

MARCEL DEN DIKKEN

*EITHER-FLOAT AND THE SYNTAX
OF CO-OR-DINATION*[★]

ABSTRACT. The syntax of *either ... or ...* treats the analyst to two main puzzles: the ‘*either* too high’ puzzle (*either* can be dissociated from the contrastive focus, surfacing in positions higher up the syntactic tree), and the ‘*either* too low’ puzzle (*either* is apparently too low in the tree, embedded inside the first disjunct). Covering data beyond the range of extant accounts, this paper presents an integrated solution to both puzzles. The paper’s central claim is that both *either* and *or* are phrasal categories. They originate in a position adjoined to their disjunct, to the contrastive focus or to a higher node on the ‘ θ -path’ projected from the contrastive focus. Though *either* itself is immobile, its [+NEG] counterpart, *neither*, can undergo phrasal movement from its base-generation site to a higher position in the tree, from which it triggers negative inversion; [+WH] *whether* must move to SpecCP; and *or* and [+NEG] *nor* must, if they are not base-generated there, front to the initial position in the second disjunct in order to be able to participate in a feature-checking relationship with the abstract head J(unction), the functional head that takes the second disjunct as its complement and the first disjunct as its specifier. The movement of *whether*, *neither* and (*n*)*or* will be diagnosed on the basis of the familiar restrictions on movement.

1. INTRODUCTION

The syntax of *either ... or ...* treats the analyst to two main puzzles, to which many of the finer-grained peculiarities of this disjunction construction can be reduced. The two puzzles are illustrated in (1)

[★] Part of the material for this paper was first presented in a seminar co-taught with Janet Fodor at the CUNY Graduate Center in the spring of 2003. An immediate predecessor of the present text was delivered at the 28th GLOW Colloquium in Geneva, Switzerland, on 1 April 2005. I thank the audiences present on both occasions for their generous feedback. I am very grateful to Anikó Lipták for carefully reading and meticulously commenting on earlier versions of the paper. Many thanks are also due to the anonymous reviewers for *NLLT*, as well as to editor Peter Culicover. Their invaluable input has led to substantial improvements of the analysis and to refinements of the empirical material. The responsibility for the final product is mine alone.

and (2). The problem in (1), instantiating the ‘*either* too high’ puzzle, is that *either* seems to be able to ‘run away’ from the focus of the first disjunct (here, the object *rice*) and surface in positions higher up the syntactic tree. That is, *either* in (1b,c) is ‘higher than it is supposed to be’. The problem illustrated in (2) (the ‘*either* too low’ puzzle) is the converse of that in (1): *either* in (2b) is apparently ‘too low’ in the tree, ‘buried’ inside the first disjunct, which, by the Law of Coordination of Likes, would have to be a full-fledged IP to match the second disjunct. Appropriating Kayne’s (1975) terminology for Q-float (‘L-*tous*’ and ‘R-*tous*’), I will refer collectively to both phenomena as ‘*either*-float’, and, more specifically, to instances of *either* occurring further to the left than might be expected as ‘L-*either*’ and to cases of *either* occurring further to the right as ‘R-*either*’ (not meaning to prejudice the analysis thereby; the terminology adopted is meant to be pretheoretical).

- (1)a. John ate either rice or beans.
 b. John either ate rice or beans. → L-*either*
 c. Either John ate rice or beans. → L-*either*
- (2)a. Either John ate rice or he ate beans.
 b. John either ate rice or he ate beans. → R-*either*

These two puzzles are familiar from the literature, though substantially more ink has been spilled over the first than over the second (cf. esp. Larson 1985; Schwarz 1999 for detailed discussions of L-*either*). For (1), both movement and ellipsis accounts have been proposed. For (2) it is plain that an ellipsis analysis is unformulable (see Hendriks 2003:33–34 for an explicit demonstration), while a movement-based approach that assumes (2a) as the underlying representation (on the basis of the standard idea that the first disjunct cannot be smaller than the second; but see Larson 1985 for an ‘unbalanced’ coordination approach to (2b)) has to grapple with the unwieldy downward movement of *either* that then seems required to derive (2b).

Without denying that movement and ellipsis play a key role in the syntax of *either ... or ...*, the present paper’s main innovation is its argument to the effect that both *either* and *or* are phrasal categories. This entails that neither *either* nor *or* is itself a disjunction particle. The phrasality of *either* will be shown to lead, in conjunction with the

hypothesis (pioneered in Hendriks 2001, 2003) that the surface distribution of *either* is strongly tied to contrastive focus, to an integrated solution to the puzzles in (1) and (2). Section 3 of the paper is dedicated to showing this in detail. *Either* will be shown to be immobile (cf. also Han and Romero 2004, *contra* Larson 1985); but *either*'s negative and [+WH] incarnations, *neither* and *whether*, do have the ability or the obligation to move, as section 4 will show, on the basis of the familiar restrictions on movement. *Either*'s counterpart (*n*)*or* in the second disjunct is systematically forced to be at the left edge of the second disjunct, where it ends up either via base-generation or (if it does not originate on the left edge) via movement: (*n*)*or* is not a disjunction particle but a phrasal element that needs to establish a local, feature-checking Agree relationship with the abstract functional head J in the structure of coordination constructions in (3) (a structure familiar from the recent literature; cf. Munn 1993; Kayne 1994; Johannessen 1998, and references there in).

- (3) < *either* > (...) [_{JP} [_{XP} (...) < *either* > ...] [_J [_{YP} *or* ...]]]

Section 5 puts the structure in (3) and the approach to *either ... or ...* that it reflects in a broader perspective, extending it to *both ... and ...* and considering the motivation for the left-peripheral placement of *or* and *and* in the second dis/conjunct. Finally, section 6 offers a brief summary of the major claims and accomplishments.

2. L-EITHER : A LOOK AT THE LITERATURE

The principal focus of this paper is the phrasality of *either* and *or*, not the '*either* too high' puzzle in (1), which is only one piece of the big puzzle presented by the syntax of *either ... or ...* disjunction constructions. But to set the stage, it will be good to start out the discussion with a quick look at the previous literature on what I am calling L-*either* – if only because, with the notable exception of Hendriks (2001, 2003), the literature on the syntax of *either ... or ...* constructions has focused primarily on the puzzle in (1): the fact that *either* can surface in a position that is 'too high', higher than the position which it would seem to originate in (i.e., the position right next to the contrastive focus, as in (1 a)). For the paradigm in (1), two

main types of approach are represented in the literature: a movement analysis (defended in Larson 1985; Munn 1993; cf. (4a)) and an ellipsis approach (championed by Schwarz 1999; cf. (4b)).

- (4)a. <Either_i> John <either_i> ate <either_i> [rice or beans].
 b. John ate either [[_{NP} rice] or [_{NP} beans]].
 John either [[_{VP} ate rice] or [_{VP} ~~ate~~ beans]].
 Either [[_{IP} John ate rice] or [_{IP} ~~John ate~~ beans]].

In defence of his movement approach, Larson capitalises on the island effects illustrated in (5)–(7), with (5) instantiating an ‘inner island’ effect,¹ (6) a CNPC effect, and (7) a *wh*-island violation.²

- (5)a. ^(?)John didn’t eat either rice or beans.
 b. ^{??}John either didn’t eat rice or beans.
 c. ^{??}Either John didn’t eat rice or beans.

¹ Note, though, that ‘inner island’ (or negative island) effects typically do not give rise to marginality but instead to ungrammaticality: thus, *How strongly don’t you think inflation will rebound?* blocks a ‘downstairs’ reading for *how strongly* categorically.

² I should note that (7b) is not rejected outright by all native speakers I have asked. But to most, (7b) does indeed sound awkward. It seems to improve substantially, however, with *to* preceding *retire*: cf. (i), which many speakers accept readily.

- (i) John was either wondering whether to resign or to retire.

This observation (which to my knowledge has not been reported in the literature before) is something that no extant account of the *either...or...* construction seems to have a handle on. Note that there is no *general* restriction that prevents VPs in the complement of *to* from being foci (cf. *What John wanted to do was (to) retire*). But interestingly, when the focused infinitival VP is inside a *whether*-CP, some speakers do suddenly report a marked preference for *to*: both variants of (ii) are slightly awkward due to the weak *wh*-island effect induced by extraction of *what* across *whether*, but the variant without *to* is deemed worse by some of my informants. An ellipsis approach to displacement of *either* (cf. Schwarz’s 1999 analysis, discussed below) could accommodate these facts with the aid of (iii) (Wilder 1997) once it is ensured that, in *whether*-infinitives, the focus is the *to*-IP. It will remain to be determined, however, why it ostensibly cannot be VP.

- (ii) [?]What John was wondering whether to do was ^{??}(to) retire.
 (iii) Ellipsis goes all the way down to but never into the focus.

EITHER-FLOAT AND THE SYNTAX OF CO-ORDINATION

- (6)a. John revised [_{NP} his decision [_{CP} C [_{IP} PRO to cook either rice or beans]]].
- b. *John revised either [_{NP} his decision [_{CP} C [_{IP} PRO to cook rice or beans]]].
- (7)a. John was wondering [_{CP} whether [_{IP} PRO to either resign or retire]].
- b. *John was either wondering [_{CP} whether [_{IP} PRO to resign or retire]].

The locality conditions on L-*either* are *stricter* than expected on an island-based analysis, however – *any* CP blocks it, even CPs which are not islands for garden-variety A'-extraction.³

- (8)a. < Either > John < either > wanted to eat < either > rice or beans.
- b. < ??Either > John < ??either > wanted < %either > for you to eat < either > rice or beans.
- c. < ??Either > John < ??either > said < %either > that he would eat < either > rice or beans.

This has led Munn (1993) to propose an analysis of L-*either* in terms of S-structure Quantifier Raising (QR) – an analysis which both capitalises on the fact that *either* doubles as a quantifier (as in *Either analysis will capture the facts*) and immediately assimilates the facts in (8) to the scope facts in (9).

- (9)a. Some girl wanted to watch every 007 movie. $\checkmark \forall > \exists$
- b. Some girl wanted for you to watch every 007 movie. $*\forall > \exists$
- c. Some girl said that she would watch every 007 movie. $*\forall > \exists$

Schwarz (1999) counters Munn's (1993) 'overt QR' approach to L-*either*, however, by pointing out that L-*either* is blocked in contexts in which inverse scope is not. The key data, involving verb-particle constructions, are reproduced here in (10) and (11),

³ While Larson (1985) and Schwarz (1999:342) report that sentences like (8c) are bad with *either* placed immediately to the left of the *that*-clause, there are speakers who accept this; a similar observation holds for (8b). See section 3.5 below, for discussion.

with the left-hand examples in (10) being unacceptable for Schwarz's informants (though Han and Romero 2004:fn. 12 note, attributing the observation to a reviewer, that there is speaker variation on this point, 'with emphasis, in certain discourse contexts').

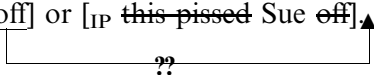
- (10)a. ??Either this pissed Bill or Sue off. vs.
 Either this pissed Bill off or Sue.
- b. ??Either they locked you or me up. vs.
 Either they locked you up or me.
- c. ??Either he gulped one or two down. vs.
 Either he gulped one down or two.
- (11)a. Something pissed every guest off.
- b. Some sheriff locked every gangster up.
- c. Some boy gulped every coke down.

The crucial thing to note here is that the examples in (11 a–c) all allow an inverse scope reading ($\forall > \exists$) (Schwarz 1999:349; their counterparts with the particle adjacent to the verb support this reading rather more readily, though). This then compromises the QR approach to *L-either* – after all, in exactly the same context in which *L-either* is impossible in (10), QR is nonetheless possible.⁴

Schwarz (1999) argues that an ellipsis account does make sense of the deviance of the left-hand examples in (10). He captures this with a combination of an appeal to the general requirement that gapping not leave 'dangling remnants' (cf. (12)), which ensures that the representation in (13a) is ungrammatical, and an appeal to Right Node Raising, which, when taking (13b) as its input, delivers a

⁴ One might seek to salvage the movement analysis, however, by assimilating the facts in (10) to cases of *subextraction* from the sandwiched noun phrase; cf. *Who did he look <up>* the number of <??up>?

suboptimal output: RNR of a bare particle up to a position above IP is highly marginal (cf. Schwarz 1999:359).⁵

- (12)a. Some talked *(with you) about politics and others ~~talked~~ with me about music.
- b. John dropped the coffee and Mary (*clumsily) ~~dropped~~ the tea.
- (13)a. *Either [IP this pissed Bill] or [IP ~~this pissed~~ Sue off].
- b. Either [IP this pissed Bill off] or [IP ~~this pissed~~ Sue off]▲
- 

Schwarz (1999:359–360) supports his RNR-based approach to the left-hand examples in (10) by pointing out that their non-elliptical counterparts are likewise degraded with *either* in sentence-initial position, as seen in (14). He also suggests that the grammaticality of the variants of the left-hand sentences in (10) featuring *either* in preverbal position correlates with the grammaticality of their non-elliptical counterparts with coordination at the VP-level (cf. (15)), where the particle is RNR'ed merely up to the VP.⁶

⁵ Han and Romero (2004:fn. 12) suggest, in connection with the RNR facts, that speakers might differ with regard to their tolerance of RNR of bare particles above IP, noting that some speakers accept the left-hand examples in (10) 'with emphasis, in certain discourse contexts'. They do not spell out these contexts; but it seems clear that some of the factors that come to the rescue have little to do with the RNR'ed particle itself: thus, (ib) seems appreciably better than (ia) (which repeats the left-hand sentence in (10b)) but both the weight and height of the particle *up* are plainly the same in both sentences.

- (i)a. ^{??}Either they locked you or (they locked) me up.
- b. ^{??}Either they locked a Romanian or (they locked) an Albanian up.

⁶ Surprisingly, Schwarz (1999:360) never actually gives the non-elliptical versions of (15a–c); instead, he provides examples of the same type that involve RNR of a PP or an adverbial (e.g., *This either pleased Bill or pleased Sue a lot*). He notes that 'the judgments are subtle' (see also fn. 7 below); and indeed, it seems that the status of the variants of (15a–c) with the bracketed material included in them is less than overwhelming. But, if only for the sake of argument, I will follow Schwarz (and, in his wake, Han and Romero 2004 as well) and take them to be good.

- (14)a. ??Either this pissed Bill or (it pissed) Sue off.
 b. ??Either they locked you or (they locked) me up.
 c. ??Either he gulped one or (he gulped) two down.
- (15)a. This either pissed Bill or (^(?)pissed) Sue off.
 b. They either locked you or (^(?)locked) me up.
 c. He either gulped one or (^(?)gulped) two down.

But what he does not point out is that variants of the examples in (14) can be constructed which, while still involving RNR to a position above IP, do come out grammatical. Two such variants are given in (16), differing from the examples in (14) in either lacking *either* altogether or featuring it in a position left-adjacent to the verb, just as in (15).⁷

- (16)a. ^(?)This (either) pissed Bill or it pissed Sue off.
 b. ^(?)They (either) locked you or they locked me up.
 c. ^(?)He (either) gulped one or he gulped two down.

The examples in (16), instantiating the ‘*either* too low’ puzzle, have roughly the same status as the non-elliptical versions of those in (15) (which, as I pointed out in fn. 6, is somewhat tenuous), but since in (16) we are evidently dealing with coordination at the level of IP (unless we are willing to countenance an ‘unbalanced coordination’ approach to (16); see fn. 9 for a critical appraisal), the particles must have been RNR’ed just as high in (16) as in Schwarz’ s own examples in (14). The fact that (14) and (16) differ in acceptability then suggests

⁷ The sentences in (16) are certainly not the preferred vehicles for the communication of the messages they are meant to convey, but the same is true for the non-elliptical variants of (15). Throughout, one would normally prefer not to RNR the particle and to place it to the immediate right of the verb: < *Either* > *this* < *either* > *pissed off* < *either* > *Bill* or (*it pissed off*) *Sue*. I will return to the general awkwardness of the V-NP-Prt order with focal pitch-accent on the NP in section 3.

that an account in terms of the ‘extent of RNR’ is unlikely to be on the right track.⁸

Whatever the relative merits of the movement and ellipsis approaches to *L-either*, however, a major problem for both types of account is that they do not seem to have an obvious handle on Schwarz’s (1999:368) observation, exploited by Han and Romero (2004), that *whether ... or ...* behaves differently from *either ... or ...* when it comes to the facts in (10): (10a–c) are all fine with *whether* (cf. (17) below).

