

Anti-Locality: Too-Close Relations in Grammar

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1. Overview

Anti-locality, in the sense used here, provides a perspective on locality conditions imposed on movement dependencies that pays close attention to a possible lower bound on legitimate distance.¹ In essence, it is encapsulated by the *Anti-Locality Hypothesis* stated in (1), which will be picked up in the next section from a quasi-historical vantage point, put in perspective throughout this chapter, and embellished with a presentation of more recent theoretical and empirical work pertaining to it.

- (1) *Anti-Locality Hypothesis* (Grohmann 2003b: 26)
Movement must not be too local.

This take on (anti-)locality did not emerge from a vacuum, however. On the one hand, a dissertation written just a little later (Abels 2003) dealt with ‘too-close’ relations in syntax under the same name, but for a somewhat different purpose and within quite a different set of theoretical assumptions. In addition, there are several obvious precursors in work from the mid 1990s that was never, as far as I am aware of, pursued any further (Murasugi & Saito 1995; Bošković 1994, 1997; Ishii 1997, 1999; and Saito & Murasugi 1999, all cited by Abels).

In this chapter, I will first localize the idea of ‘anti-locality’ with respect to both the current understanding of the notion and its roots in generative theorizing. This will eventually lead to an exposition of the Anti-Locality Hypothesis (1) in the context of a structural tripartition through *Prolific Domains* and, subsequently, to the notion of *Copy Spell-Out* as a ‘repair strategy’ to void an anti-locality violation that would arise otherwise. This will finally be related to the conceptual underpinnings of *Prolific Domains*, and a specific explanation of the Anti-Locality Hypothesis, stemming from interface conditions on the derivation and the computational system at large.

Despite the emphasis on my own formulation of anti-locality, I would like to stress from the outset that, while presented in tandem, the tripartition of the clause into *Prolific Domains* and its relation to anti-locality (including *Copy Spell-Out*) are quite independent from each other. With the discussion of anti-locality in a broader context, I intend to show that a domain-partitioning serves as one possible evaluation metric for anti-local relations (perhaps even the wrong one), with the latter related to, yet conceptually independent from, the former; I will also make the attempt to relate anti-locality to Phase Theory (Chomsky 2000 *et seq.*). The upshot of this chapter will be a comprehensive discussion and much-needed characterization of anti-locality—the Cinderella of contemporary theorizing on locality effects in natural language, which as such requires, and deserves, more thorough attention.

2. Too-Short (Movement) Dependencies

The term ‘anti-locality’ was first used as such and couched within a larger theoretical framework in Grohmann (2000b) to capture the intuition that movement is not only delimited by an upper bound, but that the distance between two syntactic objects in a given (movement) dependency or chain is also subject to a lower bound in order to be licit. This intuition was then picked up by Abels (2003), who (correctly, yet only in passing) points to intellectual precursors in the literature engaged in attempts of ruling out too-close relations in phrase structure. These, and related issues, will be presented first. One of the central questions here regards the evaluation metric for anti-locality: If anti-locality, as understood here, is a ban on ‘too-short movement steps’ or ‘too-close structural dependencies’, over which derivational-structural part or domain is it to be computed, and when does this evaluation take place?

2.1. Ban on Specifier–Adjunction Dependencies

Possibly the earliest discussion of a too-close relation between two syntactic objects in phrase structure in the relevant sense, or a too-short movement step in derivational terms—certainly the first in the minimalist literature—is the central concern of Saito & Murasugi’s (1999) chapter, originating in a 1993 manuscript. Given an economy condition on derivations such as (2), also known as Minimize Chain Links (MCL),

- (2) *Economy of Derivation* (Chomsky & Lasnik 1993: 546)
Minimize chain links.

discussed in Chomsky & Lasnik (1993: 540ff.; cf. Chomsky 1995: 90) and also aimed at capturing Relativized Minimality effects (Rizzi 1990), the question arises not only how to compute well-formed chain links, but also how minimized they can be. This is particular relevant in the context of Takahashi’s (1994) influential framework, where, rather than checking a feature in intermediate positions, successive-cyclic movement follows from the requirement that individual movement steps be local (see Bošković 2002 and especially Boeckx 2003 for implementations and further refinements of Takahashi’s proposal): Each chain link must be as short as possible, as per (2); see also Manzini (1994) for the suggestion that movement must pass through the domain of every head. Even though they do not explicitly say so, with this background, one can interpret one of Saito & Murasugi’s goals so as to formulate a minimal satisfaction of minimizing chain links, that is, a lower boundary of distance to be traversed in any movement step—or: an anti-local requirement on dependencies.²

One of the side effects of Saito & Murasugi’s work, as observed by Bošković (1994, 1997), was that ‘vacuous topicalization’ of subjects in English can be ruled out. Within the GB-framework, where topicalization (3b), was—following Ross’s (1967) Chomsky-adjunction analysis (see also Iwakura 1978)—(free) adjunction to S (Baltin 1982) or IP (Lasnik & Saito 1992), thus derived from (3a), we can observe that subjects, unlike objects, cannot undergo this free adjunction step (3c).

