45)  a. An accented head is assigned a focus feature [+F].
     b. A focus-assigned head licenses the focus assignment of its projection.
c. A focus-assigned internal argument licenses the focus assignment of its head.

Examples (46a) to (46c) spell out the focus-projection mechanism, which is generally assumed for English and German. Applying (45a)–(45c) to example (43b), the paradigm in (46a) shows that a single pitch accent on *Murmel* gives rise to three different focus structures depending on different context questions.20 A pitch accent on the head of the VP *verschlucken* ‘swallow’ in (46b) provides two different focus structures, either a narrow-focus reading on the verb or a wide-focus reading on the VP if the object DP is D-linked. (46c) results in a narrow-focus reading on *Jan*, since this example can only answer a single question, namely *Who has swallowed a marble?*

   Jan has a marble swallowed
   i. Jan hat eine [MURMEL]*F* verschluckt.
   ii. Jan hat [eine [MURMEL]*F* verschluckt]*F*.
   iii. [Jan hat [eine [MURMEL]*F* verschluckt]*F*]*F*.

b. Jan hat eine Murmel VERSCHLUCKT.
   i. Jan hat eine Murmel [VERSCHLUCKT]*F*.
   ii. Jan hat [sie [VERSCHLUCKT]*F*]*F*.
   Jan has it swallowed

c. JAN hat eine Murmel verschluckt.
   i. [JAN]*F*. hat eine Murmel verschluckt.

The conclusion is straightforward: we need neither a rule like the C-NSR, nor the additional concepts of metrical sisterhood or metrical invisibility for an explanation of the relevant data in German.

Let us now consider the case of German directional ditransitives. In Zubizarreta’s account, the S-NSR assigns prominence to the lowest internal argument of the verb, namely to the directional argument, both in the transitive and in the directional ditransitive cases, as seen in (43b) and (43c). 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 in thetic contexts, the most natural intonation would be with a fall (H* followed by an L-tone) on the direct object, as seen in the examples listed in (47). This is also the neutral accent pattern documented in publications on focus in German.

(47) 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 Ede mit der Hacke dies LOCH ins Eis gehackt hat.
      since Ede with the ax this hole into-the ice cut has
Example (47a) is taken from Jacobs (1991: 22), who calls it “a perfect neutral stress pattern.” Example (47b) stems from von Stechow and Uhmann (1986: 315ff.), where it is claimed that only the accent pattern shown in (47b) allows a neutral, or wide-focus reading. Our own intuitions concur with these judgments. Since these accent patterns do not require that the PP be c-construable or defocalized, this evidence again poses a problem for Zubizarreta’s account, which aims at generalizations with respect to depth of embedding and ignores in-depth analyses of the argument structure of German. Following up Jacobs’s observation 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), we propose that these cases are analyzed on a par with other event-delimiting constructions (cf. Tenny 1992; Tenny and Pustejovsky 2000). We follow Winkler (1996), who shows that directional ditransitives, just like resultatives, form a complex predicate with the matrix predicate (pp. 303–305, 382–388). In the examples (47a) and (47b), in die Wand schlagen ‘hit into the wall’ and ins Eis hacken ‘cut into the ice’ form complex predicates in which the PP delimits the event of hitting or cutting, respectively. In addition, these examples have the special quality of being thetic sentences. This is not the case with (43c). The two relevant intonations are given in (48a) and (48b) with a slight lexical modification:

(48) a. Karl hat ein Buch ins \GeWÜRZregal gestellt.
   Karl has a book on-the spiceshelf put
   (und nicht ins BÜCHRregal)
   (and not on-the bookshelf)
b. Karl hat ein \BUCH ins Gewürzregal gestellt.

Both (48a) and (48b) are possible utterances in German. However, only (48b) is a thetic utterance, that is, a response to a what happened question (48a), on the other hand, requires a question along the lines of What did Karl do with a book? (48a) is clearly marked and triggers a contrastive reading. Note that there is a third accent pattern, given in (49):

(49) Karl hat ein /BUCH ins \GeWÜRZregal gestellt.

The accent pattern with a rise on Buch (book) and a fall on Gewürz (spice), often called a hat pattern (cf. Fery 1993), provides a felicitous, so-called single-pair answer to the multiple wh question What did Karl put where? We suspect that this pattern is often mixed up with (48a), if prenuclear accents are ignored in the intonational analysis.

The relevant observation is that the discussion of focus in German is intricately related to word-order facts and to the different accent types.
realized in prenuclear and nuclear positions. That is, the blind application of the MNSR is simply not possible. What is required is a discussion of the interaction between word-order facts, argument structure, and different types of accents.

3.3. **Zubizarreta’s ambiguity hypothesis of nuclear stress in German**

Zubizarreta investigates unergative sentences in German as in (50) with the intonation in (51) and also a set of transitive sentences in which the D-linked objects have been deaccented, as in (52) (see Zubizarreta p. 60). She formulates an ambiguity hypothesis and claims that a wide-focus reading is available in each case with the accent either on the subject or on the past participle.\(^{22}\)

\begin{align*}
(50) & \quad \text{daß ein Junge gelacht hat.} \\
& \quad \text{that a boy laughed has} \\
(51) & \quad \text{a. daß ein Junge GELACHT hat.} \\
& \quad \text{b. daß ein JUNGE gelacht hat.} \\
(52) & \quad \text{a. Ich glaube, daß ein Junge das Buch GENOMMEN hat.} \\
& \quad \text{I believe that a boy the book taken has} \\
& \quad \text{‘I believe that a boy took the book.’} \\
& \quad \text{b. Ich glaube, daß ein JUNGE das Buch genommen hat.} \\
\end{align*}

More precisely, with respect to (50) she claims 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). With respect to (52) she claims that the (a) and (b) examples are alternative realizations of the NS. That is, she explicitly assumes that the example pairs in (51) and (52) have identical focus structures (note 26, p. 175).

Let us consider (51a) and (51b) more closely. First, it is not completely clear how a position can be “ambiguous.” Second, it is unclear to us how the focus structures of these examples can be identical. Our intuitions of the data are straightforward: neither of these sentences reflects the native-speaker intuitions for the intended neutral-focus reading as an answer to a what-happened question. (51a) can only be an answer to the question *What did you hear?* if the context provides a situation in which we have 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. But note that it will never be acceptable as a thetic utterance, which requires that the context is unstructured. The same is true for (51b). It cannot readily function as a thetic sentence.\(^{23}\) It can only answer the question *Who laughed?* If the
modularized version of the NSR predicts different focus structures for a single sentence, the notion of “neutral focus” lacks an adequate definition.