- (17)a. Whether this pissed Bill or Sue off is unclear.
- b. Whether they locked you or me up, I can’t recall.
- c. Whether he gulped one or two down is immaterial.

Moreover, the movement and ellipsis analyses are specifically keyed towards an account of the ‘*either* too high’ puzzle (1), and have nothing to offer by way of a solution to the ‘*either* too low’ puzzle instantiated by the example in (2b). This is a major conundrum for an ellipsis approach: there simply is nothing to elide in (2b). Schwarz 1999:fn. 2 acknowledges the puzzle but does not provide an analysis. A movement approach would, in order to accommodate (2b), either need to resort to downward movement or assume an account whereby *either* itself does not move but the subject of the first disjunct raises around *either* and out of the coordination via (non-ATB) movement. But downgrading movement is generally problematic, and though the non-ATB subject movement analysis might perhaps be able to take care of (2b) as it stands, Hendriks (2003: 27) points out correctly that the plot thickens for a minimal variant of (2b) featuring a modal, such as (2b’):

- (2b’) John will either eat rice or he will eat beans.

Here *John will* is not a constituent, hence cannot move as a unit, and movement of *John* and *will* individually (to obscure IP-external landing-sites, moreover) would leave us with two violations of the

⁸ I do not profess to know the answer to the question of what makes (14) so much poorer than (16) for many speakers. That (16) has gone unnoticed in the literature is due to previous work’s virtually exclusive emphasis on the ‘*either* too high’ puzzle.

Coordinate Structure Constraint. Though these would not necessarily be fatal (much depends, after all, on a proper understanding of the roots of the CSC), it would nonetheless seem to diminish the chances of an adequate solution to the ‘*either* too low’ puzzle couched in a movement-based analysis.⁹ While I am certainly not denying that movement and ellipsis both play a role in the syntax of *either . . . or . . .*,

⁹ Larson (1985) himself presents an ‘unbalanced’ coordination approach to (2b), having the VP of *laughed* coordinated with the IP *he cried*. Though this violates the Law of Coordination of Likes in the overt syntax, Larson nonetheless seeks to preserve this law by declaring it active at LF only, and by arguing that in examples that apparently violate it, such as (2b), the two syntactically ‘unbalanced’ disjuncts are always of the same *semantic* type – thanks primarily to the fact that the overt subject of the second disjunct is coreferential with the subject of the VP that constitutes the first disjunct. But while it is true that (2b) and perhaps the bulk of R-*either* cases, the subjects of the two disjuncts are coreferential (something which Hendriks 2003:fn. 13 links to the topicality of the second subject), there is no *general* coreference constraint on examples of this structural type. Sentences like those in (i) (of which (ib–f) were taken from Hendriks 2001, 2003; she culled them from the literature, the press and the web) refute Larson’s claim that in ‘unbalanced’ coordinations the two subjects must be coreferential. Thus, any attempt at representing these kinds of sentences as ‘unbalanced’ coordinations in overt syntax in the hopes of getting them to satisfy the Law of Coordination of Likes at LF is doomed to failure. This is not to say, however, that the Law of Coordination of Likes is unsalvageable in the face of examples of this type. I will show below that they can be represented as cases of IP-level coordination, the fact that *either* shows up ‘buried’ inside the first disjunct not standing out as a problem for the present analysis of R-*either*.

- (i)a. You either leave now or I’ll call the police.
- b. Yet our invitation was either a complete hoax . . . or else we had good reason to think that important issues might hang upon our journey. (A. Conan Doyle, *Sherlock Holmes*)
- c. By the prefix, we are either put in possession of the subject of the poem, or some hint . . . is thereby afforded, not included in the body of the piece, which, without the hint, is incomprehensible. (E.A. Poe, *Selected Works*)
- d. ‘Within a matter of a day or two,’ Dr. Yeomans said, ‘the situation will become far more clear, and it will either become a nonevent or some appropriate announcement will be made. . .’ (*New York Times*, 20 March 1998)
- e. ‘I believe,’ he said, ‘positions will either harden or there will be a settlement in the next few months.’ (*New York Times*, 15 February 1998)
- f. The attachment will either open automatically or a dialog box will appear requesting that you either open the file from its current location or save the file. (Yahoo! Mail – Online Support; <http://help.yahoo.com/help/us/mail/read/read-17.html>)

it seems plain that an *integrated* approach to both puzzles in (1) and (2) cannot be formulated *exclusively* in terms of either movement or ellipsis.

3. CONTRASTIVE FOCUS AND THE SURFACE DISTRIBUTION OF *EITHER*

Something that makes many of the examples discussed towards the end of the previous section (cf. (10), (14)–(16)) rather tenuous is the fact that it is generally rather difficult to read the noun phrase sandwiched between a verb and a particle as a focus (as Kayne 1998 points out; cf. also Chomsky 1971 on ditransitive constructions). Thus, (18b), like the right-hand examples in (10), is slightly degraded for many speakers; the effect is particularly noticeable in contexts in which the focus on the sandwiched noun phrase is to ‘project’ up to the VP: the answer in (19b) is significantly worse than that in (19a).¹⁰

- | | | |
|--------|------------------------|---|
| (18)a. | What is he looking up? | He’s looking up a LINGUISTICS TERM. |
| | b. | What is he looking up? [?] He’s looking a LINGUISTICS TERM up. |
| (19)a. | What is he doing? | He’s looking up a LINGUISTICS TERM. |
| | b. | What is he doing? ^{??} He’s looking a LINGUISTICS TERM up. |

This prompts a discussion of the role of focus in the distribution of *either*.

3.1. *Focus Matters, but either is not a Focus Particle Like Only*

In her brief but insightful discussion of *vagy ... vagy ...* disjunctions (the Hungarian counterpart to English *either ... or ...*), Lipták (2001: 22–34) establishes that ‘*vagy ... , vagy ...* structures necessarily involve exclusive focus constituents ... in each parallel clause’ (p. 31). Converging with Lipták’s conclusion, Hendriks (2001, 2003, 2004)

¹⁰ On focus projection, see fn. 16 below. Note that Selkirk (1984:215–216) presents some wide-focus contexts in which focal stress on the ‘inner’ object in ditransitive constructions is appropriate.

independently recognises the importance of focus in the syntax of English *either ... or ...* and its Dutch equivalent. Hendriks assimilates *either* (and *neither* and *both* as well; see esp. her 2004 paper) to focus particles such as *only*, *too*, and *also*, although she is not very specific with respect to the syntactic details of an analysis of *either ... or ...* that treats *either* and its ilk as focus particles (Johannessen 2005, who bases herself on Hendriks, gives more structural details). The insight that the syntactic distribution of *either* is tied to focus is indeed a very important one. Nonetheless, I believe it would be wrong to syntactically assimilate *either* to focus particles like *only* (as Johannessen 2005 does perhaps most explicitly). Let me briefly highlight the two most significant obstacles to such an assimilation.

There are two respects in which the distributions of *either* and focus particles such as *only/even* do not match. On the one hand, the distribution of *only* is narrower than that of *either*. This manifests itself in at least the following two ways. First, as Hoeksema and Zwarts (1991), McCawley (1996) and Kayne (1998) note, *only* and *even* often do not felicitously attach to the (non-quantificational) complement of a preposition – thus, though the status of (20a) is subject to speaker variation, (20b) is entirely impossible for all speakers. For *either*, however, we find no effect of this sort: (21a) and (21b) are both well-formed.¹¹

- (20)a. %John spoke to only/even Bill.
 a'. *To only Bill have they spoken the truth.
 *To even Bill they wouldn't tell the truth.
- (21)a. John spoke to either Bill or Sue.
 b. To either Bill or Sue, I will give a copy of my book.

A second respect in which the distribution of focus particles such as *only* is narrower than that of *either* is illustrated by the fact that *only/even* refuse to attach all the way up to the IP in a context in which

¹¹ Johannessen (2005:426–427) claims that sentences such as (21) are just as poor as the ones in (20), which is contrary to fact (although in R-*either* contexts an effect of this sort does indeed manifest itself – see section 4.2.4 below for discussion). I could add here that the contrast between *even* and *either* is replicated in the context of CP-complements (cf. ??*He said even that he liked Bush* vs. *He said either that he liked Bush or that he wanted to give him the push*; thanks to Anikó Lipták, p.c., for pointing this out).

they are associated to the direct object or the verb (cf. (22), which illustrates this for *only* only). Hendriks (2003:10) notes this, and puts it down to ‘certain idiosyncratic properties of focus particles’.

- (22)a. < *Only > John < ?only > will < only > read < only >
 CHAPTER 3 < only > (not chapter 4 as well).
- b. < *Only > John < ?only > will < only > READ < *only >
 chapter 3 (not learn it by heart).
- c. < Only > JOHN < only > will read chapter 3.

But what Hendriks does not point out is that, on the other hand, the distribution of focus particles like *only* is broader than that of *either* as well. This manifests itself in at least two ways. First, as the examples in (22a) and (22c) already indicate, *only* can surface to the right of the focus (*John read chapter 3 only*), something that *either* cannot mimic (**John read chapter 3 either or chapter 4*). And secondly, *only*, when associated to a focus in an embedded CP, can sometimes be placed outside that CP, in the matrix clause, as in (23a); for *either* this is impossible (cf. (8c) and (23b)).

- (23)a. John < only > said that he would < only > read < only >
 CHAPTER 3 (not chapter 4 as well).
- b. John < ??either > said that he would < either > read
 < either > CHAPTER 3 OF CHAPTER 4.

The grammaticality of (23a) with *only* in the matrix clause is hardly surprising from a comparative perspective: focus movement can proceed successive-cyclically through SpecCP, as it does in, for instance, the Hungarian example in (24) (from É. Kiss 2000:255).

- (24) JÁNOSTÓL_i mondták [_{CP} t_i hogy szeretnék [_{CP} t_i ha
János-from said-they that would.like-they if
 ajánlást hoznék t_i]]
recommendation-ACC brought-I
 It is János that they said that they would like if I brought a
 recommendation from.

The fact that L-*either* does not work the way *only* does in (23a) now indicates that it is not associated with the focus the way *only* is.

3.2. *Either and its Relationship with the Contrastive Focus*

It is nonetheless incontrovertibly the case that *either* is closely tied to the focus. More specifically, according to Lipták (2001:31) *either ... or ...* disjunctions demand ‘exclusive focus constituents ... in each parallel clause’ – a requirement that she relates to the interpretation of *either ... or ...* disjunctions (as distinct from their counterparts lacking *either*): particularly, to the fact that *either ... or ...* is always exclusive (cf. Lipták 2001:24). Thus, while a sentence such as *Mary is taller than Bill or Bob* supports an interpretation in which Mary is taller than both boys, its counterpart *Mary is taller than either Bill or Bob* does not: Mary in this case is taller than just one of the boys, exclusively. The exclusiveness of *either ... or ...* disjunctions is directly correlated with the requirement that they contain exclusive (or, equivalently, exhaustive) foci. This goes along with Hendriks’ (2003:13) conclusion that ‘*either* needs the presence of a contrastive focus in its c-command domain’, contrastive foci being exclusive/exhaustive (cf. Kenesei 1986; É. Kiss 1998).

Lipták’s and Hendriks’ references to an *exclusive/contrastive* focus suggest that the generalisation concerning the distribution of *either* should be stated in terms of the *interpretive* focus, not the focally pitch-accented constituent. That this is correct is shown by the triplet in (25).

- (25)a. < Either > John < either > will < either > read
 < either > CHAPTER 3 or ((he’ll) read) CHAPTER 4.
- b. < Either > John < either > will < either > read
 < *either > CHAPTER 3 or (he’ll) prepare DINNER.
- c. < Either > John < either > will < either > read
 < *either > CHAPTER 3 or Jones will FLUNK him.

Here *phonological* focus in the first disjunct is systematically on the direct object (*CHAPTER 3*) but the interpretive scope of *contrastive* focus is different in the three examples (as marked by the underlining¹²): in (25a) it is narrowly confined to the object, in (25b) contrastive focus is on the VP, and in (25c) the entire clause seems to

¹² I have chosen underlining rather than Jackendoff’s (1972) square-bracket notation for the demarcation of the focused constituent in order to avoid confusion with the demarcation of the *disjuncts*, for which I will use the square-bracket notation standard in syntax. The size of the focused constituents and the size of the disjuncts are independent of one another, as the discussion shows.

be contrastively focused. What we find in (25) is that it matters, when it comes to the placement of *either*, what the scope of *contrastive* focus is, not where the focal pitch accent is located: though in all three examples the latter is located on the direct object, *either* cannot be placed directly on the object in (25b, c) because the scope of *contrastive* focus is wider than the direct object alone.

That *either* can be placed on either side of *will* even in the apparent IP-focus case in (25c) suggests that the contrastive focus in this particular case is actually the Chomskyan ν P (cf. Chomsky 1995: Chapter 4 and subsequent work), the projection that harbours the VP and the base position of the subject. By assigning the answer in (25c) the structure in (25c'), we make this example compatible with the generalisation that *either* must c-command the contrastive focus (which, in the case at hand, will be ν P, containing the trace of the raised subject).¹³

(25c') < Either > John_i < either > will < either > [ν P t_i read
 < *either > CHAPTER 3] or [_{IP} Jones_j will [ν P t_j FLUNK him]]

That the generalisation covering the surface distribution of *either* should specifically make reference to the locus of *contrastive* focus and not to *information* focus (new vs. old information) is confirmed by the question-answer pairs in (26)–(28).

(26)Q: I thought John would read chapter 2, but somehow he didn't. What did he read instead?

A: < Either > he < either > read < either > CHAPTER 3
 or ((he) read) CHAPTER 4.

(27)Q: I thought John would read chapter 2, but somehow he didn't. What did he do instead?

A: < Either > he < either > read < either > CHAPTER 3
 or ((he) read) CHAPTER 4.

¹³ A reviewer points out that a somewhat similar situation, with the base position of the subject in ν P once again playing a key role, is found in the domain of the focus particle *even* (cf. (ia)); *only* does not behave like *even* in this respect (cf. (ib)).

- (i)a. JOHN_i would *even* [ν P t_i speak to him]. \approx Even JOHN would speak to him.
 b. JOHN_i would *only* [ν P t_i speak to him]. \neq Only JOHN would speak to him.

- (28) Q: I thought John would read chapter 2, but somehow he didn't. What happened instead?
 A: < Either > he < either > read < either > CHAPTER 3
 or ((he) read) CHAPTER 4.

Here the preamble to the question as well as the answer are consistently the same, but the question is designed to have *information* focus on the object, the VP or the clause, respectively (as marked by the dotted underlining in the answers). Throughout, A is a suitable answer with *either* in any of its three positions. Though *information* focus has projected up to VP in (27) and to IP in (28) to match the question, the locus of *contrastive* focus remains confined to the direct object in all cases (as the solid underlining shows). As a result, placing *either* between the verb and the direct object systematically delivers a well-formed output in the answer.