- (3) a. John likes Mary.
 b. Mary_i, John likes *t_i*.
 c. *John_i, *t_i* likes Mary.

The relevance of subject-topicalization becomes more imminent in embedded contexts, where an IP-adjunction analysis was, at the time, even more undisputed (discussed in detail by Lasnik & Saito 1992, who also provide (4) below, taken in this presentation from Boeckx 2007: 102, citing Bošković 1994).³

- (4) a. I think that [_{IP} Mary, [_{IP} John likes <Mary>]].
 b. *I think that [_{IP} John, [_{IP} <John> likes Mary]].

Frampton (1990) already ruled the IP-adjoined position out as a possible landing site for subjects in English, but Saito & Murasugi's intention was to capture such a ban on independent grounds. The ban can be represented schematically as in (5), where 'specifier-adjunction' is meant to denote adjunction of a specifier within the same maximal projection XP—here, IP.⁴

- (5) *Ban on Specifier-Adjunction*
 * [_{IP} XP_i [_{IP} *t_i* I⁰ ...]]

This ban might be interpreted more generally as a filter disallowing phrasal movement from [Spec,XP], a specifier position of some phrase, to [Adj,XP], an adjoined position of the same phrase. If so, it would be nice to deduce this filter as a property of the computational system, that is (if it holds, of course), on independent grounds and not as a language- or even construction-specific constraint.

Saito & Murasugi capture the Ban on Specifier-Adjunction more formally through the following two-clause constraint, which I choose to call the obvious Constraint on Chain Links (CCL) and frequently return to throughout the chapter:

- (6) *Constraint on Chain Links [classic]* (after Saito & Murasugi 1999: 182)
 a. A chain link must be at least of length 1.
 b. A chain link from α to β is of length n iff there are n 'nodes' (X, X' or XP, but not segments of these) that dominate α and exclude β .

They employ (6) to explain the ungrammaticality of a number of extractions within the clause IP and the nominal layer DP. One example is the contrast in (7):

- (7) a. Who_i does John think [_{CP} *t_i* [_{IP} *t_i* fixed the car]]?
 b. *Who_i does John wonder [_{CP} how_k [_{IP} *t_i* fixed the car *t_k*]]?]

Here, the argument goes, *who* cannot adjoin to IP as an escape hatch from the embedded clause and then *wh*-move to the matrix [Spec,CP] which, all things being equal (both being A'-movements), might otherwise be a conceivable derivation.

The same argument can be made to successfully rule out complementizer-less subject relatives in English, as Bošković (1997: 26) notes, who picks up an idea from Law (1991) and argues that, under economy considerations, an IP-adjunction analysis of the null operator *Op* in (8a) should be preferred over a CP-analysis in (8b)—hence barring *Op* in subject position from adjoining to IP, as in (9).

- (8) a. the man [_{IP} *Op*_i [_{IP} John likes *t*_i]]
 b. the man [_{CP} *Op*_i [_{C'} C [_{IP} John likes *t*_i]]]

- (9) *the man [_{IP} *Op*_i [_{IP} *t*_i likes Mary]]

Apparently, some languages seem to allow a violation of the CCL in exactly these contexts. Bošković (1997: 27) provides an example from 15th-century Italian (Rizzi 1990: 71, citing Wanner 1981), and mentions comparable short zero-subject relatives in the period of English shortly after (Bošković 1997: 185–186, n. 30), found in Shakespeare, where, similar to the null-subject language Italian, null subjects are also found (data and discussion communicated to him by Andrew Radford):

- (10) Ch'è faccenda [_{IP} *Op*_i [_{IP} *pro* [_{VP} tocca a noi *t*_i]]] (Italian, 15th century)
 for is matter concerns to us
 'For this is a matter (that) concerns us.'

- (11) a. There is a lord will hear you play tonight. (*Taming of the Shrew*, c. 1590)
 b. Youth's a stuff will not endure. (*Twelfth Night*, c. 1601)

Bošković suggests that such data do not run counter to the CCL after all, since in null-subject languages, the null operator *Op* can be moved from its base-generated position ([Spec,VP] in earlier stages of the theory, nowadays commonly assumed [Spec,vP], a point to be returned to presently), with the subject position [Spec,IP] or [Spec,TP] respectively filled by a null expletive (instead of Rizzi's *pro* in (10)—if this is needed for null-subject languages to begin with; cf. Alexiadou & Anagnostopoulou 1998).