Let us make this discussion more precise and derive the focus structures by applying Zubizarreta’s own rules to (51a) and (51b). We arrive at different sets of focus structures, expressed in different sets of assertion structures (cf. section 2.1 above). The assertion structures for (51a) are given in (53a) and (53b), and those for (51b) are given in (54a) and (54b).

\[(53)\]
\[
\begin{align*}
\text{a. } & \text{daß ein Junge } [_{f} \text{ GELACHT}] \text{ hat.} \\
& A_1: \text{there is an } x, \text{ such that a boy did } x \\
& A_2: \text{the } x, \text{ such that a boy did } x = \text{laughed} \\
\text{b. } & \text{daß } [_{f} \text{ ein Junge } [_{f} \text{ GELACHT}] \text{ hat].} \\
& A_1: \text{there is an } x, \text{ such that a boy did } x \\
& A_2: \text{the } x, \text{ such that a boy did } x = [\text{he [laughed]}]
\end{align*}
\]

\[(54)\]
\[
\begin{align*}
\text{a. } & \text{daß } [_{f} \text{ ein JUNGE} \text{ gelacht hat.} \\
& A_1: \text{there is an } x, \text{ such that } x \text{ laughed} \\
& A_2: \text{the } x, \text{ such that } x \text{ laughed} = \text{a boy} \\
\text{b. } & \text{daß } [_{f} [_{f} \text{ ein JUNGE} \text{ gelacht hat].} \\
& A_1: \text{there is an } x, \text{ such that } x \text{ laughed} \\
& A_2: \text{the } x, \text{ such that } x \text{ happened} = [\text{a boy [laughed]}]
\end{align*}
\]

Furthermore, Zubizarreta’s claim is completely surprising, since the rule system (C-NSR/S-NSR) introduced above in (19) cannot even derive these so-called ambiguous patterns. In addition to the **convention for the application of the NSR** in (55), an **auxiliary convention** (56), must be introduced to derive the accent pattern in (51b):

\[(55)\]  
**Convention for the application of the NSR:**

Given two analyses of the syntactic tree \(C_1, \ldots, C_j \ldots\) and ... \(K_1, \ldots, K_j, \ldots\) such that ... \(C_i, \ldots, C_j\) and ... \(K_i, \ldots, K_j\) ... 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).

\[(56)\]  
**Auxiliary to convention 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 ([55] [= Zubizarreta’s (67)]) (p. 59).

The proposal here is again based upon the concept of metrical nondistinctness. The reason 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 (57) illustrates which nodes are considered metrically nondistinct in the derivation of (51a) and (51b):

(57) VP
    D1  V1
    ein Junge
    V1
    [V2D2]
    gelacht
    hat

For the derivation of (51a), the C-NSR applies to [D1] and [V1] and assigns prominence to [V1], which is realized on gelacht. For the derivation of (51b), it is assumed that the convention in (55) applies, according to which [V1] and [V2D2] are metrically nondistinct (enclosed by a solid line) because their projections [V1] and [V2] (enclosed by a dotted line) are metrically nondistinct. Therefore, [D1] and [V1] (solid circles) are interpreted as being selectionally ordered. The S-NSR applies to these nodes and assigns major prominence to [D1].

The “ambiguity analysis” of the transitive sentences in (52) runs into the same problems as that of (51). It is simply not the case that the (a) and (b) sentences of (52) are felicitous answers to the same wide-focus-inducing question. They cannot be analyzed as prosodically ambiguous in the sense that the accent falls either on the subject or alternatively on the verb. Moreover, (52a) and (52b) are marked (or even ungrammatical as in the case of [52a]) and clearly need contextual manipulation. Let’s look at the relevant focus structures of (52a) and (52b) and the corresponding assertion structures (58a) and (58b) more closely:

(58) a. Ich glaube, daß [eine Junge Das [nomen] Buch] [eine GENOMMEN hat].
A1: I believe there is an x, such that x happened, and there is a y (y = a boy) and a z (z = a book) in x
A2: the x, such that x happened = [he [took it]]
b. Ich glaube, daß [er ein JUNGE] das Buch genommen hat.

A₁: I believe there is an x, such that x happened, and there is a y (y = a book) and an action z (z = taking y)

A₂: the x, such that x happened = [a boy [did it]]

The pairs of assertion structures in (58a) and (58b) do not match. The so-called ambiguity hypothesis of NS does not go through.

There are at least two misconceptions involved in Zubizarreta's ambiguity hypothesis: first, the examples are not prosodically ambiguous. They are uttered in different contexts and mean different things. If "prosodic ambiguity" should mean that the same sentence can be uttered with different prosodic realizations in different situations, then the concept has been well known since the Prague school investigations in the 1920s. More precisely, the (a) versions of examples (51) and (52) can never function as neutral or thetic utterances, not even with extensive contextual manipulation. Second, the issue with examples (51) and (52) is not whether the MNSR can derive the primary accent on the VP-internal element or alternatively on the verb. The issue is whether presupposed and therefore deaccented VP-internal material can be part of the wide-focus domain or not. This issue remains controversial and requires a definition of what exactly is meant by wide focus.

3.4. Conclusion: there is no C-NSR in German

Before we continue with the discussion of the application of the MNSR to Romance 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. More precisely, what are the answers to the questions that were posed in (42) above, repeated here in (59):

(59) i. Is the C-NSR needed?
ii. Is the notion of metrical sisterhood needed?
iii. Is the notion of metrical invisibility needed?

We have shown in the discussion above that the C-NSR is not needed for German. We have further shown that if we do away with the C-NSR, the concepts of metrical sisterhood and metrical invisibility can go as well.

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 and Uhmann 1986; Lenerz and Klein 1988; Rosengren 1991; Krifka 1992; Winkler 1996; Jacobs 1999). The proponents of the other group believe that some version of the NSR is also active in German (Höhle 1982; Jacobs 1991, among others). Zubizarreta’s proposal of a modularized nuclear-stress rule that 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, an explanation of which depends on theories of deaccentuation (of which scrambling is one) and which cannot easily be 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 that 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 (pp. 50, 58, note 16). 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 perhaps more obvious.

4. The C-NSR and word order in Romance

Zubizarreta argues that only the C-NSR is active in Romance and that it is the main trigger for p-movement. And indeed evidence seems to accrue for movement operations that lie outside the domain of what Chomsky (2000) calls “narrow syntax,” the computation that leads to the LF interface. In other words, we observe a revival of PF operations, which were covered by the “stylistic rules” in pre-GB syntax. One reason for this shift in perspective 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 can only be evoked as a trigger for movement of DPs. PP-scrambling (complements and adverbials alike) 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 but seems to be an operation solely induced by the interaction of focus structure with the prosodic rules. Zubizarreta formulates p-movement as an operation that applies after the core syntactic operations (overt and covert) have been performed (i.e. on the stretch between Σ-structure and LF).