Not only is it inconsequential what the extent of *information* focus is, the *size* of the disjuncts (or the level at which coordination takes place) does not matter either when it comes to the placement possibilities of *either*. As the parentheses indicate, the facts in (25)–(28) hold regardless of whether the second disjunct is just the object, the VP, or a complete clause. The focus facts for *either* placement thus turn out not to discriminate between the ‘*either* too high’ and the ‘*either* too low’ puzzles. The homogeneous behaviour of the examples in (25)–(28) irrespective of whether the material in parentheses is included in them or not strongly suggests that the ‘*either* too high’ and the ‘*either* too low’ puzzles should not be conceived of as separate puzzles, and should receive a unified account. Contrastive focus must play a key role in that account.

3.3. *C-commanding the Contrastive Focus is Neither Necessary nor Sufficient*

It is insufficient, however, to require of *either* (as does Hendriks 2003:13) that it c-command ‘a contrastive focus’. While taking care of (29a–d), it leaves the ‘paired focus’ construction in (29e) by the wayside: all tokens of *either* in (29) have a contrastive focus in their c-command domain, yet all variants of (29e) that have *either* in any position to the right of the first member of the pair of foci (*JOHN*) are ungrammatical.

EITHER-FLOAT AND THE SYNTAX OF CO-OR-DINATION

- (29)a. < Either > John < either > will < either > read
< either > CHAPTER 3 or (he'll read) CHAPTER 4.
- b. < Either > John < either > will < either > READ
< *either > chapter 3 or (he'll) DESTROY it.
- c. < Either > John < either > WILL < *either > read
< *either > chapter 3 or he WON'T (do so).
- d. < Either > JOHN < *either > will < *either > read
< *either > chapter 3 or MARY (will).
- e. < Either > JOHN < *either > will < *either > read
< *either > CHAPTER 3 or MARY CHAPTER 4.

We could of course modify the claim and require, more specifically, that *either* must c-command *all* contrastive foci in a given sentence. But this revised statement, while accurate for all of the examples in (25)–(29) and for a good number of other cases as well, does not achieve full descriptive adequacy *either*. In (30) (an expanded version of (8), with solid underlining again demarcating the contrastively focused constituent), all tokens of *either* meet that requirement, yet only some pass muster: in (30b, c), *either* cannot be placed in the matrix clause, and many speakers also resist placement of *either* in front of the complementiser.

- (30)a. < Either > he < either > wanted to < either > eat
< either > RICE or BEANS.
- b. < ??Either > he < ??either > wanted < %either > for you
< either > to < either > eat < either > RICE or BEANS.
- c. < ??Either > he < ??either > said < %either > that
< either > he < either > would < either > eat < either >
RICE or BEANS.

While (29e) and (30b, c) instantiate cases where *either* is excluded from occurring in many locations from which it does in fact c-command a contrastive focus, we also find cases in which, conversely, *either* legitimately occurs in positions that do not c-command a

contrastive focus at all.¹⁴ The question–answer pair in (31) (provided to me by an anonymous reviewer) is a case in point: here the contrast (between the question and the answer: (31A) would not work out of the blue) is external to the disjunction, but *either* immediately precedes the first disjunct.

- (31)Q: Did John say that he had either FRIED it or BAKED it?
 A: No! John DENIED that he had either fried it or baked it.

While the placement of *either* in the *question* is in keeping with a requirement to the effect that *either* must c-command a contrastive focus, the fact that contrast in the *answer* is at the level of the matrix VP, which includes the disjunction as well as *either*, suggests that *either* does not have to c-command the focus.

Not only does *either* fail to c-command the contrastive focus in (31A), it actually resists being placed in a position c-commanding the contrastive focus (cf. (31A')). And while *either* is variably placed in a sentence such as *John said* < %*either* > *that* < *either* > *he* < *either* > *had* < *either* > *FRIED* it or *BAKED* it (cf. (30c)), it seems that *either* in (31A) is fixed in the position immediately preceding the embedded main verb: the variants given in (31A'') seem very awkward.

- (31)A': No! < **Either* > John < **either* > DENIED that he had fried it or baked it.
 A'': No! John DENIED < **either* > that < **either* > he < **either* > had fried it or baked it.

In contexts of the type in (31A), therefore, it appears that *either*'s distribution is entirely insensitive to the locus of contrastive focus, and is subject solely to the requirement that *either* be placed on the first disjunct.

¹⁴ A particularly peculiar case that meets the text description is Johannessen's (2005:430) Norwegian R-*either* example in (i). The analysis of the distribution of *either* offered in what follows does not directly accommodate (i), which does not seem to have a grammatical counterpart in English: **Peter WALKED either to the tram or he took the BUS* is very awkward. The fact that the English verb does not move whereas (i) is a Verb Second construction, featuring movement of the focused verb leaving a trace in a position c-commanded by *enten*, is presumably relevant; but how to make hay of this fact is unclear to me at this point (cf. also (37)–(38)).

(i) Per GIKK enten til trikken eller han tok BUSSEN. (Norwegian)
 Per walked either to tram-the or he took bus-the

3.4. *Either Placement: Contrastive Focus, and the ‘ θ -path’*

To account for the constellation of facts canvassed in the foregoing, we need a theory of the distribution of *either* that will allow *either* to be placed directly on the first disjunct (as, for instance, in (31A)) but will also grant *either* the liberty to be embedded inside the first disjunct (as in R-*either* cases) or to be outside the disjunction altogether (L-*either*). More microscopically, R-*either* must be subject to the requirement that it ‘float’ no further down than the first contrastive focus (this is what remains of Hendriks’ c-command requirement), and L-*either* must be subject to restriction that it should not ‘run away’ too far (recall (30b, c)). The descriptive generalisation in (32) ensures precisely this.¹⁵

- (32) *Either* is a phrasal constituent in construction with
- a. the first disjunct, attaching to it; or
 - b. the first contrastive focus, attaching to
 - (i) the contrastive focus itself, or
 - (ii) a phrasal node on the θ -path projected from the first contrastive focus.

¹⁵ The locution ‘in construction with’ is used non-technically in (32), though it is perfectly compatible with Klima’s (1964) technical notion (the predecessor of ‘c-command’); the technical restrictions on *either*’s being ‘in construction with’ its associate are defined for each individual case in (32a) and (32b.i/ii).

An interesting question is whether *either* might be attached to the *second* disjunct as well. The fact of the matter is that this is not the case (cf. (ia,b)). (32) rules this out by stipulation, by making reference to the *first* disjunct and the *first* contrastive focus of a string of contrastive foci. The discussion in section 4.2.4, on *or* and its privileged relationship with the head ‘J’ of the coordination structure, will likely subsume the ungrammaticality of both versions of (i) under the umbrella of minimality effects (with (ia) then being a case where the desired Agree relationship between J and *or* is blocked by the intervening *either*, while (ib) would instantiate a failed attempt at moving *or* across *either*). The inclusion of the modifier ‘first’ in the generalisation in (32a) may ultimately be dispensable, therefore. I will keep it in for the sake of convenience.

- (i)a. *He said that he would eat RICE either or BEANS.
- b. *He said that he would eat RICE or either BEANS.

The notion of ‘ θ -path’ invoked in (32b.ii) is defined as in (33).¹⁶

- (33)a. A θ -path is a sequence of nodes such that each node is θ -linked to the next higher node on the main projection line.
- b. α is θ -linked to β iff α or its head assigns a θ -role to β or receives a θ -role from β .

Before proceeding to an analysis of *either* placement from the perspective of (32) and (33), let me address the way the θ -path is computed. Take, for instance, a biclausal structure in which the object of the embedded verb is the contrastive focus. The verb selecting the object θ -marks its object, hence VP is θ -linked to the object, by (33b). VP is itself the complement of I, which θ -marks its VP complement – Selkirk (1984:209) made an early suggestion to this effect, and Chomsky (1986:20) presented an explicit argument based on VP topicalisation out of a *wh*-island: the fact that such extraction (illustrated in (34)) gives rise to only a mildly degraded result indicates that the ECP is apparently being satisfied, which must mean in turn (given that antecedent-government of the VP-trace is

¹⁶ The notion ‘ θ -path’ and the way it is defined hark back to Kayne’s (1984) theory of paths and connectedness. It also bears a resemblance to the Selkirkian notion of ‘focus projection’ (cf. Selkirk 1995; Rochemont 1986). Although in earlier versions of this article, I sought to state the generalisation governing the (il)legitimate *L-either* and *R-either* patterns in terms of Selkirk’s (1984) Basic Focus Rule in (ia) and, more importantly, her Phrasal Focus Rule in (ib), it has become clear to me that actually formulating it in such terms is not feasible. Perhaps most devastating for a focus projection approach is É. Kiss’s (1998) demonstration of the fact that, while information focus can project, contrastive focus (which she refers to as identificational focus) cannot. If contrastive focus did indeed project up to the phrasal node on which *either* is placed and if *L-either* was sensitive to focus projection, the variable placement of *either* should go hand in hand with variable scope for the contrastive focus, *quod non*: regardless of where *either* is placed in a sentence such as (30a), the scope of contrastive focus is confined to the direct object.

- (i)a. *Basic Focus Rule* (cf. Selkirk 1984:207)
A constituent to which a pitch accent is assigned is a focus.
- b. *Phrasal Focus Rule*
A constituent may be a focus if (i) or (ii) (or both) is true:
- (i) The constituent that is its *head* is a focus.
- (ii) A constituent contained within it that is an *internal argument* of the head is a focus.

unattainable in this particular context) that I manages to θ -govern its VP complement.

(34) $^?_{[VP \text{ Fix the car}]_i}$, I wonder $[_{CP} \text{ whether } [_{IP} \text{ he will } t_i]]$

With I θ -marking VP, it then follows that IP is θ -linked to VP; and with VP being θ -linked to the object, we now have a θ -path leading all the way from the contrastively focused object to the IP. The θ -path cannot be extended further up, however: C does not θ -mark IP, nor does IP assign a θ -role to C.

The significance of the fact that (33b) is stated in ‘in two directions’, as it were, can be seen in contexts in which the container of the contrastive focus is not θ -marked by the head of the next higher node but instead assigns a θ -role to (the head of) that node. Such is the case, for instance, in sentences of the type in (35), where the contrastive focus is the attributive AP, whose external θ -role is assigned to the head noun (or, in the sense of Higginbotham 1985, this role is ‘ θ -identified’ with the external θ -role of the noun). In this way, the NP of the head noun is θ -linked to the contrastively focused AP, so that a θ -path can be constructed from the AP to the NP; that θ -path extends further up to the DP (on the assumption that the head noun’s external θ -role is assigned to D, *à la* Williams 1981) and, thanks to the thematic relationship between the DP and the verb, and between the VP and I, all the way up to IP. This accounts for the fact that *either* can be placed in any of the positions indicated in (35).¹⁷

¹⁷ Note that Selkirk’s (1984, 1995) focus rules (cf. fn. 16) will not get focus on *BLUE* to project to the complex noun phrase (as it should in the question–answer pair in (i), where information focus rests on the entire direct object): the adjective is neither the head of the complex noun phrase (unless, perhaps, one adopts an Abney 1987 type perspective on attributive modifiers) nor an argument of its head. In the light of this and other examples, Schwarzschild (1999:167) comes to the conclusion that the rules of focus projection are ‘simply wrong’; see also Büring (2002) and Selkirk (2003).

- (i) Q: Nowadays John drives Mary’s red convertible. What did he drive before?
A: He drove her *BLUE* convertible.

That *either* cannot actually be placed directly on the contrastively focused AP (see (iia)) is part of a broader generalisation (cf. (iib–d)) that I will not have space to address in detail in this paper. Suffice it to make a few brief remarks on the matter. Hendriks (2003) brings up the ungrammaticality of things such as **right either ABOVE or BENEATH that little chest* to support her claim that *either*-disjunction is impossible

- (35) < Either > he < either > drove < either > [_{DP} his [_{NP} [_{AP} BLUE] [_{NP} car]]] or (he drove) his GREEN one.

Similarly, in (36), the fact that *either* can be legitimately placed on the VP, the I' or the IP even though contrastive focus is confined to the manner or temporal adverbial can be taken care of by (32) and (33) on the assumption that adverbial modifiers are predicated of the VPs they modify, by which a θ -link is established between the adverbial modifier and the VP, with the θ -path subsequently extending further up to IP. Naturally, placing *either* between the verb and the direct object in these examples is ungrammatical: adjunction of *either* to the direct object violates (32).

- (36)a. < Either > John < either > will < either > solve
< *either > the problem < either > QUICKLY or (he
will solve the problem) THOROUGHLY.

(Footnote 17 Continued).

below the maximal projection level, citing Neijt (1979). But on standard assumptions, what follows *his* in (iia,b), *right* in (iic) and *carefully* in (iic) is a maximal projection. The 'anti-locality' effects on *either*-placement thus presumably have a different source. What we may be dealing with in these examples is a ban on attachment of *either* directly to the lexical projection of the adjective, noun, preposition or verb. The empirical generalisation that *either* cannot be attached to a lexical projection can presumably be reduced to a general restriction imposed on lexical projections: syntactic operations that duplicate a category label cannot apply to a lexical projection. (This restriction will follow as a matter of course if lexical heads (and hence lexical projections as well) do not *have* a category label (category membership then being deduced from the functional environment within which the lexical projection is embedded), as was suggested in Marantz (1997) and in subsequent work done within the framework of Distributed Morphology.) An alternative strategy that is worth exploring further in future work, in light of the discussion in section 4.2.4, would be to derive the ungrammaticality of the relevant variants of (ii) from restrictions on *or*-movement to the left periphery of the second disjunct.

- (ii)a. < Either > he < either > drove < either > his < *either > BLUE
car or ((he) drove) his GREEN one.
b. < Either > he < either > drove < either > his < *either >
CONVERTIBLE or ((he) drove) his SUV.
c. < Either > he < either > put the ball < either > right < *either >
ON the box or ((he) put it) IN it.
d. < Either > he < either > carefully < *either > DISCUSSED the facts
or (he) (slily) AVOIDED them.

- b. < Either > John < either > will < either > solve
 < *either > the problem < either > TOMORROW or
 (he will solve the problem) NEXT WEEK.

The facts in (35) and (36) show that θ -paths can be projected from constituents that are syntactically adjuncts: whenever these constituents are predicated of the constituent to which they are adjoined, they are θ -linked to their hosts, by (33b). The use, in the definition of θ -path in (33a), of the notion ‘ θ -linking’ (a symmetrical notion distinct from ‘ θ -marking’, and perhaps comparable to Emonds’ 1985:78 ‘ θ -relatedness’) ensures that the account does *not* predict that contexts in which *either* cannot be associated with a contrastive focus at a distance are precisely the familiar CED configurations, and hence does not reduce the analysis to a movement account *à la* Larson (1985). This is a desirable result.

The θ -path is a syntactic notion, insensitive in principle to such PF properties as the locus of focal pitch-accent. But in the specific context of the surface distribution of *either*, the locus of focal stress *is* of the utmost importance: L-*either* is regulated by a conjunction of syntactic and phonological conditions (the θ -path and the placement of contrastive focal stress, respectively). The significance of this conjunction of conditions is particularly evident in cases in which the contrastive focus is *ex situ*, surfacing in a position that is not itself on any θ -path but linked to a trace (or silent copy) that is. The examples in (37b) and (38b) instantiate such cases.

- (37)a. < Either > John < either > will < either > donate his MONEY to the CHURCH, or (he will donate) his BOOKS to the LIBRARY.
- b. < Either > his MONEY, < *either > John < *either > will < *either > donate *t* to the CHURCH, or his BOOKS (he will donate) to the LIBRARY.
- (38)a. < Either > John < either > will < either > only his MONEY or only his BOOKS.
- b. < Either > only his MONEY will < *either > John < *either > donate *t* or only his BOOKS.