Note, however, as Volker Struckmeier (p.c.) reminds me, that several dialects of present-day, Modern English also allow short zero-subject relativization, such as the so-called 'subject contact relatives' (Doherty 1993) in (12), termed 'contact-clauses' by Jespersen (1961: 132ff.), as den Dikken (2005: 694) points out, where these are taken from (cf. Jespersen 1961: 1444).⁵

- (12) a. There's one woman in our street went to Spain last year.
 b. It's always me pays the gas bill.
 c. I have one student can speak five languages.
 d. He's the one stole the money.

From a conceptual perspective, if the CCL were a grammatical constraint, it would also not be desirable to allow its violation in some languages.

2.2. Ban on Complement–Specifier Dependencies

If there is anything to anti-locality in terms of a minimal distance requirement on movement steps—that is, if a constraint on syntactic operations, or the computational system more generally, should derive the Anti-Locality Hypothesis—it should involve more than just a ban on XP-adjunction from [Spec,XP].⁶ This would be expected if the CCL is a good means of capturing the data presented in the previous sub-section; in fact, under a multiple-specifier approach to phrase structure (Chomsky 1995), not available to Murasugi and Saito at the time of writing either work, the constraint already rules out, as desired, movement from one specifier position to another within the same maximal projection. In this sub-section, and especially the next, more empirical evidence will be collected for something like an anti-locality constraint on linguistic structures in grammar and possible formulations of it will be sketched based on the CCL, used from now on in a slight reformulation, as the Modified Constraint on Chain Links:

(13) *Constraint on Chain Links [modified]*⁷ (after Bošković 2005: 16)

Each chain link must be at least of length 1, where a chain link from α to β is of length n iff there are n XPs that dominate α but not β .

Bošković (1994) already introduced this modification (see the Original Constraint on Chain Links in note 7) in order to rule out the illicit movement in (14c): The internal argument cannot move to the external argument position to yield (14a) with a plausible hypothetical interpretation of (14b).

- (14) a. *John likes.
 b. John likes himself.
 c. [_{VP} John likes ~~John~~]

Since there is an additional complication in terms of phrase-structural assumptions, these cases will be discussed in more detail in the next section, which will lead to a new take on the Anti-Locality Hypothesis.

Note first off that—if the CCL rules out movement from α [Spec,XP] to β [Adj,XP] because no maximal projection is crossed that dominates α but not β , thus resulting in a length of the chain link less than 1—movement from the complement position to the specifier within one and the same projection should likewise be ruled out. This is exactly what Abels (2003) seems to be concerned with for the most part.^{8,9} He presents data such as the following (as well as comparable examples from French and Icelandic; cf. Abels 2003: 116–117):

- (15) a. Nobody believes that anything will happen.
 b. That anything will happen, nobody believes.
 c. *Anything will happen, nobody believes that.

What we observe here is that CP is ‘mobile’, in Abels’ terms, but TP, the complement of the phase head C (*that*), is not.¹⁰ Thus there is a ban on moving TP out of CP, across and stranding its head, as in (15c), while extracting the entire CP, complement of a higher verb, is legitimate (15b).

On a par with the Ban on Specifier-Adjunction in (5) above, this ban might be interpreted more generally as a filter disallowing phrasal XP-movement from a complement position of some phrase, [Compl,XP], to a specifier of the same phrase, [Spec,XP]. Structurally, we can then think of it as a Ban on Compl-to-Spec (cf. the Revised Ban on Specifier-Adjunction from (ii) of note 4 for the notation now used):

(16) *Ban on Compl-to-Spec*

*[_{XP} YP_i [_{X'} X⁰ ~~YP_i~~]]

If so, it would be nice to deduce this filter as a property of the computational system, that is—if it holds, of course—on independent grounds and not as a language- or even construction-specific constraint. Abels suggests he does (but see right below and note 9). His approach ties in with Phase Theory (Chomsky 2000 *et seq.*), more specifically, with the need to move within a feature-checking/valuation framework. In the approaches stemming from (either version of) the CCL, it would arguably be by stipulation: Within a specified phrase-structural configuration, movement minimally must cross a particular number/type of nodes. The understanding of anti-locality developed at length in Grohmann (2000b) and related work will give the “independent grounds” a twist which will be presented and discussed in subsequent sections.

First, let us consider Abels’ own ