

The Syntax of Emphasis: Ellipsis and Discontinuity in the DP*

Dimitris Ntelitheos

University of California, Los Angeles

1 Introduction

This paper presents a novel analysis of two superficially unrelated syntactic phenomena, nominal ellipsis and discontinuous DPs. Departing from current assumptions in the relevant literature (Lobeck, 1995; Kester, 1996; Sleeman, 1996), I argue that nominal ellipsis is a complex process that involves syntactic movement of the elided NP to a position associated with properties of the discourse function of topic. This movement precedes phonological deletion of the moved NP, which eventually produces the elliptical structure in the nominal domain. In other words NP-deletion is preceded by NP-topicalization.

The remnant modifier always carries new information and is thus always focused. This can be expressed syntactically as syntactic focus movement to the specifier of a focus projection. The topic and focus projections are argued to be part of the nominal domain. In other words I assume a nominal left periphery that parallels the clausal left periphery, supporting the assumption with evidence from the distribution of DP-internal *wh*- and focused elements from Greek. Furthermore, I show that Discontinuous DPs have a similar initial stage of NP-topicalization followed by focalization of the remnant nominal modifier. The only difference is that the landing site of the moved elements in discontinuous DPs is in the clausal left periphery. If the above assumptions are on the right track then a number of common properties between nominal ellipsis and discontinuous DPs can be captured.

* This paper would not have been possible without the help of Hilda Koopman, Tim Stowell and Anoop Mahajan. I would also like to thank Dominique Sportiche, and the participants at the Syntax & Semantics seminar at UCLA for their useful comments on an earlier version of this paper. The usual disclaimers apply.

The paper is organized as follows: In section 2, I present my analysis of nominal ellipsis and discontinuous DPs as sister operations. I present an analysis of nominal ellipsis as NP-topicalization followed by focalization of the remnant modifier. Furthermore I present evidence for the existence of a nominal left periphery, a notion crucial to the analysis presented here. I subsequently show that Discontinuous DPs also involve NP-topicalization and focalization of the remnant modifier, this time in the clausal left periphery. Section 3 shows that the predictions that the proposal makes for a number of common properties between discontinuous DPs and nominal ellipsis are borne out. Section 4 discusses an apparently problematic case for the analysis presented here and shows that it is only superficially problematic. Finally, section 5 contains my concluding remarks.

2 Nominal Ellipsis and Discontinuity as Sister Operations

2.1 Nominal Ellipsis as NP-Topicalization

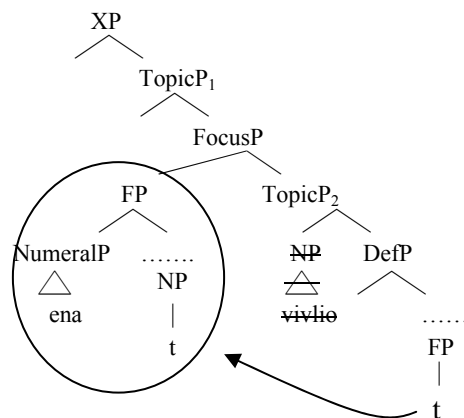
Johnson (2001) explores the possibility that VP Ellipsis is licensed by VP Topicalization. That is, for a VP to elide it must first topicalize. This assumption can directly account for why the conditions on VP Topicalization and VP Ellipsis are so close. For example, a topicalized VP cannot succeed unless an auxiliary governs the trace it leaves and the same condition applies to VP-ellipsis, there is an apparent block on VP-topicalization and VP-ellipsis of VPs headed by *have*, and topicalized VPs cannot land inside an infinitival clause in the way that they can in finite clauses, a similarity they also share with VP-ellipsis. The above observations seem to indicate that elided VPs stand in a topic position, and therefore the licensing conditions on VP Ellipsis should be sought in this projection.

Based on the above assumptions I propose an extension of the idea of VP-Ellipsis as VP-Topicalization, applied to the nominal domain. In other words I propose that NP-ellipsis proceeds through NP-topicalization. This topicalization is a discourse driven syntactic process that involves movement of the NP to a nominal left-peripheral position, which I tentatively call TopP for reasons that will be explained shortly.

