Alternatives to cartography: an introduction

Jeroen van Craenenbroeck

1.   A brief history of cartography

In the 1980s generative grammar witnessed the birth and rise of the functional projection. Both in the nominal (Brame 1982; Abney 1983; Hellan 1986) and in the clausal domain (Stowell 1981; Safir 1982; Chomsky 1986), it was recognized that functional material is able to project syntactic structure in conformity with the X-bar-format. This insight, in combination with the principle in (1) (cf. Cinque and Rizzi 2009:2), soon led to a considerable increase in the inventory of known projections (cf. most famously Pollock 1989 on the split IP).

(1)   *One Feature One Head* (OFOH)
         Each morphosyntactic feature corresponds to an independent syntactic head with a specific slot in the functional hierarchy.

A second influential factor was the assumption – essentially going back to Vergnaud (1982) – that all languages have the same set of morphosyntactic features, with cross-linguistic variation being mainly due to the overt or covert nature of the morphology spelling out those features. This led to a further proliferation of functional projections, so much so that by the mid to late 1990s each portion of clausal and phrasal structure was assumed to exhibit a richly articulated functional domain. For example, the domain above NP is argued to contain not only a rigidly ordered set of adjectival projections (Cinque 1994, 2007), but also a whole series of projections related to definiteness, number, specificity, possessive structures, and so on (see Matthewson 1998, Coene and D'hulst 2003a, 2003b and references mentioned there). Similarly, while projections such as CP, IP, VP or PP were traditionally considered to be unitary, they have now been split up into a whole string of projections (for CP see Rizzi 1997, 2001, 2004a, for IP see Cinque 1999, for VP see Ramchand 2008, and for PP see Koopman 2000, Holmberg 2002, Svenonius 2004, and the papers in Cinque and Rizzi to appear).

The basic idea behind this line of reasoning is that sentence structure can be represented as a template of fixed positions, each of which can be filled by a limited set of syntactico-semantic elements. This template is taken to be a universal totally ordered set of functional projections, the specifiers of which

serve as merger sites or as landing sites for XP-movement. Cross-linguistic word order variation is then reduced to (a) the absence or presence of such Merge and Move operations, and (b) the overt or covert nature of the heads and specifiers making up the functional sequence. Given that the general goal of this enterprise is to draw a detailed map of a particular portion of the clause, it often goes by the name of *cartography* (cf. in particular Rizzi 2004c, Cinque 2002, Belletti 2004, Cinque and Rizzi to appear). In recent years, however, a number of problems has been raised for this approach. I introduce some of them in the next section.

2.   Challenges for cartography

A first challenge targets the idea that the universal functional sequence can be described as a total linear ordering. First of all, this assumption seems to lead to word order paradoxes. For example, Bobaljik (1999) points out that while adverbs, verbal heads and floating quantifers are each strictly linearly ordered, it is not possible to combine all three groups into a single 'macro-ordering'. Rather, the three groups of elements can be freely interspersed with one another, so long as their internal 'micro-ordering' is respected. Similarly, it is possible to detect transitivity failures in the functional sequence. Transivity is a cornerstone in cartographic reasoning, as it allows one to build a total linear sequence even if certain combinations of elements are missing for independent reasons. Thus, if A precedes B and B precedes C, then A is assumed to precede C even if the two do not actually co-occur in the language in question – or in natural language in general for that matter. As shown in (2) (Nilsen 2003:10–11), however, transitivity is not always respected (see Van Craenenbroeck 2006 for comparable examples involving the CP-domain).

(2)   a.   *muligens* **'possibly'** < *ikke* **'not'**
       Ståle har <*ikke> muligens <ikke> spist hvetekakene sine.
       S.   has   not   possibly   <not>   eaten the.wheaties his
       'Stanley possibly hasn't eaten his wheaties.'

       b.   *ikke* **'not'** < *alltid* **'always'**
       Ståle har <*alltid> ikke <alltid>   spist hvetekakene sine.
       S.   has   always not <always> eaten the.wheaties his
       'Stanley hadn't always eaten his wheaties.'

c.　*alltid* **'always'** < *muligens* **'possibly'**

Dette	er	et	morsomt	gratis	spill	hvor	spillerne	alltid
this	is	a	fun	free	game	where	the.players	always

mulligens	er	et	klikk	fra	å	vine	$1000!
possibly	are	one	click	from	to	winn	$1000

'This is a fun, free game where you're always possibly a click away from winning $1000!'