Plainly, a θ -path leading up to IP is constructible in (37b) and (38b) from the base position of the fronted object. But apparently, the fact that a θ -path can be so constructed is not sufficient to allow *either* to surface on the nodes on that path: attaching *either* to the projections of V and I is out of the question in these sentences, while it is perfectly well-formed in the a-examples. It would be difficult to deny that a θ -path can be built from the object's base position in the b-sentences: making the construction of a θ -path sensitive to the presence of overt material at the foot of the path is an indefensible move (because thematic notions are not otherwise known to be sensitive to the overt/covert distinction, nor would one expect them to be). But to facilitate *L-either*, we need more than a θ -path: we also need a focal pitch-accent. Focal pitch-accents can of course be realised only on overt material, not on traces – and it is this that makes *L-either* directly sensitive to the physical location of the first contrastive focus. The first focal pitch-accent encountered in the examples in (37b) and (38b) is that on *MONEY*. No θ -path is constructible from the *surface* position of this pitch-accented constituent (which is an *A'*-position). As a result, *L-either* is strictly impossible in sentences in which the contrastive focus is preposed. The fact that the preposed focus binds a trace in a position from which a θ -path *can* be projected is irrelevant: the trace, being covert, can bear no focal pitch-accent.¹⁸

¹⁸ In the examples just discussed, *A'*-movement was applied to the contrastive focus, with drastic consequences for *L-either*. A question now arises about sentences in which the (first) contrastive focus has putatively undergone *A*-movement: as in the case of *A'*-movement, the moved focus would not be in a position from which a θ -path is constructible, hence *L-either* is expected to be ungrammatical. This expectation is not borne out: in the examples in (i), *either* is successfully placed further up the tree from the contrastively focused constituent. In the case of (ia, b), one might want to have recourse to a (secondary) thematic relationship between the ECM-subject and the matrix verb (cf. the discussion of 'L-marking' via Spec-Head agreement in Chomsky 1986); but while perhaps plausible for (ia) (though see Hoekstra 1988 for a demonstration of the absence of a thematic relation between a perception verb and the subject of its small-clausal complement), a θ -relation between *consider* and the ECM-subject would be a bit of a stretch, and for (ic) such a strategy is definitely not viable. An integrated solution to the problem posed by (ia–c) from the perspective of the θ -path approach to *L-either* will be forthcoming if

With these background assumptions about the establishment of θ -paths in place, let me now proceed to laying out the analysis of *either* placement based on (32).

3.5. *Either Placement and the θ -path: Analysis*

Let us turn, first of all, to the example in (30c), repeated here.

- (30c) <??Either> he <??either> said <%either> that
 <either> he <either> would <either> eat
 <either> RICE or BEANS.

Since the verb *eat* θ -marks the contrastively focused object, *RICE*, the embedded VP is on the object's θ -path.¹⁹ And by virtue of the θ -relation between the I-head taking *eat*'s VP as its complement and that VP, the θ -path extends up to and including the embedded IP (cf. (39), which incorporates the structure of coordination constructions

(Footnote 18 Continued).

passive and raising constructions have the subject merged in its surface position, hence it may attract its θ -role (or aspectual feature, as in Manzini and Roussou's 2000 proposal) up the tree. I refer the reader to Manzini and Roussou (2000) for a detailed defence of an analysis of 'A-movement' along these lines. (Note that this dismissal of the standard movement-based account of raising and passive constructions does not necessarily dispense with A-movement altogether; recall from the discussion of (25c) in section 3.2 that some genuine A-movement dependencies, with concomitant traces/copies, must exist on present assumptions. On the standard assumption that transitive, active ν P is a strong phase, the need for a ν P-internal trace in (25c') can be derived if the θ -role or aspectual feature that the subject in SpecIP needs to attract is invisible outside the ν P phase (which will follow if the relevant property is a property of V).)

- (i)a. <Either> he <either> saw <either> JOHN be arrested or BILL.
 b. <Either> he <either> considers <either> JOHN to be the best candidate or BILL.
 c. <Either> there <either> will <either> be <either> a MAN arrested or a WOMAN.

¹⁹ The fact that the object of the verb *eat* is a disjunction, *RICE OR BEANS*, is immaterial. No matter what one's assumptions are regarding the structure of coordination (see (3) and section 5, below, for a specific proposal, following standard assumptions in the current literature), one will always need to assume there to be a thematic relationship between the verb and its coordinated objects to get the interpretation and selectional restrictions right: a verb such as *eat* selects noun phrases, not conjunctions. I assume without discussion that the functional structure of coordinations is thematically and selectionally transparent.

in (3), discussed further in section 5; the circled nodes in (39) and the representations to follow in this section are on the θ -path).

- (39) He said [_{CP} that [(θ) he I=would [(θ) eat [_{JP} [RICE] [J [or
[BEANS]]]]]]]

But (33b) stops the θ -path in the embedded clause in (30c) at IP: CP is not θ -linked to IP, hence is not on the θ -path. In (30c), therefore, *either* is predicted to be allowed to occur anywhere between the embedded complementiser and *RICE*: directly on the first disjunct or contrastive focus, on the VP of *eat*, or on the IP above that, but no higher. This is by and large accurate – but more needs to be said about speakers who can attach *either* to the embedded CP itself in (30c) (and also in (30b), which is parallel to (30c) in all relevant respects).

I would like to argue that such speakers represent these sentences as CP-coordination cases, with ellipsis in the second disjunct all the way down to the contrastive focus (cf. (40)). This is confirmed by the fact that speakers who accept (30c) with *either* to the immediate left of *that* also accept (41A.ii) in answer to the question in (41Q), where contrastive focus is on the embedded object. For these speakers, therefore, (41A.i) is ambiguous between a parse in which the answer is structurally no larger than the noun phrase *BEANS*, on the one hand, and an alternative parse that structurally assimilates it to (41A.ii), with ellipsis down to *BEANS*.²⁰ It is the latter strategy that is being exploited in the analysis in (40).

²⁰ Thanks to Jed Shahar and Erika Troseth for discussion of these data. The speakers accepting (30c) with *either* to the immediate left of *that* that I have consulted also allow the answer in (41A.i) in reply to the question *Did he say that he would eat RICE or that he would eat BEANS?*, with contrastive focus on the *that*-clause. If the size of the answer must minimally match the size of the contrastive focus, (41A.i) in this context involves an elliptical *that*-clause of the type in (41A.ii); this will then further confirm these speakers' exploitation of ellipsis.

Ellipsis is probably also at work in *L-either* cases such as (ia), pointed out to me by Peter Culicover, differing minimally from (ib). For (ib), the account is entirely straightforward: the *during*-PP is predicated of some (extended) projection of the verb, hence θ -linked to that (extended) projection, and the θ -path will extend further up to IP. The example in (ia) has as its second disjunct a constituent that is ostensibly smaller than the *during*-adjunct (and as a result seems more delicate; the '?' on the token of *either* preceding *will* is Culicover's). I suggest that speakers accepting *L-either* in (ia) represent it as a case of disjunction of a constituent larger than *during*'s complement, with ellipsis down to the focused noun phrase.

(40) [_{IP} He I [_{VP} said [_{JP} [either [_{CP} that he would eat RICE] [J [or [_{CP} ~~that he'd eat~~ BEANS]]]]]]]]]]

(41)Q: Did he say that he would eat RICE or BEANS?

A.i: BEANS.

A.ii: %That he would eat BEANS.

Note that in (40), *either* is placed directly on the first disjunct even though the first disjunct is itself neither the contrastive focus (as is clear from its undergoing ellipsis; Wilder 1997 argues that ellipsis goes all the way down to but never *into* the focus) nor on the θ -path. This confirms our earlier conclusion (based on (31A), repeated below alongside its corresponding question) that the grammar of *either* should allow placement of *either* on the first disjunct regardless of focus (cf. clause (32a)). Since *either* is not on the θ -path in (40), but attaches to a first disjunct that is neither itself the contrastive focus nor on the θ -path extending upwards from the contrastive focus, *either* is allowed no further liberties; in particular, it cannot be placed any higher up the tree. This ensures that speakers accepting (30c) with *either* to the immediate left of *that* still reject the versions of (30c) that have *either* placed further to the left. By the same token, it follows that *either* in the answer to (31Q) resists being placed in positions above or embedded inside the first disjunct (cf. (31A', A'')).

(31)Q: Did John say that he had either FRIED it or BAKED it?

A: No! John DENIED that he had either fried it or baked it.

(Footnote 20 Continued).

- (i)a. John <[?]either> will <either> sneeze during the FIRST ACT or the INTERMISSION.
- b. John <either> will <either> sneeze during the FIRST ACT or during the INTERMISSION.

The discussion of (40) and (i) makes it clear that the present account of *either* placement does not eschew ellipsis as a matter of principle – there would be little point in doing so, ellipsis being an incontrovertible ingredient of theory's technical machinery. But unlike Schwarz (1999), my analysis resorts to ellipsis to a very limited extent, assigning non-elliptical parses to the bulk of cases.

A': No! <*Either> John <*either> DENIED that he had fried it or baked it.

A'': No! John DENIED <*either> that <*either> he <*either> had fried it or baked it.

In (30c), contrastive focus is confined to the embedded object, as indicated by the underlining: a sentence such as (30c) can be felicitously used as a follow-up to a statement like *John said that he'd eat either of two things*, with the presupposed set of alternatives (Rooth's 1985 'p-set') including {*rice, beans*}. As a follow-up to *John said either of two things*, with contrastive focus on the object of the matrix verb *said* such that the p-set includes {*that he'd eat rice, that he'd eat beans*}, sentences of the type in (30c) are usually not very felicitous. Instead, one would follow this up with a sentence such as (42).

(42) <Either> he <either> said <either> that <*either> he <*either> would <*either> eat <*either> RICE or (he said) that he'd eat BEANS.

Here, in contradistinction to what we see in (30c), attachment of *either* to the embedded clause becomes perfectly fine for all speakers, thanks to the fact that it is the embedded clause as a whole that serves as the contrastive focus of the complex sentence.²¹ In this case, *either* is also welcome to be inserted anywhere further up the matrix tree, on nodes that are on the θ -path projected from the contrastively focused CP (cf. (43)). But *either* now cannot be inserted anywhere inside the embedded clause; to do so would violate (32). This is true irrespective of the level at which disjunction takes place. In the variant of (42) that has *that he'd eat BEANS* directly following *or*, coordination is performed at the level of the object of the matrix verb, as in (43a); in the variant of (42) that has *he said that he'd eat BEANS* following *or* (instantiating the 'either too low' puzzle for all instances of *either* that

²¹ For Selkirk (1984, 1995), all phrasal focus is projected, via the Phrasal Focus Rule (cf. fn. 16), from the pitch-accented element (here, the direct object of the embedded clause). With C not taking its IP-complement as its internal argument, focus should be unable to project from the lower verb's object in (42) up to CP, or from the lower verb up to the matrix VP in (44), below. Since there is no way of tracing the focus down to the pitch-accented element in keeping with the Phrasal Focus Rule, it would be impossible, by Selkirk's logic, to take the embedded CP in (42) and the matrix VP in (44) (of the first disjunct) to be the focus.

do not precede the matrix subject in the first disjunct), coordination is at the level of the matrix IP, as illustrated in (43b). Regardless, however, the θ -path runs from the object of *said* up to the matrix IP, and hence, regardless of the size of the disjuncts, *either* may be attached to the embedded CP, the matrix VP or the matrix IP, in conformity with (32), but not anywhere inside CP.

- (43)a. [$\textcircled{\text{IP}}$ He I [$\textcircled{\text{VP}}$ said [JP [CP that he would eat RICE] [J [or [CP that he would eat BEANS]]]]]]]
- b. [JP [$\textcircled{\text{IP}}$ He I [$\textcircled{\text{VP}}$ said [CP that he would eat RICE]]] [J [or [IP he said [CP that he would eat BEANS]]]]]]]

If contrastive focus is anchored even higher in the tree, at the level of the matrix VP, *either* may not even be placed on the embedded CP. This is shown in (44), which is analysed as in (45).

- (44) < Either > he < either > said < *either > that < *either > he < *either > LOVED her or (he) INSULTED her.
- (45)a. [$\textcircled{\text{IP}}$ He [JP [VP said that he LOVED her] [J [or [VP INSULTED her]]]]]]]
- b. [JP [$\textcircled{\text{IP}}$ He [VP said that he LOVED her]] [J [or [IP he [VP INSULTED her]]]]]]]

The natural interpretation of (44), as a follow-up to something like *John did either of two things*, is such that a contrast is established between his saying something and his insulting her. It should be said, however, that on a – considerably less natural – interpretation in which a contrast is established at the level of the *embedded* VP (following up on *John said he did either of two things*), (44) will behave to all intents and purposes like (30c) (or like *John said that he LOVED her or (he) HATED her*), hence on such a reading placement of *either* in the two positions inside the embedded clause in (44) would be legitimate while placement of *either* in the matrix clause is ungrammatical, with speakers varying once again on the question of whether *either* can immediately precede *that* in such a context.

It should be plain that the account of *either* placement presented here also directly accommodates the facts in (6) and (7), above (from

Larson 1985). Larson's observation that negation blocks L-*either* (cf. (5), repeated below as (46)) can be accounted for as well.

- (46)a. ^(?)John didn't eat either RICE OR BEANS. (cf. (5))
 b. ^{??}John either didn't eat RICE OR BEANS.
 c. ^{??}Either John didn't eat RICE OR BEANS.

Either can be legitimately placed directly on the contrastively focused constituent (*RICE*), as in (46a), but positioning *either* to the left of the negation, as in (46b, c), results in a strongly degraded result. This is because negation breaks the θ -path leading up from the contrastive focus. With negation syntactically represented in terms of a NegP, the fact that its head, Neg⁰, does not θ -mark its complement (which I take to be VP, in a non-split IP system) prevents the θ -path from extending beyond the complement of Neg. Placement of *either* to the left of negation will then be ruled out, which results in (46b,c) being rejected as sentences in which the direct object is the contrastive focus, and disjunction is at the level of the direct object.

Interestingly, when disjunction is at the level of IP, as in (47), the judgements flip: (47b,c) are now fully well-formed, and (47a) is ungrammatical.²²

- (47)a. *John didn't eat either RICE or he didn't eat BEANS.
 b. John either didn't eat RICE or he didn't eat BEANS.
 c. Either John didn't eat RICE or he didn't eat BEANS.

²² That (46b,c) apparently do not (naturally) support an IP-coordination parse with ellipsis down to the contrastive focus (cf. Schwarz's 1999 ellipsis-based analysis of L-*either*) is presumably due to the fact that negation in the second disjunct is being elided on such a parse. The fact that (46a) is not perfect may tie in with this: (46a) is ambiguous, in principle, between a 'neither' reading (*John ate neither rice nor beans*) and a 'one of the two' reading (*John didn't eat rice or he didn't eat beans*); but the latter reading, which corresponds to the ones that (46b,c) would legitimately support if they (naturally) allowed an IP-coordination parse, is salient only in reply to negative questions such as *What didn't John eat/do?* or *What is it that John didn't eat/do?*; and the 'neither' reading is more felicitously expressed with the aid of *neither* itself, rather than with a combination of negation and *either*.

The grammaticality of (47c) is of course straightforward: *either* here is placed directly on the first disjunct, in accordance with (32a). The sentences in (47a) and (47b) are both cases of R-*either*, the difference between the two being that in (47a) *either* has ‘floated rightward’ beyond the sentential negation while in (47b) it stays to the left of the negation. But R-*either* does not literally involve rightward (i.e., downward) float of *either*: such would be an illegitimate case of downgrading movement. We cannot therefore hold the position of *either vis-à-vis* the sentential negation directly responsible for the difference between (47a) and (47b). On my analysis of R-*either*, ‘rightward floated’ *either* is attached to a node within the first disjunct that *either* is itself the contrastive focus or finds itself on the θ -path projected from the contrastive focus. Since the θ -path projected from the focally pitch-accented direct object *RICE* does not extend to NegP (as we discovered in the previous paragraph), (47b) must be a case in which the contrastive focus is the NegP itself, with *either* placed directly on the contrastive focus. This is grammatical. But it is not immediately apparent why (47a) should be ungrammatical: *RICE*, after all, is a possible contrastive focus (it is in (46a)), so why should *either* not be welcome to attach to it? The analysis of *either ... or ...* disjunctions developed up to this point does not account for the ungrammaticality of (47a). As we will discover in section 4, the cause of this hole in the account is our one-sided focus, up to this point, on *either* as the root of all restrictions on *either ... or ...*: as it will turn out, the root of the problem with (47a) actually lies with *or*, not with *either*.