The process that leads to nominal ellipsis then follows the steps illustrated in (1). In the structure of the noun phrase “ena vivlio” of (1.a.) represented in bracketed notation in (1.b.), the numeral ‘ena’ occupies the specifier of some functional projection FP. The topic projection is assumed to be recursive as in the clausal domain (Rizzi, 1997), and the focus projection is placed between a higher and a lower topic phrase. Finally, DefP is the previously labeled DP, i.e. the locus of definiteness in the DP.

1. a. o Giannis agorase tria vivlia kai o Petros agorase ena.vivlio
 the Giannis bought-3SG three books and the Petros bought one book
 ‘John bought three books and Petros bought one book’
- b. [XP [TopicP [FocusP [TopicP [DefP... [FP **ena** ...[NP **vivlio**]]]]]]]]
- c. [XP [TopicP [FocusP [TopicP [NP **vivlio**] [DefP... [FP **ena** ...t_{NP}]]]]]]]]
- d. [XP [TopicP [FocusP [FP **ena** ...t_{NP}] [TopicP [NP **vivlio**] [DefP... t_{FP}]]]]]]]]
- e. [XP [TopicP [FocusP [FP **ena** ...t_{NP}] [TopicP [NP ~~vivlio~~] [DefP... t_{FP}]]]]]]]]

The NP “vivlio” moves to the specifier of the local Topic projection (1.c.) Subsequently, the remnant modifier in the specifier of a functional projection pied-pipes that projection and moves to the specifier of a local Focus projection (1.d.). This movement licenses deletion of the topicalized NP resulting in the structure of (1.d.). This series of movements has no effect on the word order of the nominal elements as the modifier ends in a prenominal position at the end of the derivation. However, as we will see in the following section the effects of the movement can be traced on the morphological properties of the participating modifiers. A tree-structure representation of the movement operations is given below:



2.1.1 On a Nominal Left Periphery

The above assumptions require the existence of a nominal left periphery parallel to the clausal left periphery, discussed in Rizzi (1997). Let us see how this structure can be mapped exploring the distribution of DP-internal elements from the Greek DP. In Rizzi (1997) the extended structure of the left periphery is assumed to contain a number of projections that are mainly related to discourse functions and the structuring of information. On the lower level, the clausal left periphery is assumed to project FinP, the locus of finiteness. The elements that merge here reflect certain properties of the verbal system of the clause. I assume that the equivalent of FinP in the nominal domain is DefP, the locus of definiteness and the projection in which definite determiners merge. DefP parallels the finiteness projection in the clausal domain, in that the determiner is the element of the nominal left periphery that communicates with the nominal system. In a sense it determines the presupposition of existence of the entity represented by the NP. The choice of the determiner reflects certain properties of the nominal system; it selects the nominal domain in the same way the complementizer selects the verbal domain.

In Greek, possessors marked with Genitive case appear after the possessed NP:

2. a. mu ipes pos dhiavases to vivlio tu Gianni
me-GEN said-2sg that read-2sg the book-NOM the-Gianni-GEN
'you told me you read Gianni's book'

The same possessors can appear in a position before the determiner when contrastively focused:

3. a. mu ipes pos dhiavases tu GIANNI to vivlio (ki ohi tu KOSTA)
me-GEN said-2sg that read-2sg the-Gianni-GEN the book-NOM (and not the Kosta-GEN)
'you told me you read Gianni's book (and not Kosta's)'

I assume that the focused possessor in (3.a.) is in the specifier position of a FocP of the nominal domain. The fact that the possessor is DP-internal in (3.a.) can be confirmed by (4.a.) where the focused possessor appears between the definite determiner and the demonstrative:

4. a. mu ipes pos dhiavases ola afta tu GIANNI ta vivlia (ki ohi tu KOSTA)
me-GEN said-2sg that read-2sg all these the-Gianni-GEN the books-NOM (and not the Kosta-GEN)
'you told me you read all these books of Gianni's (and not Kosta's)'