What these types of examples suggest, is that it might not always be possible to provide a total linear ordering of functional projections. As such, these data threaten one of the basic underlying assumptions of cartography.

A second problem related to the idea of a total linear ordering is the fact that it undergenerates. For example, as discussed by Neeleman and Van de Koot (2008), topics and foci in Dutch – both moved and non-moved ones – can occur in a wide variety of structural positions. There are two ways to incorporate such data into the cartographic framework. One would be to allow TopP and FocP to be freely merged anywhere along the functional spine, while the second approach would be to adopt a multitude of such projections, at regular intervals in the functional sequence. While the first approach is clearly in contradiction with one of cartography's basic tenets, Neeleman and Van de Koot show in detail that the second one cannot account for the locality and intervention data they have uncovered (I refer to the original paper for details).

A second challenge for cartography concerns its reliance on the LCA. While cartography and antisymmetry are logically independent, the latter has certain features that make it very suitable as a phrase-structural framework for the former. First of all, it offers a straightforward mechanism for converting precedence into hierarchical relations. Secondly, it does not allow for adjunction and limits the number of specifiers per projection to one. This meshes very well with the OFOH-principle formulated in (1) and the concomitant 'criterial' approach to movement à la Rizzi (2004b). As shown by Abels and Neeleman (2009), however, a system which allows for more base generated orders and which does away with the LCA (and its host of word order salvaging movement operations) is no less restrictive than a strictly cartographic approach, and equally successful in deriving typological word order generalizations in the nominal domain.

A third and final issue I want to raise here concerns movement. The picture painted by cartography in this respect is a very clear and simple one: each functional head is endowed with a specific morphosyntactic feature, and it attracts phrases with a matching feature to its specifier. Note that under such an approach it would be unexpected if the movement of a certain phrase X would have interpretive effects on another phrase Y not directly involved in the movement op-

eration. As pointed out by Neeleman (1994), Lekakou (2000), Gill and Tsoulas (2004), Neeleman and Van de Koot (2008), however, such effects do occur.

Summing up, while it is clear that the cartographic approach constitutes an important and very valuable development in generative grammar, in recent years a number of concerns have been raised regarding certain aspects of this program. In light of this it should not come as a surprise that a number of alternative proposals has been made. I introduce some of them in the next section.

3.   Alternatives to cartography (ATC)

Roughly speaking, two main lines can be discerned in the ATC-literature. The first – implicitly or explicitly – aims at reducing the number of functional heads assumed to make up the clausal or nominal spine. The second seeks alternatives for the idea that word order is the result of a universal base order with concomitant movement operations. I discuss each line in turn.

Recent cartographic estimates of the number of functional projections present in natural language range up to four hundred (Cinque and Rizzi 2009:7). Add to this the assumption that all of these projections are present all of the time in all languages and it is clear why linguists have sought ways of reducing the number of FPs. One straightforward means of doing so is by giving up or weakening OFOH. In an approach that could perhaps be described as 'cartography light', some papers (e.g. Rizzi 1996; Thraínsson 1996; Giorgi and Pianesi 1997; Bobaljik and Thraínsson 1998) argue that languages differ as to which morphosyntactic features project their own functional projection and which ones are grouped together on a single functional head and do not project on their own. This approach keeps to the idea of a universal functional sequence, but allows parts of if to be 'collapsed' in certain languages or even certain constructions.