In the present section, we have seen that analysing *either* as a phrasal category sensitive to the locus of contrastive focus and what I have called the ‘ θ -path’ gives us good mileage on L-*either* and R-*either*, without recourse to movement of *either*, and without reference to either the size of the disjuncts or the scope of information focus. In the next section, we will find that for a comprehensive picture of the syntax of *either ... or ...*, we also need to take *or* into account – in particular, we need to analyse *or*, like *either*, as a phrasal category; unlike *either*, however, *or* is forced to surface at the left edge of its disjunct, so if it is not base-generated there (but instead originates somewhere inside the second disjunct), it must raise there in the course of the syntactic derivation. Movement of *or* is subject to syntactic restrictions, and it is these syntactic restrictions that will ultimately give us an answer to why (47a) is ungrammatical.

4. *EITHER* AND *OR* AS PHRASAL CATEGORIES

The fact that *either* can occur in positions on the first disjunct, the contrastive focus or along the θ -path projected from the contrastive focus suggests that *either* occupies a PHRASAL position.²³ Being phrasal, it should distribute like things phrasal. In this section I will show first of all (in section 4.1) that this gives us an account of the interesting restrictions on *either* placement to the immediate left of a subject, and I will subsequently show (in section 4.2) that the phrasality of *either* allows its negative and [+WH] incarnations, *neither* and *whether*, to undergo movement to positions beyond those along the contrastive focus's θ -path that they can be base-generated in. After extending the phrasal approach to (*n*)*or* in section 4.3, I will then lay out in section 4.4 the analysis of coordination constructions that the discussion gives rise to. Finally, I present some further support for the phrasal approach to *either* and *or* in section 4.5, from locality effects that would otherwise go unexplained.

4.1. *Either as a Phrasal Adjunct, and the Restrictions on its Placement in Pre-subject Position*

The conclusion that *either* is a phrasal category that attaches to maximal projections is of course compatible with our earlier discussion of 'either-float'. In the present subsection, I will argue that it is further confirmed by the examples in (48)–(53).

- (48)a. John considers < *either > the president < either > a FOOL OR a GENIUS.
 b. John considers < ?either > the PRESIDENT < *either > a FOOL OR his WIFE a GENIUS.
 c. John considers < either > the PRESIDENT < *either > a fool OR his WIFE.
- (49)a. John put < *either > the book < either > on < ?either > the SHELF OR (on) the TABLE.

²³ See also Johannessen (1998, 2005), who draws the same conclusion. She presents evidence from a variety of Germanic Verb Second languages to show that *either*, when initial in a finite disjunct, can and in some languages must trigger Verb Second (cf. e.g. the first disjuncts of German (70a,b), below). On (*n*)*or* in the second disjunct triggering inversion, see section 4.2.3 and fn. 31.

EITHER-FLOAT AND THE SYNTAX OF CO-OR-DINATION

- b. John put <?either> the BOOK <*either> on the SHELF or the RECORD on the TABLE.
 - c. John put <either> the BOOK <*either> on the shelf or the RECORD.
- (50)a. John gave <*either> the book <either> to <?either> MARY or (to) SUE.
- b. John gave <?either> a BOOK <*either> to MARY or a RECORD to SUE.
 - c. John gave <either> a BOOK <*either> to Mary or a RECORD.
- (51)a. John gave <*either> Mary <either> a BOOK or a RECORD.
- b. John gave <?either> MARY <*either> a BOOK or SUE a RECORD.
 - c. John gave <either> MARY or SUE <*either> a book.
- (52)a. John considers <*either> the president <either> to <either> be <either> a FOOL or a GENIUS.
- b. John considers <?either> the PRESIDENT to be a FOOL or his WIFE a GENIUS.
 - c. John considers <either> the PRESIDENT to be a fool or his WIFE.
- (53)a. John wants <*either> Mary <either> to <either> eat <either> RICE or BEANS.
- b. John wants <?either> MARY to eat RICE or SUE BEANS.
 - c. John wants <either> MARY to eat rice or SUE.

Throughout these examples, *either* c-commands the contrastive focus; nonetheless it cannot be placed to the immediate left of the subject of the small or ECM-infinitival clause in the a-sentences. The generalisation covering the examples in (48)–(53), which I will show can be made to follow from the account of the surface distribution of *either* developed here, is that *either* cannot be inserted to the immediate left of the subject of a small-clausal or ECM-infinitival complement

unless that subject is itself the contrastive focus or the higher member of a pair of contrastive foci.²⁴

Why would this generalisation hold? With *either* being a phrasal category, a word order in which *either* immediately precedes the subject of a small or infinitival clause could in principle be analysed in either of two ways: either *either* is attached to the subject itself, or it is adjoined to the small or infinitival clause as a whole. The latter is prohibited: it is impossible to adjoin any material to a small or infinitival clause in complement position (cf. (54)), something which has traditionally been blamed on Case Theory (Stowell's 1981 adjacency condition on structural Case assignment).

- (54)a. John < basically > considers < *basically > the president
< basically > a fool.
- b. John < carefully > put < *carefully > the
book < carefully > on the table.
- c. John < secretly > gave < *secretly > the book
< secretly > to Mary.

²⁴ See Kayne (1984), Hoekstra (1988), Den Dikken (1995) and references cited there for small clause approaches to resultative, prepositional dative and double object constructions. I should add here that, throughout (48)–(53), *either* can felicitously be placed to the left of the verb or the matrix subject, as expected in light of the discussion of the θ -path in section 3. Note that such placement of *either* is possible even in the case of *want*-constructions – something which, in light of the fact that (8b) is poor with *either* in the matrix clause (cf. <^{??}Either > John <^{??}either > wanted <[%]either > for you to eat <either > RICE or BEANS), suggests that the ECM complement of verbs like *want* is not a covert *for-to* infinitive (contra e.g. Kayne 1984): a θ -path can be projected from the infinitive's object into the matrix clause. I should also note that the paradigms in (48)–(53) can be reproduced in their entirety for R-*either* (e.g., John considers < *either > the president < either > a FOOL or he considers him a GENIUS). This once again confirms that R-*either* should not be given some 'special' solution but should be part and parcel of the general analysis of *either* placement. That R-*either* is possible (though somewhat marginal) in *want*-ECM constructions as well (cf. John wants Mary to <²either > eat <³either > RICE or he wants her to eat BEANS) while such is entirely impossible in *for-to* infinitives (cf. John would prefer for Mary to < *either > eat < *either > RICE or he would prefer for her to eat BEANS) is an additional indication that the ECM complement of *want* is not a CP. By the same logic, the grammaticality of both L-*either* and R-*either* in control contexts (cf. < Either > John < either > wants to < either > eat < either > RICE or (he wants to eat) BEANS) suggests that control infinitives are smaller than CP as well. I will content myself here with pointing out these consequences without pursuing them further.

- d. John <secretly> gave <*secretly> Mary
<secretly> the book.
- e. John <secretly> considers <*secretly>
the president to be a fool.
- f. John <passionately> wants <*passionately> Mary to
eat rice.

So the generalisation that *either* cannot be inserted to the immediate left of the subject of a small-clause or ECM-infinitival complement unless its subject is itself the contrastive focus or the higher member of a pair of contrastive foci will follow if we can ensure that *either* can only be adjoined to the *subject* of the small clause if that subject is *focused*; if, by contrast, the subject is not in focus, *either* cannot be inserted between the verb and the ECM-subject, on pain of a violation of the same general ban that also manifests itself in the examples in (54). The representations in (55) sum this up.

- (55)a. John gave [_{SC} (*either) [_{SC} [(*)either) a book] [_{PP} to MARY]]] ...
- b. John gave [_{SC} (*either) [_{SC} [([?]either) a BOOK] [_{PP} to MARY]]] ...
- c. John gave [_{SC} (*either) [_{SC} [(either) a BOOK] [_{PP} to Mary]]] ...

That attaching *either* to the subject of the small clause is impossible in (55a) is because this subject is not the first disjunct, the first contrastive focus or a node on the θ -path projected from the first contrastive focus (i.e., *MARY*). That the SC-subject is not the first disjunct or the first contrastive focus is plain; it may not be immediately obvious, however, that it is not on the θ -path projected from *MARY* either. The PP headed by *to* is certainly θ -linked to the contrastive focus, hence on the θ -path; and the SC-subject, receiving an external θ -role from the *to*-PP, is θ -linked to the *to*-PP (cf. (33b)). But that does not make the SC-subject be on the θ -path projected from the contrastive focus: paths (as in Kayne's 1984 theory) are defined, in (33a), in such a way that all nodes on them other than the lowest one (i.e., the one from which the θ -path is projected) must be on the main projection line.

For the c-examples in (48)–(53), where the embedded subject is the sole contrastive focus of the sentence, base-generation of *either* on the subject (as in (55c)) is of course perfectly straightforward. Interestingly, however, we are led to base-generate *either* there in paired focus constructions of the b-type as well: the variants of the b-examples in (48)–(53) with *either* to the immediate left of the subject result not from attachment of *either* to the small or infinitival clause as a whole but rather from attachment of *either* to the first member of the pair of focused constituents (as depicted in (55b)).

The treatment of *either* as a phrasal adjunct and the constituency of *either* and focused subject (whether it be the sole focus or the first member of a pair of foci) can both be confirmed by blocking effects. Thus, while in (56a), *either* can be placed in any of three positions, *wh*-fronting of *to whom* with concomitant subject-auxiliary inversion, as in (56b), is successful if *either* is placed directly on the focused direct object or on the VP, but not if *either* is inserted to the left of the subject (where it is free to be placed if no *wh*-fronting plus concomitant I-to-C movement takes place).

- (56)a. < Either > John < either > gave < either > a BOOK to Mary or a RECORD.
 < Either > John < either > gave < either > a BOOK or a RECORD to Mary.
- b. To whom did < *either > John < either > give < either > a BOOK or a RECORD?

In this respect, *either* behaves precisely like phrasal adverbs such as *probably*, which likewise exert a blocking effect on inversion, as seen in (57).²⁵

- (57) To whom did < *probably > John < probably > give a BOOK?

²⁵ That the blocking effect in (56b) and (57) is one involving subject-aux inversion and not *wh*-fronting is evident from the fact that in *embedded* questions, the effect disappears: thus, both *I'd like to know to whom (either) John gave a BOOK or a RECORD* and *I'd like to know to whom (probably) John gave a book* are grammatical with the bracketed material included. (The roots of the blocking effect seen in (56b) and (57) are not very well understood; see Kayne 1984:Chapter 10 for an interesting perspective.) On root and embedded yes/no-questions, pre-subject *either* and *probably* diverge, which is something I will address in the context of intervention effects in section 4.2.2, below; see the main-text discussion of (67) and also fn. 29.

But *either* is allowed to linearly intervene between the raised auxiliary and the subject in (58a,b), where the subject is focused (either by itself alone or in a paired focus construction). This mimics the absence of a blocking effect on inversion when an adverb is a constituent of the subject, as in (59b), where *often* modifies the gerund in subject position and thus appears embedded within the matrix subject (unlike in the minimally contrasting case in (59a), where *often* is construed as a modifier of the matrix predication).

- (58)a. To whom did [(either) JOHN] give a book or BILL?
 b. To whom did [(either) JOHN] give a BOOK OR BILL a RECORD?
 (59)a. To whom does (*often) [working on focus] seem appealing?
 b. To whom does [(often) working on focus] seem appealing?

The discussion in this section has shown that the restrictions on *either* placement seen in (48)–(53) and (56)–(59) provide substantial evidence to support the view that *either* is a phrasal category – an adjunct attaching to eligible maximal projections. In the next section, I will further support the phrasality of *either*, as well as *neither*, *whether*, *or* and *nor*, on the basis of restrictions on phrasal movement.

4.2. Phrasal Movement

4.2.1. Either vs. Whether

L-*either* (i.e., *either* placed in a position higher in the tree than those left-adjacent to the first disjunct or contrastive focus) is not readily accepted by all speakers: speakers disagree in their appreciation of the variants of (29) (repeated below) with *either* ‘running away’ from the contrastive focus.

- (29)a. <Either> John <either> will <either> read
 <either> CHAPTER 3 or (he’ll read) CHAPTER 4.
 b. <Either> John <either> will <either> READ
 <*either> chapter 3 or (he’ll) DESTROY it.
 c. <Either> John <either> WILL <*either> read
 <*either> chapter 3 or he WON’T.
 d. <Either> JOHN <*either> will <*either> read
 <*either> chapter 3 or MARY (will).
 e. <Either> JOHN <*either> will <*either> read
 <*either> CHAPTER 3 OR MARY CHAPTER 4.

Even those who do not like L-*either* do, however, happily accept *whether* (the [+WH] counterpart of *either*; cf. Larson 1985; Jespersen 1961: Vol. II, p. 200; Vol. III, p. 43; Vol. V, p. 384) ‘running away’ from the focus: the *whether* examples in (60) are perfectly fine for all speakers.

- (60)a. I would like to know whether John will read CHAPTER 3 or CHAPTER 4.
- b. I would like to know whether John will READ chapter 3 or TEAR it UP.
- c. I would like to know whether John WILL read chapter 3 or he WON'T.
- d. I would like to know whether JOHN will read chapter 3 or MARY.
- e. I would like to know whether JOHN will read CHAPTER 3 or MARY CHAPTER 4.

Of course, there is an explicit *trigger* for leftward movement of *whether*: the fact that it is marked [+WH] *forces* it to be in SpecCP, regardless of where it originated and regardless of the question (which speakers apparently react to differently, perhaps for stylistic reasons²⁶) of whether *either* is welcome only on the contrastive focus itself or along the θ -path projected from the contrastive focus.

The very fact that *either* does not ‘run away’ freely and is sometimes actually *prevented* from ‘running away’ (as in the Right Node Raising cases discovered by Schwarz 1999; see section 2), while *whether* is welcome in all contexts in which L-*either* is not, as is seen in the contrast between Schwarz’s (61) and their *whether* counterparts in (62) (cf. Schwarz 1999: 368; Han and Romero 2004), suggests that *either* can only occur in positions in which it can be *base-generated*: it is not allowed to stray further from home via movement in syntax.

²⁶ I say stylistic because I have not found any clear grammatical restrictions at work here in English. There certainly are languages in which the equivalent of *either* is categorically prevented from floating (cf. e.g., French *ou* ‘either/or’ and *ni* ‘neither/nor’), but as far as I know, no variety of English is in that category.

- (61)a. ??Either this pissed Bill or Sue off. (cf. (10))
 b. ??Either they locked you or me up.
 c. ??Either he gulped one or two down.
- (62)a. Whether this pissed Bill or Sue off is unclear. (cf. (17))
 b. Whether they locked you or me up, I can't recall.
 c. Whether he gulped one or two down is immaterial.

I therefore side with Han and Romero (2004) in prohibiting *either* from moving. They attribute this to a parallel between *either* and adverbial material, noting that the fact that adverbs such as *often* do not move by themselves while their [+WH] incarnations (*how often*) do is matched by the contrast between *either* and *whether* when it comes to movement.

4.2.2. Phrasal Movement of Whether: Intervention Effects²⁷

That *whether* is a phrase and moves as a phrase is clear from the fact that it must occur in a position which is known to be reserved for phrases (SpecCP) and which, moreover, is outside the θ -path: though the θ -path extends from the complement of V up to the VP and further up to the IP, it is impossible for the θ -path to be extended further up to CP because IP is not θ -marked by C. That *whether* arrives in SpecCP via movement is confirmed in an interesting way by the fact that its raising to this position is interfered with by 'harmful interveners' – *either*, in particular, blocks movement of *whether* across it. To set this up, consider first the example in (63). This example is acceptable in six surface guises, spelled out in (63a–f). The ones that interest me here in particular are those in (63e,f), both featuring *two* tokens of *either*, one for each disjunction.

- (63) < Either > Mary < either > went < either > SWIMMING OR DANCING, or she stayed at HOME.
 a. Mary went SWIMMING OR DANCING, or she stayed at HOME.
 b. Either Mary went SWIMMING OR DANCING, or she stayed at HOME.

²⁷ The discussion in this section draws in part on Gulli (2003), which also discusses Italian and Calabrian in this connection.

- c. Mary either went SWIMMING OR DANCING, or she stayed at HOME.
- d. Mary went either SWIMMING OR DANCING, or she stayed at HOME.
- e. Either₁ Mary either₂ went SWIMMING OR DANCING, or she stayed at HOME.
- f. Either₁ Mary went either₂ SWIMMING OR DANCING, or she stayed at HOME.

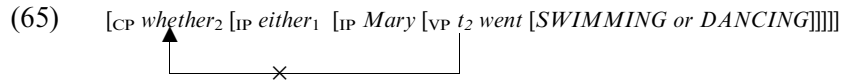
When we replace *either*₁ in (63e,f) with its [+WH] counterpart *whether* and try to raise it to SpecCP, the result is grammatical, as seen in (64a), but replacing *either*₂ with *whether* and raising it across *either*₁ delivers an ungrammatical output (cf. (64b)); the ungrammatical example in (64b) can be rescued, though, by turning it into a paired focus construction, as in (64c).²⁸

- (64)a. I wonder whether Mary (either₂) went (either₂) SWIMMING OR DANCING.
- b. I wonder whether (*either₁) Mary went SWIMMING OR DANCING.
- c. I wonder whether (either₁) MARY went SWIMMING OR SUE went DANCING.

That (64a) is unproblematic with *either* present is not particularly surprising: the base position of *whether* (which here corresponds to *either*₁ in (63e,f)) is higher up the tree than the position occupied by *either*₂. The interesting thing is that (64a) becomes ungrammatical when *either* is attached to the IP (as in (64b)), but that with *either* in exactly the same place in the linear string, (64c) is nonetheless okay. Taking (63e,f) as our model from which to derive the sentences in (64a) and (64b), we can capture the ungrammaticality of (64b) with *either* included as an intervention effect: the position occupied by *either*₁ (i.e., an IP-adjoined position) c-commands and is of the same type as the base position of *whether* (which in (64b) is the [+WH] counterpart of *either*₂ in (63e,f)) – with *whether* crossing over *either* we then get an

²⁸ To keep the sentences relatively simple, I suppressed the additional disjunct *or she stayed at HOME* (or *or they stayed at HOME*, in the case of (64c)). This is a legitimate move: *whether*-constructions in general do not need an *or*-phrase (for reasons that are not entirely transparent but need not concern us here).

ungrammatical result, as desired. The representation in (65) aims to bring this out for the variant of (64b) corresponding to (63e), with *whether* originating in a position adjoined to the VP of *went*.



That (64c) is grammatical must then mean that no intervention effect manifests itself there. And this follows readily in the light of the account of paired focus constructions presented in section 4.1: such constructions have *either* forming a constituent with the first member of the pair of foci (here, the subject). Hence, no intervention effect manifests itself in the paired focus case in (64c): with *either* adjoined to the subject, it is not going to interfere with movement of *whether* in any way whatsoever.

Note that the examples in (66) pattern exactly like those in (64).

- (66)a. I wonder if Mary (*either*₂) went (*either*₂) SWIMMING or DANCING.
- b. I wonder if (**either*₁) Mary went SWIMMING or DANCING.
- c. I wonder if (*either*₁) MARY went SWIMMING or SUE went DANCING.

If the analysis of the latter outlined in the previous paragraph is on the right track, this strongly confirms the hypothesis that in embedded *if*-questions there is null operator movement to SpecCP. And that analysis then readily carries over to *root* yes/no-questions as well (cf. (67)).²⁹

- (67)a. < Either > you < either > ate < either > RICE or BEANS.
- b. < *Either > did < *either > you < either > eat < either > RICE or BEANS?

²⁹ See also Han and Romero (2004). The ungrammaticality of **Did either you eat rice or beans?* is thus taken care of independently of the ungrammaticality of (56b) above, with *either* placed between *did* and *John*. That this is a good result is clear from the fact that, while the deviance of the relevant variant of (56b) vanishes in embedded contexts (cf. fn. 25 for illustration), that of (67b) with *either* to the immediate left of the subject persists: *I was wondering whether < *either > you < either > ate < either > rice or beans.*

Such an analysis is enhanced by the fact that in several languages, including Early Modern English (cf. Radford 1997:295; see (68) for illustration), an overt incarnation of this operator shows up in SpecCP: none other, in fact, than the element *whether*.

- (68)a. Whether had you rather lead mine eyes or eye your
 master's heels? (Mrs Page, *Merry Wives of Windsor*, III.ii)
- b. Whether dost thou profess thyself a knave or a fool?
 (Lafeu, *All's Well that Ends Well*, IV.v)

4.2.3. Phrasal Movement of Neither and Nor: Negative Inversion

Having established that the [+WH] incarnations of *either*, i.e., *whether* and its null-operator counterpart, are phrasal categories undergoing phrasal movement, I now proceed to showing that for its [+NEG] incarnation, which is spelled *neither*, a similar story applies. In (69b) (cf. Culicover 1999) we find *neither* surfacing in a position which is known to be restricted to phrases (the specifier position from which Negative Inversion is triggered) and which clearly lies outside IP, the largest node to which a θ -path can be projected from anything inside IP.

- (69)a. Mary neither spends her vacations at the seashore nor
 does she go to the mountains.
- b. [?]Neither does Mary spend her vacations at the seashore nor
 does she go to the mountains.
- c. *Neither Mary spends her vacations at the seashore nor
 she goes to the mountains.

The examples in (69) also show that *nor*, the [+NEG] counterpart of *or*, exhibits phrasal behaviour as well: it, too, triggers Negative Inversion (obligatorily so), hence must occupy the IP-external A'-specifier position from which Negative Inversion is accomplished.³⁰

The case of German is interesting in this connection as well. Consider the pair in (70) (from Wesche 1995; see also Lechner 2000; Johannessen 2005:436).

³⁰ Culicover (1999:164) contests the claim that Negative Inversion is triggered from a specifier position, saying that one might 'abandon the requirement that negative inversion occurs only when what appears to the left of the inverted auxiliary

- (70)a. Entweder kocht Hans heute, oder Maria ruft den
either cooks Hans today or Maria calls the
 Pizzaservice. (German)
pizza service
 Either Hans cooks today or Maria calls the pizza service.
- b. Weder kocht Hans heute, noch ruft Maria den
neither cooks Hans today nor calls Maria the
 Pizzaservice.
pizza service
 Neither will Hans cook today nor will Maria call the pizza
 service.

(Footnote 30 Continued).

is a phrase', and going on to suggest that negative inversion can 'simply' be stated 'in terms of the linear sequence in the structure, respecting of course the organization into phrases', as in (i).

- (i) $X[+ \text{AFFECTIVE}] \text{ NP } V_{\text{fin}} \text{ Y} \Rightarrow$
 $X[+ \text{AFFECTIVE}] V_{\text{fin}} \text{ NP } \text{ Y}$

The reason why such a linear statement is untenable (even abstracting away from the awkward reference to ' V_{fin} ': only finite *auxiliaries* undergo inversion, of course) is that [+AFFECTIVE] matrix verbs that happen to be linearly adjacent to the subject of their embedded clause (thanks to complementiser deletion) never bring about Negative Inversion – take the case of *deny*, illustrated in (ii).

- (ii)a. Newcastle United footballer Laurent Robert has denied he was
 involved in a scuffle with a local newspaper reporter.
- a'. *Newcastle United footballer Laurent Robert has denied was he
 involved in a scuffle. . .
- b. Mr Vizard, a former lawyer, also denied he had engaged in insider
 trading as a former Telstra director to invest in a computer
 company Sausage Software.
- b'. *Mr Vizard, a former lawyer, also denied had he engaged in insider
 trading. . .
- c. John Armitt denied he had taken on the worst job in Britain, saying
 he liked a 'challenge'.
- c'. *John Armitt denied had he taken on the worst job in Britain. . .

So discarding Culicover's Negative Inversion rule in (i), we are left with the text conclusion that the fact that *neither* and *nor* trigger Negative Inversion shows that *neither* and *nor* are phrases that may sit in specifier positions.

Whereas *oder* ‘or’ does not trigger inversion after it in the second disjunct, *noch* ‘nor’ does. Placing the disjunction particle on the left edge of the second disjunct does not, therefore, give rise to inversion as a matter of course: we do not get a generalised Verb Second effect; whether inversion will be triggered or not depends, in English as in German, on the question of whether the disjunction particle is negative or not.

The facts in (70) thus present a context in which it can be demonstrated that English is not the only Germanic language that distinguishes negative initial constituents from other initial material: Negative Inversion exists in German as well (though in German it is far more difficult to diagnose because of the generalised Verb Second found in (non-coordinated) root clauses, which obliterates the effect of Negative Inversion in most contexts).³¹

Since *whether*, *neither* and *nor* (and *nor*’s German counterpart *noch* in (70b) as well) cannot have been *base-generated* in their IP-external surface positions in (60) and (69b) (because that would prevent them from associating with the contrastive focus), they must have been *moved* into the positions in the left periphery that they appear in. This, then, is a clear indication that *whether*, *neither* and *nor* are phrasal, like *either*, the phrasality of which was demonstrated in section 4.1.

4.2.4. Phrasal Movement of *or*: Locality Restrictions

If *nor* is a phrasal category, as (69) demonstrates, then the same should arguably be true for *or* – unless *or* and *nor* are treated as profoundly different lexical categories, an approach that certainly will not qualify as the null hypothesis. That *or* is indeed phrasal and originates (like *either*) close to the contrastive focus, rather than as a disjunction particle, is evidenced by two sets of empirical data

³¹ In older varieties of the Indo-European languages (e.g., Old and Middle English, Old Norse, Old, Middle and Early Modern High German, Middle and Early Modern Dutch, and Old French; see Zwart 2005:section 3.2.2 and references cited there), non-negative conjunction and disjunction particles could trigger inversion, giving rise to a generalised Verb Second pattern with the con/disjunction particles raising to SpecCP.

involving locality effects that manifest themselves in the context of the ‘*either* too low’ puzzle.³²

The first we encountered already at the end of section 3.5. There we saw that R-*either* across a sentential negation is impossible, as shown by the ungrammaticality of (47a), repeated below along with its grammatical counterparts in (47b,c).

- (47)a. * John didn’t eat either RICE or he didn’t eat BEANS.
 b. John either didn’t eat RICE or he didn’t eat BEANS.
 c. Either John didn’t eat RICE or he didn’t eat BEANS.

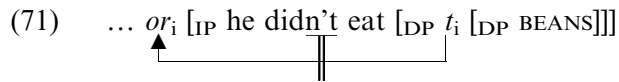
We had also seen that the ban on R-*either* across a sentential negation cannot be blamed on *either* itself: *either*, after all, cannot float rightward (i.e., downward); it is base-generated in the low position it is occupying in (47a), and in that low position, directly on the contrastive focus, it would appear to be perfectly legitimate. The problem with (47a), therefore, does not lie with *either*. Instead, I will argue that it is *or* that is to blame.

If, as I argued extensively throughout the paper, *either* is a phrasal category and if *nor* is, too (cf. section 4.2.3), then we should seriously entertain the possibility that *or* is a phrasal category as well – a phrasal category of the same type as *either*. Suppose, in particular, that *or* originates *either* directly on the second disjunct or alternatively within the second disjunct, attached to the contrastive focus or to a node on the θ -path projected by the contrastive focus (cf. (32)).³³ Suppose, furthermore,

³² The fact that *or* could trigger inversion in earlier varieties of English as well as other Indo-European languages (cf. fn. 31) further supports this conclusion. Joseph Emonds’ (p.c.) observation that the coordinating particle in Japanese occurs between the first and second con/disjuncts may suggest that in Japanese, too, this particle is phrasal, not the lexicalisation of the head ‘J’ in (3) (which, given the general head-final character of Japanese, would be expected to surface exclusively after the second con/disjunct).

³³ That *or* cannot originate *outside* the second disjunct altogether (for instance, in the first disjunct or in the structure above the disjunction construction) follows from the discussion in section 5, where it is argued that *or* needs to check features against J, the abstract functional head of the disjunction construction (cf. (3)): *or* must originate in a position c-commanded by J so that an Agree relationship between J and *or* can be established.

that *or* originates *within* the second disjunct (rather than directly on the second disjunct) if and only if *either* occupies a position within the first disjunct: *or* is preferably base-generated *on* the second disjunct; but parallelism between the two disjuncts ensures that if *either* is somewhere inside the first disjunct, *or*'s base position in the second will match *either*'s in the first. Assuming this much, what we are confronted with in the R-*either* case in (47a) is an underlying representation in which *or* is base-generated inside the second disjunct, directly on the contrastive focus (i.e., in a position adjoined to the maximal projection of *BEANS*). But clearly, it has not stayed there in (47a) – it *cannot* stay there, in fact (something which I will address in section 5.3 below): it must surface at the left edge of the IP that forms the second disjunct. On the assumption that *or* originates in the same hierarchical position within the second disjunct as *either* does in the first, and given that that position is an object-adjoined position, *or* must have *moved* to the position in which it surfaces, via a phrasal movement operation, as depicted in (71). The problem, however, is that *or* CANNOT so move: in so doing, it crosses a sentential negation, which sets up an inner island (cf. Ross 1984).



This locality problem is averted in (47b), where, even though it once again has to be base-generated inside the second disjunct (because *either* is embedded within the first), *or* originates higher up the tree than the sentential negation (in the same relative position that *either* occupies). And naturally, no inner island effect arises in (47c) either: here, *or* attaches directly to the second disjunct and therefore does not need to move. But inner island problems are unavoidable in (47a) on present assumptions – and the fact that they do indeed manifest themselves thus supports the analysis of *or* as a phrasal category that moves to the left edge of the second disjunct whenever it does not originate there.

A second context in which we can see phrasal movement of *or* at work involves R-*either* cases in which *either* surfaces inside a PP or complex noun phrase. Consider first the case of PP-embedding. While (72a) reconfirms the fact (demonstrated already in section 3.1; cf. (21)) that *either* is in principle embeddable in a complement PP,

the sentences in (72b,c), involving disjunction at the level of PP or IP, respectively, show that R-*either* inside a PP is impossible.³⁴

- (72)a. <Either> this sentence is <either> from <either> [NORWEGIAN] or [SWEDISH].
- b. <Either> this sentence is <either> [from <*either> NORWEGIAN] or [from SWEDISH].
- c. <Either> [this sentence is <either> from <*either> NORWEGIAN] or [it is from SWEDISH].

The examples in (73) make the same point: embedding *either* inside the complement PP is legitimate if and only if disjunction is at the level of P's complement (as in the a-examples); as soon as the disjuncts are as large as PP or larger, *either* is prevented from occurring inside PP.

- (73)a. <Either> John was <either> reading <either> from <either> [a BOOK] or [a MAGAZINE].
- b. <Either> John was <either> reading <either> [from <*either> a BOOK] or [from a MAGAZINE].
- c. <Either> John was <either> [reading <either> from <*either> a BOOK] or [reading from a MAGAZINE].
- d. <Either> [John was <either> reading <either> from <*either> a BOOK] or [he was reading from a MAGAZINE].