P-movement is essentially a strategy to mark defocused material. Another strategy is contextual deaccenting. According to Zubizarreta, only the first strategy is available in Spanish and Italian, while French allows both options (cf. [60]).

(60)  a. Nous avons mis sur la table TROIS LIVRES.
    we have put on the table three books
   
   b. Nous avons mis TROIS LIVRES sur la table (p. 147).
     [What did you put on the table?]?

Both p-movement (Romance) and deaccenting (Germanic and French) are the result of a conflict between the application of the FPR and the C-NSR (repeated below). Since the C-NSR is not sensitive to the focus–background structure of the sentence and assigns prominence to the most deeply embedded constituent of two (metrical) sisters, the conflicting prominence assignment of the two rules is resolved either by analyzing defocused material as metrically invisible or by moving the defocused constituent in front of the focused one. The two rules can then reapply, assigning main prominence to the same constituent.

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

(62) C-NSR
Given two sister nodes $C_i$ and $C_j$, the one lower in the asymmetric
c-command ordering is more prominent.

In the preceding sections we have argued that the notion “metrical sisterhood” as employed by Zubizarreta is highly problematic and should
be dispensed with. Therefore, it is necessary to reformulate the prominence rules. The question now arises of whether one of the two rules can be eliminated or subsumed under the other. Since some version of the NSR applies in all Romance languages (cf. the references quoted in section 1), it is the status of the FPR that must be reconsidered. Furthermore, since the notion of metrical invisibility is also an ad hoc assumption, the difference between languages that allow contextual deaccenting and those that don’t must be described in different terms.

A second question concerns the effect of different movement operations on the focus structure of the sentence. Zubizarreta advocates an approach in which the C-NSR applies uniformly in both Germanic and Romance: nuclear stress is assigned to the most deeply embedded constituent within the clause (unless the language allows contextual deaccenting). Word-order differences and differences in focus structure among Romance languages are the result of language-specific restrictions and options on movement operations. The difference between Spanish and Italian focus structure, for example, follows from different syntactic operations. Consider the examples (63) and (64).

(63) La manzana la comió JUAN.
the apple ACC.CL ate Juan
[What happened to the apple?]
[Who ate the apple?]

(64) La mela, l’ha mangiata GIANNI.
the apple ACC.CL has eaten Gianni
[*What happened to the apple?]
[Who ate the apple?]

Spanish allows a wide focus in (63), while Italian can only focus the subject in (64). The NSR applies in both cases, but Zubizarreta argues that the source structures for (63) and (64) 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 (64). First, the focused subject moves to a sentence-peripheral focus position that dominates TP, namely, the specifier of a focus phrase (FP). This operation achieves the narrow-focus effect. Then, the TP is adjoined to FP, as in (65). 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 (65) is left-dislocated, which Zubizarreta analyzes as movement to a dominating TopP, as in (66).

(65) $\forall_{FP} [e_i \text{ ha mangiato la mela}, [_{FP} \text{ Gianni}, [_{TP} e_i]]]$

(66) $\forall_{TOPP} \text{ la mela}_k [_{FP} [e_i \text{ l’ha mangiata } e_k], [_{FP} \text{ Gianni}, [_{TP} e_i]]]$
While movement of the focused constituent to the specifier of FP followed by p-movement and left-dislocation of the defocused material accounts for the narrow-focus effect in Italian, it remains a puzzle why p-movement in the Spanish example (67) also imposes narrow focus on the constituent bearing nuclear stress. The narrow-focus effect of scrambling does not follow from Zubizarreta’s rule system in any obvious way. In Romanian, for example, p-movement is not incompatible with broad focus.

(67) Ana escondió debajo de la cama un LIBRO.
    Ana hid under the bed a book
    [What did Ana hide under the bed?]

A third question concerns the level at which the prominence rules apply. Given the fact that the NSR operates completely mechanically and, at least in Spanish, does not seem to be sensitive to the focus-structural articulation of the clause, it is desirable to formulate this rule as a PF rule (cf. Frascarelli 1999). If the NSR is indeed a PF rule, the question certainly arises as to which stage of the derivation p-movement applies at and whether the model of the grammar proposed by Zubizarreta is justified.

We will address the questions raised above in the following sections. We begin by considering some facts of word-order variation in Romanian, a language in which prosodically conditioned movement does not induce a narrow-focus effect. We argue that certain differences between Spanish and Romanian VP-internal scrambling follow if the NSR can be overridden in certain contexts. Rather than invalidating an NSR approach, the data presented below provide additional evidence for the plausibility of such an approach. However, the discussion will lead to the conclusion that the NSR does not apply in languages that allow contextual deaccenting.

4.1. Further evidence for the NSR approach from Romanian (and Swedish)

 Romanian behaves like Spanish in certain respects, but it also shares properties with French and the Germanic languages in that it allows contextual deaccenting. As in Spanish, (O)VS order in Romanian is compatible with broad focus. Application of the NSR in (68) requires “removal” of the object from within the VP, typically by cliticization, as in (68a). In a broad-focus context with an F-marked object, as in (69), the backgrounded subject may remain VP-internal because it is not the target of the NSR.

(68) A: Nu găsesc ziarul.
    ‘I can’t find the newspaper.’
Yet the NSR does not seem to have any effect on word order in Romanian if (noncontrastive) focus in VP is narrow, as the following contrast between the Spanish and Romanian V–object–adverbial sequences indicates. In the Spanish example (70), the backgrounded adverbial is scrambled in front of the object. In the Romanian example (71), the object occurs in its canonical position following the verb.

(70) A: What did John plant in the garden?
    B: Juan plantó en el jardín [fr un ROSAL].
        Juan planted in the garden a rosebush

(71) A: Ce ai plantat în grădina?
        have.1SG planted a rosebush in garden
        I planted a rosebush in the garden.
    b. #Am plantat în grădina un TRANDAFIR.

The difference in word order between Spanish and Romanian can be captured if the NSR applies only to broad focus in Romanian. A preliminary formulation of the rule is given in (72).

(72) NSR (Romanian)
    Assign main prominence to the rightmost lexical item in the clause iff the whole clause is focused.

The basic idea is that the NSR does not apply in (71), hence no reordering of constituents occurs. This example, with narrow focus on the object, contrasts with (73). In (73a), the whole sentence is focused and the adverbial is scrambled in front of the direct object. A defocused adverbial must scramble in broad-focus contexts. The accentual pattern in (73b) can only signal narrow focus on the object.
Note that it would be counterintuitive to approach Romanian as a language that optionally analyzes defocused constituents as metrically invisible, for an obvious reason: in (71) the adjunct would be analyzed as metrically invisible, but not in (73), where reordering is sensitive to the phrasal-stress rule. Rule (72) captures the fact that broad focus is possible with “noncanonical” word order, which is generally associated with narrow-focusing strategies in a wide range of languages, including Spanish (cf. Haider 1992; Demonte 1995; Costa 1998).