Furthermore, clausal elements cannot appear between the focused possessor and the NP. For example, as (5.a.) illustrates, adverbs cannot be inserted in that position:

5. a. * mu ipes pos dhiavases tu GIANNI tora ta vivlia
me-GEN said-2sg that read-2sg the-Gianni-GEN now the books-ACC
'you told me you read Gianni's books now'

A closer inspection of the examples in (3.a.-4.a.) further strengthens the approach adopted here. More specifically the string in the parenthesis in both examples involves nominal ellipsis. If contrastive focus is the licensing condition for nominal ellipsis then the fronting of the antecedent possessor (tu GIANNI) indicates fronting of the second focused possessor (tu KOSTA). But this is exactly what is claimed here, that the remnant modifier of an elliptical site has moved to a pre-determiner position (i.e. the specifier of a nominal FocusP).

Since there is some evidence for a focus projection in the nominal domain one would expect to find evidence for a topic projection since the latter has been also associated with the clausal left periphery. Ihsane & Puskas (2001) formulate exactly such a hypothesis connecting the existence of a Topic Phrase in the DP with the locus of specificity.

In the Minimalist framework, elements merge or move to the DP-internal TopicP to check a specificity feature. This is a position that demonstratives for example can appear in Greek. If demonstratives are like adjectives in that they modify (i.e. specify) the nominal head, then following Cinque (1994) we can assume that they originate in a specifier position of a functional projection in the determiner phrase (see also Bernstein, 1997). Subsequently, in Greek they can move to the TopicP of the nominal left periphery to check their specificity feature. This is why they appear in a pre-determiner position in Greek:

6. a. thelo afto to kenurjio vivlio
want-1SG this the new book
'I want this new book.'

Specificity is understood as constraining the relation of the referent of the DP to a discourse referent that is already in the domain of discourse prior to the utterance of the DP. In Enç's (1991) definition "*specificity involves a weak link, that of being a subset of or standing in some recoverable relation to a familiar object*" (1991:22). The similarities with the definition of topic as established (grounded) information (the entity anchoring the sentence to the previous discourse) are obvious. López (2000) incorporates the above notions of specificity and topic in a new refined definition of Pesetsky's (1987) notion of D-linking. In Pesetsky's discussion, D-linking is defined as the ability of *wh*-words to pick an entity or set of entities from a set of alternatives that are present in the minds of both speaker and hearer. López (2000) assumes that D-linking is associated with a specific feature that can be thought of as "*an instruction for the interpretive component that says 'connect with a discourse topic'*" (López, 2000:186). A further refinement assumes that the context, which is common in the participant's mind, is merely the preceding discourse as this is the only relevant source in cases of ellipsis.

López's definition of D-linking is very close to the definition of partitivity as the denotation of a family of sets that consist of a superset and a subset. The superset is the set of alternative entities or sets of entities in López's definition, while the subset is the specific entity/set of entities chosen by the speaker. This relates to the definition of a discourse topic and thus all the relevant properties of ellipsis can be associated with the properties of a topic projection. Even the notion of specificity that, as we have seen, has been assumed to reside in a nominal topic projection is relevant to elliptical contexts. The superset of a partitive structure has to be specific:

7. a. I saw some of the students.
- b. * I saw some of students.

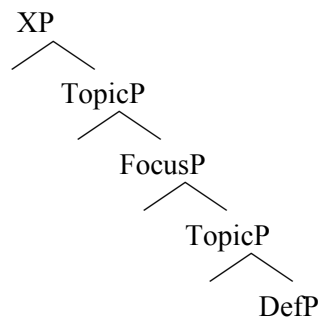
Similarly the deleted NP in nominal ellipsis has to be specific:

8. a. I looked carefully at all the books and I decided to buy three ~~books~~.
- b. Mary bought three books and I bought five ~~books~~.