Another way of reducing the number of functional heads is by rethinking the way movement works. As pointed out in the previous section, an important function of these functional heads is to drive movement operations: on the one hand they contain the relevant morphosyntactic feature that triggers the movement, while on the other they create the specifier that serves as landing site for the movement operation. There are – at least – two ways of bypassing the role played by functional heads in such a movement scenario. One is to assume that movement is triggered directly by interface conditions. In particular, syntactic movement takes place in order to facilitate the mapping onto or to serve as the input for a particular interface. This can be the interface with the phonological-prosodic component (cf. Szendroï 2001; Zubizarreta 1998; Vicente 2005), the information structural or pragmatic component (cf. Neeleman and Van de Koot

2006; Lekakou 2000) or the semantic component (cf. Zwart 2004, Nilsen 2003). Another possible bypass operation starts from the idea that movement is triggered by the foot rather than the head of the movement chain (cf. Platzack 1996; Van Riemsdijk 1997; Nilsen 1997; Van Craenenbroeck 2006; Nash and Rouveret 1997; Koeneman 2000; Suranyi 2004; Ackema e.a. 1993). This once again eliminates the need for a wide array of functional heads – and matching specifiers – as triggers for the movement.

The second main line in the ATC-literature seeks alternatives for the idea that all word order differences between languages arise from a universal base order combined with various movement operations (with the concomitant postulation of functional projections to host the moved phrases). Obviously, there are various ways of going about this. One is to assume that the flexibility in base-generated word orders is larger than is assumed under the LCA (cf. Neeleman 1994; Neeleman and Weerman 1993; Abels and Neeleman 2009; Neeleman and Reinhart 1998). Others argue that word order is not dependent on or determined by (the hierarchical relations in) a single syntactic representation, but arises as a result of linear precedence rules active in particular word order domains (cf. Kathol 2000; Chung and Kim 2003; Jaeger 2003) or as a result of the interaction between different levels of syntactic representation (Williams 2003; Van Riemsdijk 2003). Alternatively, it has been claimed that word order is the result of the interaction between a limited number of violable output oriented constraints (cf. Costa 1998; Szendroï 2001; Gutierrez-Bravo 2002; Broekhuis 2000, 2007).

It is clear that the ATC-accounts mentioned here by no means form a homogeneous group and that they display substantial differences in terms of empirical coverage and theoretical assumptions, but there is one thing they all have in common. In particular, they all give up the idea that there is a fixed, invariant structural position for each functional element. As such, they all diverge from the cartographic doctrine. It is against this background that the present volume should be situated.

4.   This volume

It is not my intention here to give a summary of the papers contained in this volume – that is what the abstracts are for. Rather, I want to situate the present book against the discussion of the previous two sections. In order to do so, I first highlight some of the challenges the papers collected here raise for cartography, and then point out some of the alternatives they propose. Finally, I give a brief outline of the entire book and indicate how it is structured.

4.1.   Challenges for cartography

Some of the problems raised for cartography in this book show clear parallelisms with the cases discussed above, others less so. An example of the former type is Giurgea's discussion of word order in the nominal domain. While the generalizations he points out do not constitute a word order paradox as such, they do not seem to be straightforwardly derivable under a cartographic system such as that of Cinque (2005). What Giurgea shows is that when postnominal adjecives and complements co-occur, they do so in that order (first adjectives, then complements), and while the adjectives display a left-branching order, the complements surface in a right-branching order. In a Cinquean-style analysis this would involve head movement of the noun around the arguments (to preserve their right-branching order) followed by remnant roll-up movement of the NP around the adjectives, but without taking along the arguments. As pointed out by Giurgea, arriving at the correct word order from an LCA-compliant base through movement would involve as an intermediate step a movement operation not allowed in Cinque's system.

The papers by Neeleman e.a. and Wagner show convincingly that topics and foci can surface in a wide variety of structural positions, limited only by their semantic combinatorial possibilities (Wagner) or their information-structural import (Neeleman e.a.). Both authors point out that a cartographic analysis of these facts would have to postulate either a flexible merger site for TopP and FocP or a multitude of such projections.