Another language in which the NSR applies only in broad-focus contexts is Swedish. Mörnø (1999) argues that this language does not fit the Germanic/Romance dichotomy postulated by Zubizarreta. The assignment of main prominence seems to be similar to Romance in that it is assigned to the last accentable item in the clause irrespective of whether that constituent is an adjunct or an argument. In (74), for example, main prominence is assigned to the adverb. If it is assigned to the oblique argument, as in (75), the sentence is only compatible with narrow focus on the PP.

The NSR in (72) is not inviolable. Note that the cases of “default accent” discussed by Ladd (1980) for English are also reproducible in Romanian. The following examples are not contrastive/emphatic nor are they cases of narrow focus. The deaccented PP and sentence, respectively, cannot be scrambled, cliticized, or deleted. Hence the NSR is overridden even though focus is broad. It cannot apply in those cases in which independent syntactic restrictions would be violated. In these examples and also in (71) above, the deaccented material is not right-dislocated; it is included in the intonational phrase that also contains the prominent constituent.

(76) A: Se pricepe Luminița la țibli?  
‘Is Luminița well informed about bats?’
In this section we have shown that the NSR is operative in Romanian, but it cannot override independent restrictions on syntactic operations. In Zubizarreta’s approach the notion of metrical invisibility is only needed in order to attribute prominence assignment to the NSR in both narrow- and broad-focus contexts. In other words, the NSR does not see defocused material if the language allows contextual deaccenting. Such an approach is clearly problematic for Romanian since one would have to assume that defocused constituents are analyzed as metrically invisible only in narrow-focus contexts, but not in broad-focus contexts. Contextual deaccenting in clause-final position actually means that the NSR does not apply in these cases.

4.2. The architecture of the grammar

4.2.1. P-movement. In Zubizarreta’s model of the grammar, (78), p-movement applies on the stretch of derivation that maps $\Sigma$-structure onto LF. $\Sigma$-structure marks the end of all core syntactic operations (i.e. merge, overt, and covert feature-driven operations).
Her main reason for the postulation of an (intermediate) level of syntactic representation like \( \Sigma \)-structure is the fact that a rule like the FPR refers to both prosodic features (i.e. assignment of prominence) and features of syntactic and semantic import (i.e. \([\pm F]\)). Moreover, the MNSR 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 in which LF is derived from \( \Sigma \)-structure. Zubizarreta considers two potential pieces of evidence.

She argues that p-movement in Spanish and French neither feeds nor bleeds the possibility of variable pronoun binding in these languages. Consider the examples below. In (79), the focused QP subject binds a variable pronoun within the object. In this example the binding configuration is already available in overt syntax (and LF) because the subject c-commands the pronoun. In (80), the defocused object has p-moved in front of the subject, but the variable pronoun interpretation is still available. P-movement is analyzed as an adjunction operation; in this particular case the projection of the lexical verb is adjoined to \( vP \), which hosts the subject. The grammaticality of (80) can be attributed to reconstruction of the p-moved VP, since reconstruction is generally assumed to be possible from A'-positions. A similar situation holds of lexical anaphor binding (cf. her example [135], p. 145).

(79) El primer día de escuela acompañará a su MADRE a su hijo.
    the first day of school will-accompany his mother ACC her child

(80) El primer día de escuela acompañará a su hijo a cada MADRE (p. 143).

The following examples present a different situation. In (81) there is no c-command relation between binder and bindee, yet the bound-variable interpretation is available. P-movement in (82) does not change this situation.27

(81) El primer día de escuela acompañará su MADRE a su hijo a cada niño.
    the first day of school will-accompany his mother ACC every child

(82) El primer día de escuela acompañará a cada niño su MADRE (pp. 142–143).
In fact, Zubizarreta shows that a similar situation occurs in English and French. An object quantifier can bind a pronoun contained within a subject only if the latter is narrowly focused and the object is construable from the context. Compare (83) with (84). In the former, focus is broad, whereas in the latter, the subject is narrowly focused. Zubizarreta proposes that the binding configuration in (82), (83), and (84) is established at AS, where the universal quantifier is represented as a topic. We discuss this aspect of her analysis in section 4.2.2 below.

(83) A: What will happen?
   B: \[[_F \text{His mother will accompany every boy the first day of school}].
   \] – bound reading of pronoun: *

(84) A: I would like to know who will accompany every boy the first day of school.
   B \[_F \text{His MOTHER} \] will accompany every boy the first day of school.
   \] – bound reading of pronoun: OK

Since the binding facts are inconclusive for determining the level at which p-movement applies, Zubizarreta adduces evidence from the licensing of negative operators in Italian. In Italian and Spanish a negative operator must be licensed by the negative particle if it occurs in postverbal position. In preverbal position a negative operator is generally emphatic and the negative particle remains unexpressed. Zubizarreta assumes that NegP is located between TP and VP, and that a negative 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 and licenses any negative operator in its scope. Consider now the Italian sentences in (85).

(85) a. Nessuno ha mangiato la mela.
   nobody has eaten the apple
   b. *(Non) ha mangiato la mela nessuno.
   not has eaten the apple nobody

In (85a) the operator is in SpecEmphasis. It has moved through SpecNegP and the negative particle has been suppressed. Sentence (85b), with VOS order, requires an overt 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 (cf. [86]), similar to the derivation of VOS order with a focused subject (cf. [65] and [66] above). 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).

\[(86) \quad [\text{FP} \ [\text{TP} \ \text{non-ha} \ [\text{NegP} \ \text{t}_{\text{neg}} \ [\text{VP} \ \text{t}_{i} \ \text{mangiato la mela}]]]_{j} \ [\text{FP} \ \text{nessuno}_{i} \ [\text{e} \ [\text{TP} \ e]]_{j}]]\]

We think this argument does not prove that p-movement feeds LF. Nor does it lead to any conclusions as to the level of representation at which p-movement occurs, because it is not clear whether Zubizarreta’s analysis of (85b) can be defended upon closer scrutiny. Note that the same data can easily be turned against her analysis of VOS in Italian. Assuming that \text{neg} in (85b) does not surface if the negative operator moves to (or through) NegP, why then is it obligatorily spelled out exactly in this example? According to Zubizarreta, the occurrence of \text{nessuno} in SpecEmphasisP is motivated by an “emphasis” feature. Hence, movement of \text{nessuno} is feature-driven, and the negative operator is expected not to skip NegP on its way to SpecEmphasis. To our minds the analysis of (85b) 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 (86), \text{neg} does not c-command the negative operator and thus would probably not be able to license it anyway.