The elided NP ‘books’ in (8.a.) must refer to a subset of the superset denoted by the antecedent occurrence of ‘books’. It cannot refer to ‘books’ that are unspecified in the previous discourse. Obviously in (8.b.) the set denoted by the elided NP is disjoint from the set denoted by the antecedent DP. However, it is still a subset of a set of ‘books’ that is part the common background for both the speaker of the utterance and the hearer (e.g. the books that were on offer in a specific bookstore).

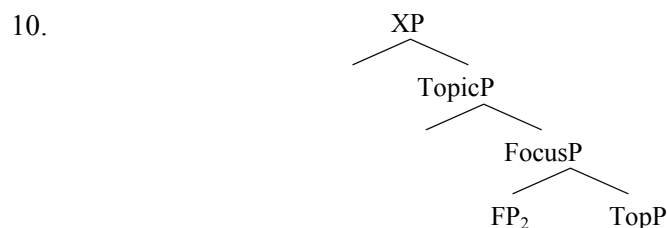
Thus, the notions of specificity, partitivity, and D-linking, which are relevant to nominal ellipsis seem to be strongly related to the notion of topic. Consequently the existence of a Topic Phrase in the DP is conceptually desired for an analysis of nominal ellipsis as movement.

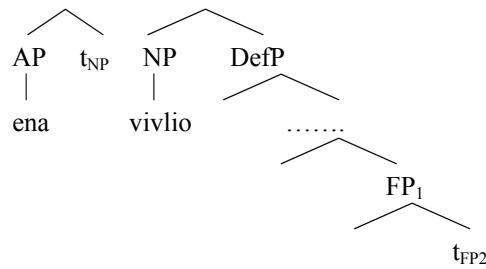
Summarizing all the above assumptions we can assume the following structure for the left-peripheral region of the nominal domain:



If the above structure is correct, in an example like (1.a.) repeated here as (9.a.) the DP should have the structure in (10):

9. a. o Giannis agorase tria vivlia kai o Petros agorase [ena.vivlio]
 the Giannis bought-3SG three books and the Petros bought one book
 ‘John bought three books and Petros bought one book’





In (10) the NP ‘vivlio’ has moved from its base position to the specifier of TopicP. Subsequently, the AP in the specifier of FP₂, pied-piped the remnant projection to FocusP.

2.2 Topicalization and Focalization in Discontinuous DPs

Discontinuity in the DP has also been analyzed as connected to the syntactic realization of information structure and has been especially associated with the expression of topic and focus in the sentential domain. Discontinuous structures emerge when a single maximal projection must fulfill two different positional requirements defined by pragmatic constraints on order. This observation has led to movement analyses of discontinuous DPs.

The left or right displacement of modifiers is licit only in focalization or topicalization in languages like Greek (Androusoyopoulou, 1998), Russian (Sekerina, 1999), Serbo-Croatian (Wilder & Ćavar, 1994), Polish (Siewierska, 1984) and so on:

- | | | | |
|-----|----|--|-------------------------------------|
| 11. | a. | to KOKKINO idha to forema.
the red saw-1S the dress
‘It is the red dress that I saw.’ | GREEK
Androusoyopoulou
1997:2 |
| | b. | STAROGO ₁ boitsja malen’kij rebenok t ₁ vra a.
old-GEN is afraid small child doctor-GEN
‘The small child is afraid of the old doctor.’ | RUSSIAN
Sekerina, 1999 |

Androusoyopoulou argues that the adjective ‘to KOKKINO’ (the red), in (11.a.) is contrastively focused. The preposed adjective ‘kokkino’ (red) separated from its noun ‘forema’ (dress) carries ‘focal’ stress and conveys new information. The presupposition is such that there are a few dresses that I could see in the given situation and the assertion is that out of those, I saw the red one. The same is true for the Russian data.

Assuming that focalization and topicalization are syntactic operations the above observations lead to the conclusion that discontinuity in the DP is the result of focus movement. Androutsopoulou (1998) has adopted such an approach taking discontinuous DPs in Greek to be the result of scrambling of the NP out of the DP with subsequent remnant movement of the DP to a left-peripheral focus position. She assumes that the operation is that of A'-movement and provides evidence from long-distance movement, sensitivity to strong islands, subject/object asymmetries, and reconstruction effects.