The cartographic approach to movement is challenged in the contributions by Abels and Costa. Abels argues that the movement of a phrase X not only affects X itself but also phrases dominating and dominated by X. Crucial evidence comes from the ban on improper movement – extended to include more movement types than just A- and A-bar – which Abels shows to be active not only in cases of 'regular' movement, but also with remnant movement and subextraction out of moved phrases. He also explicitly points out that a phrase-structural account of these locality effects in terms of the cartographic hierarchy fails. Costa on the other hand discusses the interaction between focus placement and binding in European Portuguese (EP). Foci systematically target the right periphery of the clause in EP. This can be straightforwardly captured in a cartographic account by adopting movement to a VP-peripheral focus projection (cf. Belletti 2001), possibly followed by remnant VP-movement to ensure the focus is clause-final. What Costa shows, however, is that focus placement can be bled by binding. Specifically, while a focused direct object in a ditransitive normally obligatorily follows the indirect object, it precedes it when it binds a pronoun inside that indirect object. It is clear that this type of complex interaction between two at

first sight unrelated phenomena is very hard to capture under a purely criterion-driven approach to focus placement.

The final set of problems I want to discuss here involves OFOH. Neeleman e.a. argue that while the feature [contrast] can clearly be shown to play a syntactic role in Dutch and Russian (it drives movement), adopting a separate ContrastP – as OFOH would force us to do – is not an option. Rather, this feature seems dependent or parasitic on the features [topic] and [focus]. Ritter and Wiltschko on the other hand point out that applying OFOH to the features [tense], [location] and [person] (and hence adopting a separate T(ense)P, LocationP and PersonP) would fail to capture (a) the complementary distribution of these features across English, Halkomelem and Blackfoot, (b) the identical formal properties of these features in their respective languages, and (c) their functional equivalence. In other words, an analysis that treats each morphosyntactic feature as a separate syntactic entity misses an important cross-linguistic generalization.

The list of challenges discussed here is not exhaustive, but it gives the reader an impression of the types of problems that are raised. In the next section I look at some of the alternatives that are being proposed in this volume.

4.2.   Alternatives to cartography

Just as in the previous section, my goal here is not to be exhaustive, but rather illustrative. That is, I want to highlight some of the main ATC-themes present in this volume. A first thing to note in this respect is that two of the papers adopt a 'cartography light' approach, albeit with a twist. In his discussion of the clausal left periphery, Gallego proceeds in two steps. He first considers the possibility of replacing Rizzi's (1997) rich left periphery by a single functional projection, essentially following work by Juan Uriagereka. In the second half of the paper, however, he goes one step further and tries to derive left peripheral cartographic effects from a bare-bones Chomskyan phasal architecture, whereby the morphological richness of the phase head determines the number of phrases it can attract to its edge (and hence the cartographic richness of that edge). Ritter and Wiltschko on the other hand suggest a different way of limiting the inventory of possible functional projections. They propose that while a projection such as IP is universal, its substantive content is subject to parametric variation, constrained only by its universally determined core function. Thus, while the core function of IP is to link the eventuality to the utterance, there are various morphosyntactic means through which this can be established: English uses [tense], Halkomelem [location] and Blackfoot [person]. The upshot of this is

that we do not need three separate functional projections, but can suffice with one 'meta-projection' that comes in three – or more – different flavors.

A second noteworthy tendency in this volume is the fact that a large number of authors – either explicitly or implicitly – rejects the LCA in favor of a more flexible and liberal theory of base generation (see for example the papers by Giurgea, Bouchard, Bader and Schmid, and Costa). Accompanying – and constraining – this regained freedom in basic word orders are head parameters and explicit linearization rules or procedures. As pointed out by Bouchard and Bader and Schmid, this type of approach has the advantage of doing away with the many unmotivated movement triggers often found in cartographic analyses.

The final approach I want to mention here is that of Wagner. He argues that certain cartographic word order restrictions follow from the semantic combinatorics of the elements involved. An interesting example of this concerns the order of contrastive topic and focus. Cross-linguistically it seems to be a fairly stable generalization that constrastive topics precede foci, or to put it in cartographic terms, that TopP dominates FocP. What Wagner shows is that a contrastive topic interpretation arises when a focus operator outscopes another focus operator. This straightforwardly explains why a contrastive topic can never be lower than a focus, without having to appeal to a universal hierarchy of functional projections. It is worth stressing that the type of approach put forward by Wagner is often assumed to be fully compatible with the basic tenets of cartography (cf. e.g. Cinque and Rizzi 2009:13–14), the idea being that the functional hierarchy is not a primitive of the grammar but can be derived from other principles, including semantics. As pointed out by Wagner, though, the compatibility is only partial. In particular, the claim that the order of functional elements can be derived from their compositional semantics does not entail that these elements yield a total linear ordering. A prime illustration of this is Nilsen's (2003) analysis of the transitivity failure in (2) in terms of the polarity properties of the adverbs involved.

4.3.   Outline

The papers in this volume are thematically organized. The order in which they appear reflects the functional sequence, starting in the left periphery going all the way down to the nominal domain, with a special status for the final two papers.

The first four papers (Neeleman e.a., Wagner, Costa, and Gallego) all deal with functional material traditionally associated with the left periphery (typically topic and focus). The IP-domain is covered by Ritter and Wiltschko, while Bader

and Schmid focus on the verbal domain. Bouchard and Giurgea both concentrate on adjective ordering inside the nominal domain.

The final two papers, Abels and Williams, approach the issue of (alternatives to) cartography from a more general perspective, focusing on its interaction with movement (Abels) or the transition between two cartographic domains (Williams). The interesting thing about these papers is that they both arrive at the conclusion – nicely reflected in the title of Williams' paper – that the functional sequence has an existence and importance that is independent of its direct role in structure building and that cannot be straightforwardly derived from other principles or components of the grammar. It seems fitting to end a volume that presents challenges for a certain approach with a challenge for itself.

References

Abels, Klaus and Ad Neeleman
    2009   Universal 20 without the LCA. In: José M. Brucart, Anna Gavarró, and Jaume Solà (eds.), *Merging features*, 60–80. Oxford: Oxford University Press.
Abney, Steven Paul
    1983   The English noun phrase in its sentential aspect. Ph. D. diss., MIT.
Belletti, Adriana
    2001   'Inversion' as focalization. In: Aafke Hulk and Jean-Yves Pollock (eds.), *Inversion in Romance and the theory of Universal Grammar*, 107–162. New York: Oxford University Press.
Belletti, Adriana
    2004   *Structures and beyond. The cartography of syntactic structures, volume 3*. New York: Oxford University Press.
Bobaljik, Jonathan David
    1999   Adverbs: the hierarchy paradox. *Glot International* 4:27–28.
Boblajik, Jonathan David and Höskuldur Thraínsson
    1998   Two heads aren't always better than one. *Syntax* 1:37–71.
Brame, Michael
    1982   The head-selector theory of lexical specifications and the nonexistence of coarse categories. *Linguistic Analysis* 10:321–325.
Broekhuis, Hans
    2000   Against feature strength: the case of Scandinavian object shift. *NLLT* 18:673–721.
Broekhuis, Hans
    2007   Subject shift and object shift. *Journal of Comparative Germanic Linguistics* 10(2):109–141.

Cinque, Guglielmo
  1994   On the evidence for partial N movement in the Romance DP. In: Guglielmo Cinque, Jan Koster, Jean-Yves Pollock, Luigi Rizzi, and Rafaella Zanuttini (eds.), *Paths towards Universal Grammar*, 85–110. Georgetown: Georgetown University Press.
Cinque, Guglielmo
  1999   *Adverbs and functional heads: a cross-linguistic perspective*. New York: Oxford University Press.
Cinque, Guglielmo
  2002   *Functional structure in DP and IP. The cartography of syntactic structures, volume 1*. New York: Oxford University Press.
Cinque, Guglielmo
  2005   Deriving Greenberg's Universal 20 and Its Exceptions. *Linguistic Inquiry* 36(3): 315–332.
Cinque, Guglielmo
  2007   *The syntax of adjectives. A comparative study.* Ms. University of Venice.
Cinque, Guglielmo and Luigi Rizzi
  2009   *The cartography of syntactic structures*. Ms. University of Venice and University of Siena.
Cinque, Guglielmo and Luigi Rizzi
  to appear   *Mapping spatial PPs. The cartography of syntactic structures, vol.6*. New York: Oxford University Press.
Chomsky, Noam
  1986   *Barriers*. Cambridge, MA: The MIT Press.
Chung, Chan and Jong-Bok Kim
  2003   Capturing word order asymmetries in English left peripheral constructions: a domain-based approach. In: Stefan Müller (ed.), *Proceedings of the 10th international conference on Head-Driven Phrase Structure Grammar*, 68–87. Stanford: CSLI Publications.
Coene, Martine and Yves D'hulst
  2003a   *From NP to DP. Volume 1: The syntax and semantics of noun phrases*. Amsterdam: John Benjamins.
Coene, Martine and Yves D'hulst
  2003b   *From NP to DP. Volume 2: The expression of possession in noun phrases*. Amsterdam: John Benjamins.
Costa, João
  1998   Word order variation: a constraint-based approach. Ph. D. diss., Leiden University.
Craenenbroeck, Jeroen van
  2006   Transitivity failures in the left periphery and foot-driven movement operations. In: Jeroen van de Weijer and Bettelou Los (eds.), *Linguistics in the Netherlands 2006*, 52–64. Amsterdam: Benjamins.