The quintuplet in (74), which features the PP as the complement of a noun, adds one further piece to the puzzle. These sentences not only confirm that R-*either* inside PP is impossible unless disjunction is at the level of P's complement, but they also show that embedding

³⁴ The ungrammaticality of (72b,c) and (73b–d) with R-*either* in PP is reminiscent of Kayne's (1998) discussion of sentences like *John looked at only Mary all night*, which are ungrammatical for many (though not all) speakers. Recall section 3.1. A reviewer notes that some speakers even reject R-*either* to a P-less direct object (as in *He ate either RICE or he ate BEANS*), which presumably relates to the fact that focus particles to the immediate left of the direct object are sometimes deemed marked as well (Bayer 1996:53).

R-*either* in a complex noun phrase fails as soon as the disjuncts are larger than the noun phrase containing *either*.³⁵

- (74)a. < Either > John was < either > reading < either > a book
< ?either > about < either > [CHOMSKY] or [CHOPSTICKS].
- b. < Either > John was < either > reading < either > a book
< either > [about < *either > CHOMSKY] or [about CHOP-
STICKS].
- c. < Either > John < either > was reading < either > [a book
< ?either > about < *either > CHOMSKY] or [a book about
CHOPSTICKS].
- d. < Either > John was < either > [reading < either > a book
< *either > about < *either > CHOMSKY] or [reading a
book about CHOPSTICKS].
- e. < Either > [John was < either > reading < either > a book
< *either > about < *either > CHOMSKY] or [he was
reading a book about CHOPSTICKS].

The account of the ‘*either* too low’ puzzle outlined in the preceding sections cannot accommodate the ungrammaticality of the relevant variants of (72)–(74). *Either* does not seem to be at fault: it certainly is not embedded within the focused constituent. But in *either ... or ...* disjunctions, it takes two to tango – when something goes awry, that may be because *either* trespassed, but as we have just discovered in our account of (47a), it may also be that *or* has made an illegitimate move. The latter is indeed the case in (72)–(74), as I will argue in the remainder of this section.

I have argued that *or* is a phrasal category originating within the second disjunct iff its counterpart *either* originates in the first disjunct, with *or*’s base position in the second matching *either*’s in the first. Concretely, then, in (75a), since *either* is generated on the direct object of the first disjunct, *or* originates on the direct object of the second disjunct. From there, *or* moves to the position in which it surfaces, via a phrasal movement operation, as depicted in (75b).

³⁵ The variants of (74a) and (74c) with *either* placed on the *about*-PP are somewhat marginal. McCawley (1996:190) notes the same thing for *only* – cf. McCawley’s *Pupils only of Horowitz are allowed to play this piano* and *Books only about PHONOLOGY don’t sell well*, which he finds possible ‘[a]t least marginally’ (he does not give them a question mark, though).

- (75)a. [IP John was reading either a BOOK] [or [IP he was reading a MAGAZINE]].
- b. ... or_i [IP he was reading [DP t_i [DP a MAGAZINE]]]
-

As in the case of (47a)/(71), we expect movement of *or* to be subject to the rules of movement. And it is this expectation that then leads us back to the facts in (72)–(74). Let me pick out the most complicated example of the set, the one in (74e), and flesh out its structure in such a way that it incorporates the insight that *or* originates in the same structural position in the second disjunct that *either* originates in in the first, and that, if not base-generated there, *or* ends up at the left periphery of the second disjunct via *movement*, which leaves behind a trace. The result is (74e’).

- (74e’) < Either > [John was < either > reading < either > a book < *either > about < *either > CHOMSKY] or_i [he was < t_i > reading < t_i > a book < * t_i > about < * t_i > CHOPSTICKS].

It will now be evident why the variants of (74e) featuring *either* to the right of *book* or *about* are ungrammatical: they are bad because, in the derivation of these sentences, *or* must be extracted from a complex noun phrase, *a book about CHOPSTICKS*. Though *wh*-movement from a complex noun phrase of this type is possible in English, we are not dealing with *wh*-movement in the case of the fronting of *or*. Instead, what we have on our hands is more like scrambling in languages like Dutch or German, which is known not to be able to transgress the boundaries of a complex noun phrase.³⁶ So *or* cannot get out of the complex noun phrase into the clause-initial position that we see it in (74e). By the same token, (74d) also fails with *either* – and hence *or*’s base position, too – to the right of *book* or *about*: here again, *or* originates inside the complex noun phrase headed by *book*, and ends up trapped right there.

³⁶ Cf. Dutch (ia,b).

- (i)a. dat Jan < *er > [het boek < er > over] gelezen heeft. (Dutch)
that Jan there the book there about read has
- b. dat Jan < *erover > [het boek < erover >] gelezen heeft.
that Jan there-about the book there-about read has
 that Jan read the book about it.

In (74c), where disjunction is at the level of the complex noun phrase, there is no extraction from a complex noun phrase going on in the derivation of any of the surface variants of the sentence. With *either* attached to the PP headed by *about*, *or* needs to move to the left edge of the complex noun phrase – but in so doing, it does not extract from the noun phrase, and as a result, (74c) with *either* to the right of *book* is grammatical (albeit somewhat marked; recall also fn. 35). That the variant of (74c) with *either* (and hence *or*'s base position as well) inside the *about*-PP is not well-formed is part and parcel of a broader generalisation that also covers the ungrammatical versions of (72b,c), (73b–d) and (74b) – a generalisation that is to be cast in terms of the way extraction from PP takes place.

In particular, the key to the analysis of the PP-containment cases lies in the fact that extraction from PPs proceeds via an intermediate touch-down in an A'-specifier position at the left edge of the PP. Van Riemsdijk (1978) made the initial argument for this kind of analysis on the basis of facts from Dutch and German. In more recent work on the syntactic structure of adpositional phrases, Koopman (1997) and Den Dikken (2003) have argued that adpositions have a fully extended projection reaching all the way up to the CP-level (Koopman's 'CP(Place)', for locative PPs). The specifier position of this CP is the escape hatch through which certain subconstituents of PP can make their way out of the PP – but the escape hatch position is not available for just anything. In Dutch and German, the position is specifically restricted to the so-called [+R] pronouns (Van Riemsdijk 1978). In English, the set of elements eligible for movement through PP's escape hatch is somewhat larger but still not unrestricted: PPs, for instance, cannot extract from the larger PPs that contain them (cf. *Who did you go away after speaking to?* vs. **To whom did you go away after speaking?*). I will assume that the escape hatch position on the edge of P's extended projection is reserved, presumably universally, for *nominal* material (and in some languages, such as Dutch and German, for only a small subset thereof). Though establishing the categorial status of *or* is not an entirely straightforward matter, it seems plain that it is not a nominal element: it resists articles of any kind, as well as attributive modifiers, and will not sit in NP positions by itself. Since, as a result of its non-nominality, *or* is not welcome to the escape hatch at the left edge of the PP, it cannot make its way to the left edge of the second disjunct in the variants

of the examples in (72b,c), (73b–d) and (74b,c) in which *either* (and hence also *or*'s base position) is inside PP. Since *or* has to make its way into that position (for reasons that I will address in section 5.3), the relevant versions of these sentences crash, as desired.

This account of the facts in (72)–(74), just as that of the ungrammaticality of (47a), crucially exploits movement – but movement not of *either* but of *or*. We had already seen that *nor*, the negative counterpart of *or*, must be able to undergo phrasal movement: it brings about Negative Inversion. We have now encountered two concrete pieces of support for the view that *or*, like *nor*, is a phrasal constituent that undergoes leftward movement in the overt syntax – movement which, whenever it is blocked by general locality restrictions, causes the derivation to crash.

5. THE REPRESENTATION AND DERIVATION OF COORDINATE STRUCTURES

The discussion in section 4 emphasises the significance of the phrasal character of *(n)either*, *whether* and *(n)or* and of the movements that these elements undergo in the course of the syntactic derivation. But it still begs the question of why *or* should front. This question will be at centre stage in section 5.3. But first, let me make it explicit what the foregoing discussion leads us to as far as the syntactic structure underlying coordinate constructions is concerned, and let me broaden the discussion to include conjunction constructions with *both ... and ...* as well. This is the topic of sections 5.1 and 5.2.

5.1. *The Syntactic Representation Underlying Coordinate Structures*

The representation in (76a) (a lightly elaborated version of (3), above) illustrates the structure of *(n)either ... (n)or ...* coordination adopted in this paper; (76b) is the structure of *whether ... or ...* constructions.³⁷ These structures incorporate the idea that coordinate structures are well-behaved binary-branching structures projected by a

³⁷ Recall from the discussion in section 3 that *either* does not have to be base-generated in or directly on the first disjunct: in contexts in which a θ -path can be projected well beyond the first disjunct (as, for instance, in sentences such as those in (1)), *either* can be base-generated anywhere along the θ -path, which means that it may also originate outside the disjunction. This is why the structure in (3)/(76a) includes a token of *(n)either* outside JP, a token which represents all cases in which *(n)either* originates outside the disjunction structure, further up the θ -path.

then suggests that *and* is like *or* in being base-generated in a phrasal node and undergoing leftward movement, to the edge of the second conjunct.

5.2. *L*-either vs. *L*-both and the Status of *Either* and *Both*

Note, however, that *both* seems to be quite a bit less overtly phrasal than *(n)either* in that *both* does not ‘run away from home’ as easily as does *(n)either*:

- (78)a. John ate both rice and beans.
- b. ?John both ate rice and beans.
- c. *Both John ate rice and beans.

The sentence in (78b) is not quite as good as *John either ate rice or beans*.³⁸ Blodgett and Boland’s (1998) analysis of the first 150 tokens of *both* in the Wall Street Journal database of the PennTreebank Corpus did not bring forth a single case in which *both* has ‘run away’ to the VP (though they did find one interesting example in which *both* has ‘run away’ to the DP: *both the FTC and Justice Department*); so the phenomenon seems fairly marginal. Interestingly, however, in their experimental work done on *both* in coordinate sentences, Blodgett and Boland (1998) and Blodgett (2000) found that *L*-*both* cases of the type in (78b) are in fact quite popular in sentence-completion tasks – thus, sentence onsets such as *Mary both sold vegetables and ...* were completed by supplying a noun phrase following *and* approx. 80% of the time. Of course this particular sentence completion experiment may have biased *L*-*both* : inserting a noun phrase

³⁸ Some ‘Googled’ examples of the type in (78b) are reproduced in (i).

- (i)a. He both played the violin and Sinekeman [i.e., a Turkish musical instrument]. [<http://interactive.m2.org/Music/cakin.html>]
- b. Nick knew that he both played football as well as basketball. [[http://www.angelfire.com/band2/backstreetfics/Downtime 11.html](http://www.angelfire.com/band2/backstreetfics/Downtime%2011.html)]
- c. He both played as member and a leader. [http://www.crosbystillsnash.com/csny/tour/05012002_PARTING_WORDS/05012002_reviewsPhotos.html]
- d. He both studied at Yale Law School and for the Catholic priesthood at the Sacred Heart Novitiate, a Jesuit seminary. [http://www.gracecathedral.org/enrichment/interviews/int_19991029i.shtml]

is obviously easier (i.e., less time- and energy-consuming) than supplying a VP. But in a follow-up judgement task run by Blodgett (2000), *L-both* was also judged acceptable to a significant degree (approx. 50% of the respondents deemed it perfectly fine), and in an experiment testing listeners' perception of prosodic cues a bias to identify fragments as conjoined noun phrases emerged as well. The phenomenon of *L-both* thus seems to be real, though it is presumably fair to say that it is by no means as natural as *L-either*.

But whatever the status of *L-both* in (78b), it is clear that *both* categorically resists placement in sentence-initial position, as in (78c) (cf. also Larson 1985:260; Hendriks 2003:10). Notice, though, that placement of *both* in sentence-initial position is bad even in cases of IP-coordination such as (79). The deviance of (78c) has nothing to do, therefore, with 'migration': *both* just does not want to be in this position. That *both*'s aversion to this position does not have anything to do with its being the initial position of a finite clause is evident from the fact that it manifests itself also in (80b), where *both* immediately precedes a non-finite IP.

- (79)a. Either John ate rice or Mary ate beans.
 b. *Both John ate rice and Mary ate beans.
- (80)a. The boys seem either [_{IP} all *t* to have gone out] or [_{IP} *t* to have sneaked into the attic].
 b. *The boys seem both [_{IP} all *t* to have gone out] and [_{IP} *t* to have left their coats behind].

It is conceivable that this placement difference between *either* and *both* is related to the fact that *both* qua quantifier of noun phrases demands a *plural* host (cf. (81c)).

- (81)a. [*Either* analysis] will yield the desired result.
 b. [*Neither* analysis] will yield the desired result.
 c. [*Both* analyses] will yield the desired result.

The fact that IP has no interpretable number feature may be a factor contributing to the ungrammaticality of (78c), (79b) and (80b) (though Anikó Lipták, p.c., is right to point out that the grammaticality of *This toy is both expensive and useless* then stands out as a mystery: APs presumably have no interpretable number features

either). If indeed there is a way of making sense of (78c), (79b) and (80b) along these lines, it probably lends support to the hypothesis that *both* and (*n*)*either* in con/disjunctions are not con/disjunction particles but quantifiers (see also Dougherty 1970; Higginbotham 1991; Munn 1993; Culicover 1999 for the observation that the disjunctions *either* and *neither* double as quantifiers).³⁹

5.3. Why (*n*)*or* and *and* and *must be Initial in the Second Disjunct*

This said, let me return to the question of what forces the (*n*)*or/and* in the second dis/conjunct to front to the left edge of the dis/conjunct.

³⁹ Anikó Lipták (p.c.) points out that the Hungarian counterpart to *both ... and ...* (*mind ... mind ...*) employs a quantificational element: *mind* is the floating universal quantifier ‘all’. This supports the text analysis. But interestingly, even though Hungarian *mind ... mind ...* admits of exactly two conjuncts, it does not actually use (floating) ‘both’ (i.e., *mindkét*). Note that in English as well, there are distributional parallels between L-*either* and floating quantifiers: thus, the answer in (iA) is ungrammatical if *cleverly* is interpreted as a manner adverb (‘in a clever way’) but fine with *cleverly* read as a subject-oriented adverb (‘it was clever of her to ...’ or ‘she was clever enough to ...’); the fact that L-*either* resists being placed below a manner adverb matches the fact that floating *all* cannot be placed below a manner adverb either, as seen in (ii) (Bobaljik 1995), which suggests that attachment of floating quantifiers and L-*either* to lexical projections is impossible (but see Bošković 2004 for a different interpretation of (ii)).

- (i)Q: John discussed the English and French facts. What did Sue do?
 A: She cleverly <%either> discussed the DUTCH facts or the GERMAN facts.
- (ii) The students <all> completely <*all> understood.

That (*n*)*either/both* qua quantifier differs from (*n*)*either/both* qua dis/conjunction in being unable to ‘run away from home’ (cf. *John <*either/*both> likes <either/both> reindeer*) does not necessarily defeat an assimilation of the two elements: the fact that quantificational (*n*)*either/both* cannot move away from its nominal host reduces to the entirely general fact that, in languages like English, left-branch constituents of noun phrases cannot be extracted (cf. the Left Branch Condition). Potentially more challenging differences between *either* qua ‘disjunction’ and *either* qua quantifier are the fact that the former is not necessarily binary (cf. *John ate either rice or beans or potatoes*; contra Sag et al. 1985) and that, while the former has a [+WH] counterpart *whether*, there is no such thing as [_{QP} *whether analysis*] serving as a *wh*-phrase in Modern English (though there was in pre-17th c. English, and in biblical English through the 19th c.; see Jespersen 1961:Vol. II, p. 200: *Whether of them twaine did the will of his father?*); instead of *whether*, Modern English uses *which* in this context. I have no solutions to offer for these conundrums.