I adopt Androutsopoulou's approach with two modifications. The first change has to do with the landing site of the NP. Androutsopoulou leaves the landing site of the scrambled NP unspecified although she hinges that it may be an inner topicalization projection, just above VP (see also Kayne, 1994:76) which may also be the locus of object clitics (the accusative voice projection in Sportiche, 1992). I take this assumption as basically true, with the only difference that the inner topicalization projection is in fact much lower. The NP in discontinuous DPs lands in the specifier position of TopicP, in the nominal left periphery.

The second change in Androutsopoulou's approach has to do with the movement of the remnant modifier. Androutsopoulou (1998) assumes remnant movement of the whole DP. Here I assume remnant movement of the FP that contains the modifier. Thus a derivation of a Greek discontinuous structure would follow the following steps (compare (1) to (12)):

12. a. o Petros agorase ena.vivlio
 the Petros bought one book
 'Petros bought one book'
- b. o Petros agorase [XP [TopicP [FocusP [TopicP [DefP... [FP **ena** ... [NP **vivlio**]]]]]]]]
- c. o Petros agorase [XP [TopicP [FocusP [TopicP [NP **vivlio**] [DefP... [FP **ena** ...t_{NP}]]]]]]]]
- d. o Petros agorase [XP [TopicP [FocusP [FP **ena** ...t_{NP}] [TopicP [NP **vivlio**] [DefP... t_{FP}]]]]]]]]
- e. [FocusP [FP **ena** ...t_{NP}] o Petros agorase [XP [TopicP [FocusP t_{FP} [TopicP [NP **vivlio**] [DefP... t_{FP}]]]]]]]]
-

In fact, the inner topicalization projection, in preverbal position must also exist as the remnant modifier can also appear there:

13. o Petros [FocusP [FP **ena** ...t_{NP}] agorase [XP [TopicP [FocusP t_{FP} [TopicP [NP **vivlio**] [DefP... t_{FP}]]]]]
-

Thus, the cyclic movement of the remnant focused modifier follows three steps:

14. [FocusP [FP **ena** ...t_{NP}] o Petros [FP **ena** ...t_{NP}] agorase [XP [TopicP [FocusP t_{FP} [TopicP [NP **vivlio**] [DefP... t_{FP}]]]]]
-

3 Common Properties Between Nominal Ellipsis and Discontinuous DPs

3.1 Same Type of Modifiers

Nominal ellipsis can occur in a number of environments in Greek including after numerals (15.a.), quantifiers (15.b.), adjectives (15.c.), possessors (15.d.):

15. a. i Maria ehi tria vivlia ke i Eleni ehi epta ~~vivlia~~
the Maria has three books and the Eleni has seven ~~books~~
‘Maria has three books and Eleni has seven’
- b. i Maria ehi polla vivlia ke i Eleni ehi liga ~~vivlia~~
the Maria has many books and the Eleni has few ~~books~~
‘Maria has many books and Eleni has few’
- c. i Maria forese to ble fustani ke i Eleni forese to prasino ~~fustani~~
the Maria wore-3SG the blue dress and the Eleni wore-3SG the green ~~dress~~
‘Maria wore the blue dress and Eleni wore the green one’
- d. i Maria pire ta vivlia tu Gianni ke i Eleni ~~ta vivlia~~ tu Kosta
the Maria got-3SG the books the Gianni-GEN and the Eleni ~~the books~~ the Kosta-GEN
‘Maria took Gianni’s books and Eleni took Kostas’

The same modifiers can participate in split DP structures:

16. a. EFTA ehi i Maria vivlia
seven has the Maria books
‘It is seven books that Maria has.’
- b. POLLA ehi i Maria vivlia
many has the Maria books
‘It is many books that Maria has.’
- c. to PRASINO forese i Maria fustani
the green put on the Maria dress
‘It is the green dress that Maria put on’
- d. tu GIANNI pire i Maria ta vivlia
the Gianni-GEN got-3SG the Maria the books