Let us consider an alternative analysis that is compatible with the narrow-focus effect of V(O)S in Italian and that does not incur the problem mentioned above. Such an analysis would require that the scrambled constituent be smaller than TP. The negative operator either is \textit{in situ} (SpecvP) or has moved to a preverbal focus position (cf. Kayne 1998). Let us assume that Zubizarreta is right when she argues that the narrow-focus effect on postverbal subjects in Italian is derived by movement of the subject to a focus position. Let us also assume that this focus position immediately dominates vP. The scrambled constituent could then be vP, VP, or DP. In the absence of any evidence to the contrary, we assume that the smallest constituent is scrambled, the direct object in this example. Then the derivation of (85b) must be along the lines of (87) and (88).²⁹ Under this analysis, the sentence-final operator is licensed by the c-commanding negative particle, which cannot be suppressed because the negative operator does not move through NegP. If this analysis is essentially correct, then licensing of negative operators in Italian does not provide any evidence that p-movement feeds LF.

\[(87) \quad \text{Input to p-movement:} \quad [\text{TP} \ \text{non-ha} \ [\text{NegP} \ \text{t}_{\text{neg}} \ [\text{AspP} \ \text{mangiato}_{j} \ [\text{FP} \ \text{nessuno}_{i} \ F^{0} \ [\text{VP} \ \text{t}_{i} \ \text{t}_{j} \ [\text{VP} \ \text{t}_{j} \ \text{la mela}]])]])] \]
We have assumed a structural focus position dominating VP in addition to a second focus position in the CP-domain (cf. Rizzi 1997; Frascarelli 1999). The latter is not controversial and is generally associated with a contrastive reading, whereas a focus in the VP-adjacent SpecFP is not necessarily contrastive. A VP-adjacent focus position has been identified in typologically unrelated languages like Hungarian (Kiss 1998), Hebrew (Belletti and Shlonsky 1995), Western Bade (Tuller 1992), Kirundi (Ndayiragije 1998) and even German (Krifka 1998) and English (Kayne 1998; López and Winkler 2002; Drubig 2003). It is not unreasonable to extend this analysis to the languages under consideration here. The input structure to p-movement in the French and Spanish examples (60a) and (67) is one in which the objects have moved to a preverbal FP. This would account for the narrow-focus interpretation. P-movement itself does not induce narrow focus, as we could show on the basis of Romanian data.

Where does p-movement apply then? The stretch of derivation from S-structure to LF has no motivation except in the formulation of Zubizarreta’s prominence rules themselves, which access phonological information (metrical sisterhood) and syntactic information (the features [±F]). The rules are problematic for reasons discussed above. Assignment of the features [±F] after all core syntactic operations have been performed also deviates from standard minimalist assumptions, where features are part of the initial array (the numeration) with which the derivation starts. Assignment of the focus feature to lexical items as they are drawn from the lexicon is necessary because overt focus movement, a core syntactic operation, has to refer to it. Focus movement, like topicalization, is a feature-triggered operation, a widely accepted assumption also shared by Zubizarreta.

It seems to us that the question of the level at which p-movement applies is independent of the question of where the NSR applies. If the NSR is a PF rule (cf. section 4.3 below), p-movement can still apply in the syntax because the syntactic derivation is evaluated at the interface levels. The derivation would have to meet the requirements of a phonological rule. We do not see a problem here. We only see a problem if p-movement is formulated as a postcyclic operation, as in (87)/(88) above, applying after all other syntactic operations have been performed. Such an operation violates the extension condition (Chomsky 1993, 1995). Therefore, the derivation of (85b) in (87)/(88) must be revised.
The direct object adjoins to FP before Asp\textsuperscript{0} merges with FP. The stretch of derivation from $\Sigma$-structure to LF in Zubizarreta’s model also violates the extension condition and must therefore be eliminated as well.\textsuperscript{30}

4.2.2. Assertion structure as an independent level of grammatical representation. Recall that Zubizarreta argues that there are binding phenomena that depend on the topic–focus articulation of the sentence. More precisely, variable pronoun binding may occur both at LF and at AS. In the Spanish examples (79) and (80) above the binding relation is established at LF, but in (81)/(82) and (84), repeated here in (89), the binding configuration is established at AS.

(89) \[f \text{ His}_i \text{ MOTHER} \] will accompany each/every boy, the first day of school.
     [I would like to know who will accompany each/every boy the first day of school.]

The bound-variable interpretation in (89) is contingent on two facts: the QP must have scope over the focused subject, and it must function as a topic. Wide scope alone is not a sufficient condition for binding the pronoun. In (90a), for instance, the universal quantifier may have scope over the indefinite subject, yielding a distributive reading. However, in (90b) it cannot bind the pronoun.

(90) a. Someone/a person will accompany everybody.
     b. *\[f \text{ His}_i \text{ mother} \] will accompany everybody.
     [I would like to know who will accompany everybody.]

Zubizarreta argues that the difference between each/every boy and everybody is that the former is “descriptively richer”; it can function as a topic and is to be represented as such at AS. Compare:

(91) A\textsubscript{1}: for each/every $y$, $y$ a boy, there is an $x$, such that $x$ will accompany $y$ …
    A\textsubscript{2}: for each/every $y$, $y$ a boy, (the $x$, such that $x$ will accompany $y = \text{his}_i \text{ mother}$)

One could 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 only test that supports Zubizarreta’s proposal is the possibility of left-dislocating universal quantifiers in Spanish. As illustrated in (92a), the dislocated object may bind the pronoun contained within the subject.
The binding configuration in this example is already available at LF because the quantifier c-commands the subject. In (92b) the quantifier can bind the pronoun in the subject only if the latter is narrowly focused as in English. The object does not c-command the subject, but it can be represented as a topic at AS because it is not focused.

(92) a. A cada niño, su madre lo 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, su MADRE deberá acompañar a cada niño.
      the first day of school his mother must accompany ACC each child

We think, however, that the data presented by Zubizarreta are insufficient to motivate AS as a separate level of grammatical representation. The reasons are the following:

1. The only argument for treating universal quantifiers as topics is the relative acceptability of left-dislocation of such expressions in Romance. However, the crucial examples all have the quantified NP in its base position and for none of the Spanish examples does she provide any context. Nor does she provide any criteria that would allow us to distinguish topics, as subjects of propositional predicates, from constituents that are simply backgrounded (i.e. recoverable from the immediate discourse). The distinction is encoded in her representation of AS (cf. section 2.1 above), but there is hardly any way to decide whether a “given” constituent is a topic or not. Yet many languages distinguish topics from backgrounded constituents by word order and/or morphological means under more or less well-defined conditions. Such languages are often designated as topic-prominent. Well-studied cases are Japanese (Kuno 1972, 1973) and Korean (Choi 1997), which mark topics both morphologically and syntactically. Among the Romance languages, Catalan and Romanian have been argued to be topic-prominent, in the sense that topics are obligatorily fronted to a sentence-initial position (cf. Vallduví 1992 for Catalan; Primus 1993; Göbbel 1995 for Romanian). On the other hand, there are languages in which topics are not consistently identified syntactically or morphologically. English, for example, makes heavy use of prosodic means (specific tunes and phrasing; cf. Steedman 1991; Beckman 1996). Other non-topic-prominent languages are German and Hindi/Urdu (cf. Kidwai 1999). Identifying topics in these languages is not always an easy enterprise and is often subject to theoreti-
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cal bias. Reinhart’s (1982) approach to sentence topics, which was developed on the basis of English and which is adopted by Zubizarreta, 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 (1997), 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. For example, in (93) and (94) Reinhart would have to assume that the propositions are evaluated with respect to the pie/it and Melinda, respectively. These constituents would then be the sentential topics. However, this does not reflect the fact that in (94) the topic may also be topicalized, whereas in (93) it may not.

(93) Who ate the pie?
   [f. John] ate the pie/it.
(94) I know what she told her mother. But what did she tell Melinda?
   She told Melinda [f. a lie].

The additional contrastive component that often, but not exclusively, characterizes topics has been argued by Choi (1997) to be at the heart of topic-marking in Korean. This language resists topic-marking of backgrounded constituents as the following sequence of sentences from Choi’s paper demonstrates. The first sentence is a presentational sentence. The continuations in (b) and (c) are still “about” the earthquake but have to bear the regular case marker. Topic-marking is not appropriate in this context.

(95) a. Kobe-eyse cicin-i na-ss-e.
   Kobe-in earthquake-NOM break out-PST-DCL
   ‘There was an earthquake in Kobe.’
   b. cicin-i encey na-ss-e?
   earthquake-NOM when break out-PST-INT
   ‘When did the earthquake happen?’
   b’. #cicin-un encey na-ss-e?
   earthquake-TOP when break out-PST-INT
   c. cicin-i ecey na-ss-e.
   earthquake-NOM yesterday break out-PST-INT
   c’. #cicin-un ecey na-ss-e.
   earthquake-TOP yesterday break out-PST-INT
The fact that contrastiveness plays a role in topic-marking can also be shown with Romanian data. A test for topichood in Romanian is the possibility of expressing a defocused element with a strong pronoun. The example in (96) has both a topic constituent, the left-dislocated indirect object that picks out one of the two brothers, and a backgrounded constituent, the subject. While multiple topics are not excluded in Romanian, the subject cannot function as such in this example because it cannot be replaced with the strong pronoun ea ‘she’. Defocused definite descriptions pattern with weak pronouns (i.e. pro or clitics).

(96) A: Ce le-a făcut doctorită celor doi frați?
   ‘What did the doctor do to the two brothers?’
B: Celui mic îl-a făcut o injecție.
   (to)-young one CL.DAT-has made an INJECTIE.
   ‘To the young one, the doctor gave an INJECTION.’

Since in Romanian a topic must be topicalized, sentences like those presented by Zubizarreta for a covert topic analysis do not give rise to a bound-variable interpretation if the quantifier does not c-command the pronoun. In (97) only the referential interpretation of the pronoun lui ‘his’ is available.

(97) A: Și vrea să știu cine îl va duce pe fiecare copil la școală.
   ‘I would like to know who will accompany each child to school.’
B: MAMA LUI îl va duce pe fiecare copil la școală.
   mother CL.ACC will take ACC each child to school
   ‘His MOTHER will accompany each child to school.’

Besides the fact that the conditions under which a defocused constituent should be represented as a topic are not discussed by Zubizarreta, there are also serious inconsistencies in her discussion of Spanish between what is encoded as a topic in the syntax and what is supposed to be encoded as a topic at AS. To give just one example, Zubizarreta argues that all preverbal subjects that are not contrastively focused are topics syntactically. Movement of a subject to SpecTP is triggered by a “topic” feature. On the other hand, she claims that typical out-of-the-blue sentences (i.e. all-focus sentences or thetic sentences), like (98), may have main prominence on the verb. This means that the subject in the following example need not be a topic, although it is in SpecTP. The “topic” feature employed in her analysis of preverbal constituents in Spanish has a purely positional function, dissociated from the representation of topics at AS.
Since the main empirical motivation for AS is the possibility of left-dislocation of universally quantified NPs, one would expect at least further cross-linguistic evidence for the representation of universal quantifiers as topics. However, topic-marking of universal quantifiers does not seem to be generally possible. For example, in Korean universal quantifiers can be marked as such only marginally. Lee (1989: 200f.) argues that the equivalent of every N can marginally be topic-marked if it occurs with an individual-level predicate, (99a), or if the sentence involves some kind of modality, (99b). It cannot be topic-marked when it is used with stage-level predicates.

In other languages the informational status of topicalized/left-dislocated quantifiers is also not very clear. Kiss (1999) argues that in Hungarian universally quantified NPs do not occur in topic position. They occur in a special operator position that is external to the VP, but lower than the structural topic position. Kiss actually claims that quantificational sentences form a sentence type of their own that cannot be submitted to a topic–comment analysis. We conclude here that further evidence is necessary for a covert topic analysis of universal quantifiers. This analysis is the main motivation for AS as a separate level of grammatical representation.

4.3. The NSR reconsidered

In Zubizarreta’s approach, the NSR is dissociated from focus structure. A similar position is also defended by Cinque (1993), and this may well be correct. Only the FPR rule refers to the focus–background articulation. The question now arises of whether these rules can be formulated without recourse to the problematic notions “metrical sisterhood” and “metrical (in)visibility.” In fact, Zubizarreta discusses the possibility of formulating the NSR as an intonational constraint (p. 83f.) that requires right-peripheral prominence in the intonational phrase. She rejects such an
approach because (i) prominence assignment to contrastively focused constituents in Spanish may violate this constraint and (ii) languages like French and Brazilian Portuguese may violate this constraint even if focus is noncontrastive. The introduction of the notions “metrical sisterhood” and “metrical invisibility” serve only one purpose, namely to eventually subsume under the NSR the prominence associated with a focused constituent that is not sentence-final, even though the NSR is not formulated in terms of the focus–background distinction. P-movement serves a similar function: defocused constituents are removed from the position to which the NSR blindly assigns main prominence. After p-movement the focal constituent ends up in a right-peripheral position. The reanalysis of defocused constituents as metrically invisible and p-movement are the result of conflicting prominence assignments.