Gill, Kook-Hee and George Tsoulas
    2004   Peripheral effects without peripheral syntax: the left periphery in Ko-
                rean. In: David Adger, Cecile De Cat, and George Tsoulas (eds.),
                Peripheries. Syntactic edges and their effects, 121–142. Amsterdam
                and New York: Kluwer Academic Publishers.
Giorgi, Alessandra and Fabio Pianesi
    1997   *Tense and aspect: from semantics to morphosyntax*. New York: Oxford
                University Press.
Gutierrez-Bravo, Rodrigo
    2002   Structural markedness and syntactic structure: a study of word order
                and the left periphery in Mexican Spanish. Ph. D. diss., UCSC.
Hellan, Lars
    1986   The headedness of NPs in Norwegian. In: Pieter Muysken and Henk
                van Riemsdijk (eds.), *Features and projections*, 89–123. Dordrecht:
                Foris.
Holmberg, Anders
    2002   Prepositions and PPs in Zina Kotoko. In: Bodil Kappel Schmidt, David
                Odden, and Anders Holmberg (eds.), *Some Aspects of the Grammar
                of Zina Kotoko*, 162–174. München: Lincom Europa.
Jaeger, Florian
    2003   Topics First! In- and outside of Bulgarian *wh*-interrogatives. In: Ste-
                fan Müller (ed.), *Proceedings of the 10th international conference on
                Head-Driven Phrase Structure Grammar*, 181–202. Stanford: CSLI
                Publications.
Kathol, Andreas
    2000   *Linear syntax*. Oxford: Oxford University Press.
Kayne, Richard
    1994   *The anti-symmetry of syntax*. Cambridge, MA: The MIT Press.
Koeneman, Olaf
    2000   The flexible nature of verb movement. Ph. D. diss., Utrecht University.
Koopman, Hilda
    2000   Prepositions, postpositions, circumpositions, and particles. In: Hilda
                Koopman (ed.), *The syntax of specifiers and heads*, 204–260. Rout-
                ledge, London.
Lekakou, Marika
    2000   Focus in modern Greek. MA-thesis, UCL.
Matthewson, Lisa
    1998   *Determiner systems and quantificational strategies: evidence from
                Salish*. The Hague: HAG.
Neeleman, Ad
    1994   Complex predicates. Ph. D. diss., Utrecht University.