We have seen that (*n*)*either* and *whether* can be base-generated in a variety of positions on the θ -path, and that, from there, *neither* has the option and *whether* the obligation to move to higher positions, in keeping with locality. But (*n*)*or* and *and* have no choice but to be at the left edge of the second dis/conjunct – that is, examples of the type in (82) and (83) are systematically impossible.

- (82)a. *[[John < either > ate < either > rice] [J_{\emptyset} [he < or > ate < or > beans]]]
 b. *[[John < neither > ate < neither > rice] [J_{\emptyset} [he < nor > ate < or > beans]]]
 c. *[[John < both > ate < both > rice] [J_{\emptyset} [he < and > ate < and > beans]]]
 (83)a. *[[John either laughed] [J_{\emptyset} [he or cried]]]
 b. *[[John neither laughed] [J_{\emptyset} [he nor cried]]]
 c. *[[John both laughed] [J_{\emptyset} [he and cried]]]

Regardless of the locus of focus, (*n*)*or/and* must appear at the left edge of the second dis/conjunct. Two possible hypotheses spring to mind when it comes to answering the question of why this should be the case:

- (i) (*n*)*or/and* has to raise up to J_{\emptyset} in overt syntax to license it(s emptiness); OR:
 (ii) (*n*)*or/and* has to raise to the edge of the second disjunct (a ‘phase’ in the sense of Chomsky 2001) so that J_{\emptyset} can establish an Agree relationship with (*n*)*or/and*, checking its features.

Of these two hypotheses, the latter is presumably the right one for the cases at hand – particularly in view of the fact that what we know about the vicissitudes of head movement (cf. Baker 1988; Hale and Keyser 1993 etc.) suggests that it should be very difficult for (*n*)*or/and*, which after all is a phrasal constituent that occupies a left-branch adjunction position in the tree, to make its way up to J via head movement. I therefore opt for the scenario in (ii) and assume that J has a bundle of uninterpretable formal features which can only be checked against a matching bundle of formal features in (*n*)*or/and* – which explains why (*n*)*or/and* must occur

on the second dis/conjunct, and cannot occur elsewhere (recall fn. 33). On the further assumption that any complement of J that has an instance of *(n)or/and* in it is systematically a phase, the requirement that J establish an Agree relationship with an embedded *(n)or/and* will then force *(n)or/and* to raise to the edge of the phase if it is not base-generated there – which will make it end up in initial position, as desired.

Thus, base-generating *(n)or/and* as a phrasal constituent has no adverse consequences for the account of the fact that *(n)or/and* must be initial in the second dis/conjunct. And of course the idea that *(n)or* and *and* originate in a phrasal position has the significant advantages of (a) assimilating them to their correlates *(n)either* and *both* in/on/outside the first dis/conjunct, (b) explaining the fact that fronting of negative *nor* necessarily leads to subject-auxiliary inversion (an instance of Negative Inversion), and (c) accounting for the locality and intervention effects canvassed in section 4.

5.4. Acquisition

In closing, let me raise the question of how the learner should reach the conclusion that the junction head ‘J’ in English coordination constructions is systematically empty and that the overt coordinator (*or*, *nor*, *and*) originates inside the second dis/conjunct. For *nor*, the answer to this question is most easily reached, on the basis of the positive evidence from Negative Inversion in the second disjunct. The fact that *nor* must be initial while *neither* can but does not have to be then leads to the conclusion that there is some structural trigger for placing the coordinator at the left edge of the second disjunct (the trigger being the need to establish a feature-checking Agree relationship with ‘J’), in the same position that *neither* moves into when it does indeed front. Extrapolating from the fact that *nor* can end up at the left edge of the second disjunct via movement and must hence be phrasal, the learner reaches the same conclusion (in the absence of evidence to the contrary) for *or* and, beyond this, *and* as well. This delivers precisely the result we desire – a grammar that incorporates (3)/(76) that successfully generates the well-formed cases of L-*either/both* and R-*either/both* that were catalogued in this paper and rules out all the ungrammatical cases (which, given the ‘no negative evidence’ constraint, cannot be the learner’s impetus to the construction of the grammar of dis/conjunction).

MARCEL DEN DIKKEN

6. CONCLUDING REMARKS

Starting out from the two major puzzles that the syntax of *either ... or ...* presents us with – the ‘*either* too high’ puzzle in (1) and the ‘*either* too low’ puzzle in (2) – this paper has laid out an extended argument in favour of an approach to *either ... or ...* that assumes that (i) both *either* and *or* are phrasal categories, (ii) *either* and *or* are base-generated in a position adjoined directly to their disjunct or to (a node on the θ -path projected from) the contrastive focus, but never *lower* than (or *inside*) the contrastive focus, and (iii) (*n*)*or*, if not base-generated on the edge of the second disjunct, moves there (subject to the familiar restrictions on movement) in order to be able to participate in a feature-checking Agree relationship with the abstract head J(unction), the head that takes the second disjunct as its complement and the first disjunct as its specifier, as depicted in (3). The analysis was extended to cover *whether ... or ...* and *both ... and ...* coordination constructions, which likewise feature the JP structure in (3) (cf. (76)) and again do not analyse the element introducing the second dis/conjunct as the lexicalisation of the ‘J’ head but as a phrasal category establishing a feature-checking relationship with abstract ‘J’ instead.

REFERENCES

- Abney, Stephen. 1987. *The English Noun Phrase in its Sentential Aspect*, Ph.D. dissertation, MIT.
- Baker, Mark. 1988. *Incorporation*, University of Chicago Press, Chicago.
- Bayer, Josef, 1996. *Directionality and Logical Form*, Kluwer Academic Publishers, Dordrecht.
- Blodgett, Allison. 2000. ‘Prosodic Cues “and” Syntactic Disambiguation’, *OSU Working Papers in Linguistics* **53**, 1–30.
- Blodgett, Allison and Julie Boland. 1998. ‘Understanding *both* in Coordinate Structures: The OSU Subject Pool Both Surprised Allison and Julie!’, Poster presented at the 11th CUNY Conference on Human Sentence Processing, Rutgers University, March 1998.
- Bobaljik, Jonathan. 1995. *Morphosyntax: The Syntax of Verbal Inflection*, Ph.D. dissertation, MIT.
- Bošković, Željko, 2004. ‘Be Careful Where you Float your Quantifiers’, *Natural Language and Linguistic Theory* **22**, 681–742.
- Büring, Daniel. 2002. ‘Focus Projection and Default Phonology’, Paper presented at Lund University, December 2002; ms., UCLA.
- Chomsky, Noam. 1971. ‘Deep Structure, Surface Structure and Semantic Interpretation’, in D. Steinberg and J. Jakobovits (eds.), *Semantics: An Interdisciplinary*

EITHER-FLOAT AND THE SYNTAX OF CO-OR-DINATION

- Reader in Philosophy, Linguistics and Psychology*, Cambridge University Press, Cambridge, pp. 183–216.
- Chomsky, Noam. 1986. *Barriers*, MIT Press, Cambridge, MA.
- Chomsky, Noam. 1995. *The Minimalist Program*, MIT Press, Cambridge, MA.
- Chomsky, Noam. 2001. 'Derivation by Phase', in M. Kenstowicz (ed.), *Ken Hale: A Life in Language*. MIT Press, Cambridge, MA, pp. 1–52.
- Culicover, Peter. 1999. *Syntactic Nuts*, Cambridge University Press, Cambridge.
- Den Dikken, Marcel. 1995. *Particles. On the Syntax of Verb-Particle, Triadic and Causative Constructions*, Oxford University Press, Oxford/New York.
- Den Dikken, Marcel. 2003. 'On the Syntax of Locative and Directional Adpositional Phrases', ms., CUNY Graduate Center.
- Dougherty, Ray. 1970. 'A Grammar of Coordinate Conjoined Structures: I', *Language* **46**, 850–898.
- É. Kiss, Katalin. 1998. 'Identificational Focus Versus Information Focus', *Language* **74**, 245–273.
- É. Kiss, Katalin. 2000. *The Syntax of Hungarian*, Cambridge University Press, Cambridge.
- Emonds, Joseph. 1985. *A Unified Theory of Syntactic Categories*, Foris, Dordrecht.
- Gulli, Antonino. 2003. *Phrasal Reduplication in Syntax*, Ph.D. dissertation, CUNY Graduate Center.
- Hale, Kenneth and Samuel Jay Keyser. 1993. 'On Argument Structure and the Lexical Expression of Syntactic Relations', in K. Hale and S.J. Keyser (eds.), *The View from Building 20*, MIT Press, Cambridge, MA, pp. 55–109.
- Han, Chung-hye and Maribel Romero. 2004. 'The Syntax of *Whether/Q* ... or Questions', *Natural Language and Linguistic Theory* **22**, 527–564.
- Hendriks, Petra. 2001. 'Initial Coordination and the Law of Coordination of Likes', in H. Broekhuis and T. van der Wouden (eds.), *Linguistics in the Netherlands 2001*, John Benjamins, Amsterdam, pp.127–138.
- Hendriks, Petra. 2003. '*Either* as a Focus Particle', ms., University of Groningen.
- Hendriks, Petra. 2004. '*Either, Both* and *Neither* in Coordinate Structures', ms., University of Groningen.
- Higginbotham, James. 1985. 'On Semantics', *Linguistic Inquiry* **16**, 547–593.
- Higginbotham, James. 1991. 'Either/or', in T. Sherer (ed.), *Proceedings of the North East Linguistic Society*, Vol. 21, GLSA Publications, Amherst, MA, pp. 143–155.
- Hoeksema, Jack and Frans Zwarts. 1991. 'Some Remarks on Focus Adverbs', *Journal of Semantics* **8**, 51–70.
- Hoekstra, Teun. 1988. 'Small Clause Results', *Lingua* **74**, 101–139.
- Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*, MIT Press, Cambridge, MA.
- Jespersen, Otto. 1961. *A Modern English Grammar on Historical Principles*, George Allen & Unwin London. Ejnar Munksgaard, Copenhagen.
- Johannessen, Janne Bondi. 1998. *Coordination*, Oxford University Press, Oxford/New York.
- Johannessen, Janne Bondi. 2005. 'The Syntax of Correlative adverbs', *Lingua* **115**, 419–443.
- Kayne, Richard. 1975. *French Syntax. The Transformational Cycle*, MIT Press, Cambridge, MA.
- Kayne, Richard. 1984. *Connectedness and Binary Branching*, Foris, Dordrecht.

MARCEL DEN DIKKEN

- Kayne, Richard. 1994. *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.
- Kayne, Richard. 1998. 'Overt vs. Covert Movement', *Syntax* 1, 128–191. (Reprinted in Richard Kayne, 2000, *Parameters and Universals*, Oxford University Press, Oxford/New York, pp. 223–281.)
- Kenesei, István. 1986. 'On the Logic of Hungarian Word Order', in W. Abraham and S. de Meij (eds.), *Topic, Focus, and Configurationality*, John Benjamins, Amsterdam, pp. 143–159.
- Klima, Edward. 1964. 'Negation in English', in J. Fodor and J. Katz (eds.), *The Structure of Language: Readings in the Philosophy of Language*, Prentice-Hall, Englewood Cliffs, NJ, pp. 246–323.
- Koopman, Hilda. 1997. 'Prepositions, Postpositions, Circumpositions and Particles: The Structure of Dutch PPs', ms., UCLA (available on-line at: <http://www.linguistics.ucla.edu/people/koopman/papers/pp.pdf>).
- Larson, Richard. 1985. 'On the Syntax of Disjunction Scope', *Natural Language and Linguistic Theory* 3, 217–264.
- Lechner, Winfried. 2000. 'Bivalent Coordination in German', *Snippets* 1, 11–12.
- Lipták, Anikó. 2001. *On the Syntax of Wh-items in Hungarian*, Ph.D. dissertation, University of Leiden.
- Manzini, Rita and Anna Roussou. 2000. 'A Minimalist Theory of A-movement and Control', *Lingua* 110, 409–447.
- Marantz, Alec. 1997. 'No Escape from Syntax: Don't Try Morphological Analysis in the Privacy of Your Own Lexicon', in A. Dimitriadis et al. (eds.), *Penn Working Papers in Linguistics*, Vol. 4, pp. 201–225.
- McCawley, James. 1996. 'The Focus and Scope of Only', in B. Partee and P. Sgall (eds.), *Discourse and Meaning. Papers in Honor of Eva Hajičová*, John Benjamins, Amsterdam, pp. 171–193.
- Munn, Alan. 1993. *Topics in the Syntax and Semantics of Coordinate Structures*, Ph.D. dissertation, University of Maryland, College Park.
- Neijt, Anneke. 1979. *Gapping: A Contribution to Sentence Grammar*, Foris, Dordrecht.
- Radford, Andrew. 1997. *Syntactic Theory and the Structure of English: A Minimalist Approach*, Cambridge University Press, Cambridge.
- Rochemont, Michael. 1986. *Focus in Generative Grammar*, John Benjamins, Amsterdam.
- Rooth, Mats. 1985. *Association with Focus*, Ph.D. dissertation, University of Massachusetts, Amherst.
- Ross, John Robert. 1984. 'Inner Islands', in C. Brugman and M. Macaulay (eds.), *Proceedings of the 10th Annual Meeting of the Berkeley Linguistics Society*, pp. 258–265.
- Sag, Ivan, Gerald Gazdar, Thomas Wasow and Steven Weisler. 1985. 'Coordination and How to Distinguish Categories', *Natural Language and Linguistic Theory* 3, 117–171.
- Schwarz, Bernhard. 1999. 'On the Syntax of Either ... or', *Natural Language and Linguistic Theory* 17, 339–370.
- Schwarzschild, Roger. 1999. 'GIVENNESS, AVOIDF and other Constraints on the Placement of Accents', *Natural Language Semantics* 7, 141–177.
- Selkirk, Lisa. 1984. *Phonology and Syntax: The Relation between Sound and Structure*, MIT Press, Cambridge, MA.

EITHER-FLOAT AND THE SYNTAX OF CO-OR-DINATION

- Selkirk, Lisa. 1995. 'Sentence Prosody: Intonation, Stress, and Phrasing', in J. Goldsmith (ed.), *The Handbook of Phonological Theory*, Blackwell, Oxford, pp. 550–569.
- Selkirk, Lisa. 2003. 'Focus Prosody: Interface Economy and Surface Enhancement', abstract of a paper presented at Yale University, available on-line at: <http://www.yale.edu/linguist/SelkirkAbstract.doc>.
- Stowell, Tim. 1981. *Origins of Phrase Structure*, Ph.D. dissertation, MIT.
- Van Riemsdijk, Henk 1978. *A Case Study in Syntactic Markedness*, The Peter de Ridder Press, Lisse.
- Wesche, Birgit, 1995. *Symmetric Coordination. An Alternative Theory of Phrase Structure. Linguistische Arbeiten*, Max Niemeyer Verlag, Tübingen.
- Wilder, Chris. 1997. 'Some Properties of Ellipsis in Coordination', in A. Alexiadou and T.A. Hall (eds.), *Studies on Universal Grammar and Typological Variation*, John Benjamins, Amsterdam, pp. 59– 107.
- Williams, Edwin. 1981. 'Argument structure and morphology', *The Linguistic Review* **1**, 81–114.
- Zwart, Jan-Wouter. 2005. 'Verb Second as a Function of Merge', in M. den Dikken and C. Tortora (eds.), *The Function of Function Words and Functional Categories*, John Benjamins, Amsterdam, pp. 11–40.

Received 7 November 2003

Revised 26 April 2005

Linguistics Program
CUNY Graduate Center
365 Fifth Avenue
New York, NY 10016–4309
USA
<MDen-Dikken@gc.cuny.edu >