It is Gianni's books that Maria took'

The parallelism goes further. Elements that do not license nominal ellipsis also do not seem to license Discontinuous DPs. Androutsopoulou, (1998:3) notes that “*a DP-internal string can be preposed in split-DP focus constructions if it can appear in isolation as a DP-fragment.*” In the terminology adopted here, a DP-fragment is the remnant of nominal ellipsis. Thus:

17. a. miso tin kathari adhikia GREEK
hate-1SG the pure injustice Androutsopoulou
'I hate pure injustice' 1998:3
- b. * tin KATHARI miso adhikia
the pure hate-1SG injustice
'It is PURE injustice that I hate'
- c. A. ti idhous adhikia misis?
what kind injustice hate-2SG
'what kind of injustice do you hate?'
- * B. tin kathari
the pure
'the pure one'

'kathari' in (17) is an attributive-only adjective. These adjectives have a special status in syntactic structure in that they cannot appear in predicative structures. We can assume that movement of these adjectives to the specifier of FocusP and thus licensing of both ellipsis and discontinuity is blocked. The reason is that they merge very low in the structure and freeze for movement purposes. Attributive-only adjectives do not seem to acquire “phrasal” status (following the intuition in Stowell (1981) that prenominal adjectives are adjoined to the noun at word-level [_N A-N]). For example, they cannot be modified by an adverb:

18. a. * i polli kathari adhikia
the very pure injustice
'The very pure injustice'

I will not pursue this correlation further. Suffice is to say that since these modifiers do not license nominal ellipsis they are not expected to license discontinuous DPs.

If Determiner Spreading is the expression of specifier-head agreement on the remnant modifier in focus position, and since this position is not available for the above modifiers then the analysis predicts that Determiner Spreading should not be available for the above modifiers. This is also borne out:

19. a. * i kathari i adikia
the poor the injustice

3.2 Morphological Evidence

As we have already seen, languages like German allow for different morphological paradigms for adjectives depending on the syntactic environment in which the latter appear. More specifically, we have seen that only the “strong” paradigm of modifiers participate in nominal ellipsis. Since nominal ellipsis is assumed to result from a configuration that is an intermediate step in Discontinuous DPs the theory predicts that only “strong” modifiers should participate in Discontinuous DPs as well. This is also borne out:

20. a. Geld hat er keines
money has he no
'he has no money.'
- b. * Geld hat er kein.
money has he no
'he has no money.'

In the last two sections we saw that a number of common properties between nominal ellipsis and discontinuous DPs can be captured under the analysis adopted here. In the following section we will explore an apparent problem for the analysis.

4 A Problematic Case

The present analysis does not predict the existence of a language where a modifier participates in discontinuous DPs but does not license nominal ellipsis. Such a case is discussed in Evans (1995) for Kayardild. In this language certain adjectives like

‘jungarra’/big seem to be able to appear either adjacent to the nominal head or in discontinuous structures as in (21.a.-21.b.):

21. a. dathin-a jungarra dangka-a
that-NOM big(NOM) man-NOM
‘that big man’
- b. ngada jungarra-wu karna-ju kaburrba-wu
1SG-NOM big-MPROP light-POT fire-MPROP
‘I want to light a big fire.’

However, nominal ellipsis seems not to be possible with these modifiers:

22. a. * dathin-a jungarra daliija
that-NOM big(NOM) come-PAST
‘that big one came.’

This presents a problem for the present approach. If nominal ellipsis is not possible then the conditions for focus movement of the modifier to the clausal left periphery are not met. The picture is not that simple however. Evans (1995:234) notes *that “in highly marked, contrastive contexts ... adjectives occur alone”*. Such an example is given in (23.a.):

23. a. jungarra warrngal-d, nguthunnguthu warrmar
big-NOM wind-NOM little-NOM breeze-NOM
‘The big one is called warrngald, the little one warrmar’

It seems then that in fact the conditions are also met in Kayardild. Contrastive focus licenses nominal ellipsis independently. Since discontinuous DPs also require contrastive focus in Kayardild no problem arises for the approach adopted here.