Neeleman, Ad and Hans Van de Koot
    2008   The nature of discourse templates. *Journal of Comparative Germanic Linguistics* 11:137–189.
Neeleman, Ad and Tanya Reinhart
    1998   Scrambling and the PF Interface. In: Miriam Butt and Wilhelm Geuder (eds.). *The Projection of Arguments*, 309–353. Stanford: CSLI Publishers.
Neeleman, Ad and Fred Weerman
    1993   *Flexible syntax. A theory of case and arguments*. Dodrecht: Kluwer.
Nilsen, Øystein
    1997   Adverbs and A-shift. *Working Papers in Scandinavian syntax* 59:1–31.
Nilsen, Øystein
    2003   Eliminating positions: syntax and semantics of sentence modification. Ph. D. diss., Utrecht University.
Platzack, Christer
    1996   Germanic Verb Second Languages – Attract vs. Repel: On optionality, A-bar movement and the symmetrical/asymmetrical Verb Second hypothesis. In: Edwald Lang and Gisela Zifonun (eds.), *Deutsch – typologisch*, 92–120. Berlin: Walter de Gruyter.
Poletto, Cecilia
    2002   The left-periphery of V2-Rhaetoromance dialects: a new view on V2 and V3. In: Sjef Barbiers, Leonie Cornips and Susanne van der Kleij (eds.). *Syntactic Microvariation*. Published at http://www. meertens. knaw. nl/books/synmic/.
Pollock, Jean-Yves
    1989   Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* 20:365–424.
Ramchand, Gillian
    2008   *First phase syntax.* Ms. University of Tromsø.
Riemsdijk, Henk van
    1997   Push chains and drag chains: complex predicate split in Dutch. In: Tonoike Shigeo (ed.), *Scrambling*, 7–33. Tokyo: Kurosio Publishers.
Riemsdijk, Henk van
    2003   Contour templates in syntax? A note on the spreading of (in)definiteness. In: Takeru Honma, Toshiyuki Tabata and Shin-ichi Tanaka (eds.), *A new century of phonology and phonological theory: a festschrift for Professor Shosuke Haraguchi on the occasion of his sixtieth birthday*, 559–570. Tokyo: Kaitakusha.
Rizzi, Luigi
    1996   Residual Verb Second and the Wh-criterion. In: Adriana Belletti and Luigi Rizzi (eds.), *Parameters and functional heads,* 63–90. New York: Oxford University Press.

Rizzi, Luigi
    1997   The fine structure of the left periphery. In: Liliane Haegeman (ed.), *Elements of grammar*, 281–337. Dordrecht: Kluwer.
Rizzi, Luigi
    2001   On the position Int(errogative) in the left periphery of the clause. In: Guglielmo Cinque and Giampaolo Salvi (eds.), *Current studies in Italian syntax. Essays offered to Lorenzo Renzi*, 287–296. Amsterdam and New York: Elsevier.
Rizzi, Luigi
    2004a   Locality and left periphery. In: Adriana Belletti (ed.), *Structures and beyond. The cartography of syntactic structures, vol. 3*, 223–251. New York: Oxford University Press.
Rizzi, Luigi
    2004b   *On the form of chains: criterial positions and ECP effects*. Ms. University of Siena.
Rizzi, Luigi (ed.)
    2004c   *The structure of CP and IP. The cartography of syntactic structures, volume 2*. New York: Oxford University Press.
Safir, Ken
    1982   Inflection-government and inversion. *TLR* 1:417–467.
Stowell, Tim
    1981   Origins of phrase structure. Ph. D. diss., MIT.
Svenonius, Peter
    2004   *Spatial P in English*. http://ling.auf.net/lingBuzz/000001.
Szendrői, Kriszta
    2001   Focus and the syntax-phonology interface. Ph. D. diss., UCL.
Surányi, Balázs
    2004   The left periphery and cyclic spell-out: the case of Hungarian. In: David Adger, Cecile De Cat, and George Tsoulas (eds.), *Peripheries. Syntactic edges and their effects*, 49–73. Amsterdam and New York: Kluwer Academic Publishers.
Thráinsson, Höskuldur
    1996   On the (non-)universality of functional categories. In: Werner Abraham, Samuel David Epstein, Höskuldur Thrainsson, and Jan-Wouter Zwart (eds.), *Minimal ideas: syntactic studies in the Minimalist framework*, 252–281. Amsterdam: John Benjamins.
Vergnaud, Jean-Roger
    1982   Dépendances et niveaux de représentations en syntaxe. Ph. D. diss., University of Paris VII.
Vicente, Luis
    2005   *Word order variation in Basque as non-feature-driven movement*. Ms. University of Leiden.

Williams, Edwin
    2003   *Representation theory*. Cambridge, MA: The MIT Press.
Zubizarreta, Maria-Luisa
    1998   *Prosody, focus and word order*. Cambridge, MA: The MIT Press.
Zwart, Jan-Wouter
    2004   Een dynamische structuur van de Nederlandse zin. *TABU* 33:55–71,
                   151–172.