In previous sections we have shown that in certain cases Zubizarreta’s prominence rules compute focal stress on the wrong constituent because no conflict between the NSR and the FPR arises (cf. note 19). Furthermore, we have argued that the rules cannot be extended to a language like Romanian, in which a phrasal-stress rule is also operative. For this language we have argued that the NSR does not apply in narrow-focus contexts. In other words, it is a violable intonational constraint that can be overridden even in broad-focus contexts (cf. examples [76] and [77]). Therefore, narrow focus, not necessarily contrastive focus, is a case of free prominence assignment in this language. This is also true in any language that allows contextual deaccenting (English, German, Dutch, Swedish, and, judging by Zubizarreta’s data, also French). A notion like metrical invisibility is simply not needed because the NSR does not apply in narrow-focus cases. This does not mean that prominence assignment due to narrow focusing may not coincide with the position to which the NSR assigns main prominence. We conclude that there is no reason to reject the formulation of the NSR as an intonational constraint. Following suggestions by Frascarelli (1999), we propose the following formulation:

\[(100) \text{NSR} \]
\[\begin{align*}
  a. \text{A word bearing NS is a focus or part of the focus.} \\
  b. \text{NS is assigned to the rightmost lexical item in the intona-} \\
      \text{tional phrase.}
\end{align*} \]

The first condition in (100), which effectively replaces the FPR, states that a word bearing NS (i.e. right-peripheral prominence in the intonational phrase) is a focus or in cases of broader foci, it is part of the focus. This condition is needed in order to account for p-movement. The second
condition states that the NSR applies uniformly in the languages in which it is operative; it is a PF rule and its domain is the intonational phrase. How do different languages meet the requirements of the NSR? In languages in which the NSR is operative the syntactic TP projection, which contains the focus, is parsed as a single intonational phrase at PF. The TP may be bleached of defocused constituents in the syntax. Topics and antitopics are removed by left- and right-dislocation, respectively, and are mapped into independent intonational phrases at PF (cf., for example, Frascarelli 1999 on Italian). P-movement is a second option for meeting the requirements of the NSR. Languages may comply with this constraint to different degrees. Swedish, which has relatively rigid word order, lacks p-movement altogether. In Romanian p-movement is an option, but its occurrence is still more restricted than in Italian and Spanish.

5. Conclusion

Prosody, Focus and Word Order is an ambitious and novel reexploration of the complex interplay between focus and prosody in Germanic and Romance that 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 that has gained considerable influence ever since Cinque (1993) reformulated the original NSR of Chomsky and 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 greatest 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 issues discussed in the book, we have addressed the main theoretical questions and the empirical data on which they are based. For German we have shown that there are no
strong arguments for the application of an 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 additional 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 the search for an adequate theory of information packaging.

Received 1 February 2000

Notes

* We would like to thank the participants of the 1999 Seminar on Focus at the University of Tübingen for the fruitful discussions of Zubizarreta’s book. We also want to thank Bernie Drubig for the in-depth discussion of Zubizarreta’s approach and his initial comments on this paper. Particularly, we thank the reviewers of Linguistics for their extremely helpful comments, without which the present paper would not have arrived at many conclusions that it did. We are also indebted to Kirsten Brock for her help with editing this article. Correspondence address: Seminar für Englische Philologie, Wilhelmstr. 50, 72074 Tübingen, Germany. E-mail: susanne.winkler@t-online.de.

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 stress, which applies to word stress, and accent, 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 Fokus–Hintergrund Gliederung (cf. Jacobs 1991).

3. We indicate focus-related prominence by capital letters.

4. It should be noted here that in Jackendoff’s initial discussion (1972: 261, his example [6.149]) this example occurs in a contrastive context (Well, what about the BEANS? Who ate THEM?). In the answer, the beans is associated with a fall–rise, Jackendoff’s B-accent. The focus is associated with a fall, Jackendoff’s A-accent. This detail is not mentioned by Zubizarreta, but it will become important in section 4.2.2.

5. The “topic” feature has a purely positional function and is separate from the topic-comment articulation of the sentence (cf. section 4.2.2). This conclusion is further supported by Zubizarreta’s characterization of the “focus” feature, the only morphosyntactic feature that is explicitly addressed. This feature is characterized as follows: “‘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” (note 3, p. 182).

6. It is unclear to us how overt focus movement should be handled within Zubizarreta’s framework. She would probably need a third type of focus feature beside “focus” and [+F] that is assigned to lexical constituents when they are drawn from the lexicon. The feature “focus” on T in Spanish and on the head of a focus phrase (FP) in Italian and many other languages cannot attract a constituent marked [+F], since the latter feature is assigned only after all syntactic operations (overt and covert) have been performed.


8. Asymmetric c-command in the formulation of the C-NSR deviates from Kayne’s (1994) definition. Since Zubizarreta’s version is intricately related to the notion of metrical sisterhood, we address it in the following section.

9. Note that (23e) requires a syntactic analysis in which the direct object asymmetrically c-commands the adverbial at Σ-structure. This can be achieved either by movement of the direct object to a higher position or with an analysis like the one proposed by Larson (1988). This aspect is not discussed by Zubizarreta, but she seems to prefer a covert-movement analysis for case-checking. This leaves us with a Larsonian analysis.

10. Note that in each of the examples in (24) the subject is an external argument and is not selected by the lexical verb, but by the light verb v in the framework of Chomsky (1995). In order to subsume these examples under the S-NSR, Zubizarreta introduces additional conventions for the application of this rule (cf. section 3.3 below).

11. For example, in (24b) both the subject and the verb must bear a pitch accent. Contextual manipulation is necessary in order to get the subject-prominent pattern. A sentence such as MARY voted can only be surprise information, for example in a context in which it is known that Mary generally boycotts elections. Yet, if one rethinks this example in Zubizarreta’s terms, its assertive structure cannot be represented by existential quantification (there is an x such that x happened) followed by the identification of the variable. Rather, it has to incorporate the denial of a presupposition that is best rendered as a context statement (Mary always boycotts elections/Mary does not vote). This scenario is closer to Zubizarreta’s definition of contrastive/emphatic focus, the type of focus that does not fall under the application of the MNSR.

12. 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).

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

14. Note that Zubizarreta’s account is reminiscent of Jacobs’s (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, Jacobs introduces specific rules to form a relational prosodic tree from a syntactic tree. Interestingly, even Zubizarreta’s notion of metrical invisibility has a predeces-
V-final sentences, in Zubizarreta’s terminology, include V-second sentences in which the participle is sentence-final. Non-V-final sentences refer only to sentences in which the main verb is in C⁰.