5 Conclusion

In this thesis I presented a novel proposal for the treatment of nominal ellipsis and discontinuity in the DP. I showed that the two phenomena could be successfully analyzed as sister operations that involve syntactic movement of the remnant type to discourse related projections.

I located these projections in the left periphery of the nominal as well as the clausal domain providing evidence from the distribution of DP-internal elements in Greek and cross-linguistically for the existence of such a nominal left periphery.

The proposal makes a number of predictions and I showed that these predictions are borne out providing supporting evidence from Greek. More specifically, I showed that nominal ellipsis and discontinuous DPs share the same type of modifiers and the form of these participating modifiers is identical in both phenomena. These similarities have not been addressed before in the related literature in detail. Assuming that nominal ellipsis and discontinuous DPs proceed through NP-topicalization followed by movement of the remnant modifier to the specifier of a focus projection I showed that the similarities between the two processes fall out naturally.

Finally I addressed a problem for my analysis. I showed that data from Kayardild indicates that there may be cases in which discontinuous DPs are allowed with modifiers that do not license nominal ellipsis, something that is not predicted in my analysis.

References

- Androutopoulou, Antonia. 1998. "Split DPs, Focus, and Scrambling in Modern Greek". *WCCFL 16*, 1-16.
- Bernstein, Judy. 1997. "Demonstratives and reinforcers in Romance and Germanic languages". *Lingua 102*, 87-113.
- Cinque, Guglielmo. 1994. "On the evidence for partial N-movement in the Romance DP". In G. Cinque et al. (eds), *Studies in Honor of Richard S. Kayne, Paths towards Universal Grammar*. Washington D.C. : Georgetown University Press, 85-110.
- Enç, M. 1991. The semantics of specificity. *Linguistics Inquiry 22*, 1-25.
- Evans Nicholas, D. 1995. *A Grammar of Kayardild*. Mouton de Gruyter: Berlin.
- Ihsane, Tabea & Genoveva Puskas. 2001. "Specific is not Definite". *Generative Grammar in Geneva, 2*: 39-54.

- Johnson, Kyle. 2001. "What VP ellipsis can do, what it can't, but not why". In Mark Baltin and Chris Collins (eds.) *The handbook of contemporary syntactic theory*, Blackwell Publishers, pp. 439-479.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge, Mass: MIT Press.
- Lobeck, Anne. 1995. *Ellipsis: Functional Heads, Licensing and Identification*. New York, Oxford University Press.
- López, Luis. 2000. "Ellipsis and Discourse-Linking". *Lingua 110*, 183-213.
- Pesetsky, David. 1987. "Wh-in-situ: Movement and Unselective Binding". In E. Reuland and G. B. ter Meulen (eds.) *The Representation of (In)definiteness*. Cambridge, Mass.:MIT Press, 98-129.
- Rizzi, Luigi. 1997. "The fine structure of the left periphery". In Haegeman, Liliane. (ed.) *Elements of Grammar, Handbook of Generative Syntax*. Kluwer: Dordrecht, 281-337.
- Sekerina, Irina. 1999. "The Scrambling Complexity Hypothesis and Processing of Split Scrambling Constructions in Russian". *Journal of Slavic Linguistics 7(2)*, 265-304.
- Siewierska, Anna. 1984. "Phrasal Discontinuity in Polish". *Australian Journal of Linguistics 4*, 57-71.
- Sportiche, Dominique. 1992. "Clitic Constructions". In L. Zaring & J. Rooryck (eds.) *Phrase Structure and the Lexicon*. Bloomington: IULC.
- Sleeman, P. 1996. *Licensing Empty Nouns in French*. Doctoral dissertation. University of Amsterdam.
- Stowell, A. Timothy. 1981. *Origins of Phrase Structure*. Doctoral dissertation. MIT.
- Wilder, C. & Ćavar, D. 1994. "Long head movement? Verb movement and cliticization in Croatian". *Lingua 93*, 1-58.