The distinction between thetic vs. categorical utterances is essential in order to talk about the fine-grained differences in accent location and focus readings in German. These terms refer to two different utterance types as proposed by Kuroda (1984), Sasse (1987), Drubig (1992), and Rosengren (1997), among others. Kuroda (1984) attributes the distinction to the nineteenth-century philosophers Brentano and Marty, who argue that the categorical judgment consists of two consecutive actions and is therefore called a double judgment: first, the entity is named, and then a statement is made about the entity. The thetic utterance, on the other hand, ‘concerns a particular event that is taking place at the present moment, at the moment of the utterance. It refers to a present, actual situation to which the speaker is cognitively related, most likely (but not necessarily), by visual perception’ (1984: 7). The thetic judgment is logically unstructured and therefore also referred to as a simple judgment.

Sasse (1987) provides evidence from various languages that the thetic utterances in (i) are characterized by subject accentuation signaling a wide-focus reading, whereas the categorical utterances in (ii) require the accentuation of both the subject and the predicate. (Sasse’s examples [8]–[9] and [25]–[26]):

(i)  a. What’s new? [Harry’s coming] / [*Harry’s căming].
    b. Was gibt’s Neues? [Harry kommt] / [*Harry komt].

(ii) a. What’s going on outside? [Harry’s singing] / [*Harry’s singing].
     b. Was ist draußen los? [Harry singt] / [*Harry singt].

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) for Dutch and German.

[D₂] and [V₂] are metrical sisters by virtue of the fact that [V₂] is metrically nondistinct from [V₂ e₂].

19. 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 [spät gekommen] is metrically nondistinct from [gekommen] due to the metrical invisibility of spät, 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 spät 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 easily be 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 needed 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 4.2.1 below). Yet such a conflict never arises 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 prominence on the verb in this example.

20. The list of questions is given in (i)–(iii):
   (i) What did Jan swallow?
   (ii) What did Jan do?
   (iii) What happened?

21. According to von Stechow and Uhmann (1986), all other possible accent assignments in (ia)–(id) below allow only narrow-focus readings:
   (i) a. weil Ede mit der Hacke dies Loch ins EIS gehackt hat.
      b. weil Ede mit der Hacke dies Loch ins Eis GEHACKT hat.
      c. ?weil Ede mit der HACKE dies Loch ins Eis gehackt hat.
      d. ??weil Ede mit der Hacke ins Eis dies LOCH gehackt hat.

22. Metrically invisible material is set in italics.

23. We thank the reviewers of this article for pointing out to us that for them it is possible to derive a wide-focus reading for (51b) despite the fact that lachen is an unergative verb. We are aware of Krifka’s (1984: 19) famous OTTO geigt example in (i), which shows that it is possible for some speakers to reinterpret unergative verbs as ergatives, as proposed by Drubig (1992):
   (i) (What’s happening?) OTTO geigt mal wieder.
       ‘Otto is playing the violin again.’
   One of the reviewers suggests the following context for (51b) above.
   (ii) A: Why did the teacher leave the classroom?
       B: Weil ein JUNGE gelacht hat.
   By loading the context with additional considerations, it seems possible for some speakers to reinterpret the unergative verb as an ergative verb, allowing a thetic interpretation. The point, however, remains that no matter whether it is possible for some speakers to get a wide-focus reading for (51b), the focus structures of (51a) and (51b) are different. In (51a), the DP ein Junge must be D-linked or presupposed, whereas under the thetic reading in (51b), ein Junge is the entity that is introduced into the discourse.

24. 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.

25. See in particular Holmberg (1999) for arguments that object shift in Scandinavian is a PF operation.

27. Costa (1998) argues that in Portuguese movement of the object in front of the subject is also triggered by phonological considerations. Like Zubizarreta, he argues that object shift is A\(\infty\) movement but involves adjunction of the object to VP. In this language, however, a quantified object cannot bind a pronoun within the subject (cf. [i]).

(i) *Viu cada criança, o seu pai.
    saw each child  his father
    ‘His father saw each child’ (Costa 1998: 164).

28. An anonymous reviewer remarks that (84) is ungrammatical for him/her. However, most native speakers with whom we tested this sentence accept it in a question–answer sequence.

29. Under this analysis it is immaterial whether NegP is sandwiched between TP and VP or whether it dominates TP (Laka 1990). Furthermore, we assume that AspP is projected in the perfect and the lexical verb moves to this position. Further note that this analysis is the mirror image of the analysis proposed by Belletti and Shlonsky (1995), who argue that there is an FP that dominates VP. They assume that the specifier of EP in Italian is to the right and movement of the focal constituent is a case of rightward movement. From a current perspective (cf. Kayne 1994 and much current work), rightward movement is clearly problematic and the analysis in this article is to be preferred.

30. But see Holmberg (1999) for strong arguments that object shift in Scandinavian is a postcyclic derivation and should be formulated as a PF operation. The conditions under which Scandinavian object shift occurs differ from those that trigger p-movement in Romance.

31. Topics in English are set off as separate intonational phrases and they are associated with the so-called fall–rise contour, more exactly an L\(+\)H\(\ast\) L\(-\)H\% tonal sequence. This tune is employed irrespective of whether a topic is topicalized or remains in situ.

32. Compare the current debate on scope inversion in German sentences with a ‘hat pattern’ like (i) (Büring 1997; Jacobs 1997; Krifka 1998; Molnár and Rosengren 1996; van Hoof 2002), where one of the questions at issue is whether the quantified expression with a typical ‘topic accent’ (L\(^\ast\) + H) is actually a topic or a focus.

(i)  ‘It is not the case that all politicians are corrupt.’

    /Alle Politiker sind nicht\ korrupt.

33. Note that in a topic-prominent language like Romanian a contrastive topic has to be left-dislocated. Hence, in (i) only (a) is acceptable.

    (i) I know what she told her mother. But what did she tell Melinda?
        a. Melindei i-a spus o minciună.
        Melinda.DAT CL.DAT-has told a lie
        b. #i-a spus Melindei o minciună.

34. Cf. also Szabolcsi (1997) for a similar view.

35. Due to lack of space we do not consider prenuclear accents in Romance here. We are aware that this is not a trivial matter. For a discussion of prenuclear accentuation in Romanian and its relation to focus structure, see Göbbel (2001). Also note that Romanian examples like (i) and similar examples in other Romance languages (cf. the French examples in [28] above) are problematic for a syntactic formulation of the NSR under a standard analysis of adjunct clauses. The most deeply embedded constituent is
probleme 'problems', not rezolvat 'solved' (thanks to Richard Kayne for pointing this out to us). The formulation of the NSR as a PF rule does not face this problem.

(i) A: De ce nu vi la prelegere?
   ‘Why aren’t you coming to the lecture?’
B: Am niste probleme de REZOLVAT.
   have.1SG some problems of solve.SUPINE
   ‘I have some PROBLEMS to solve.’

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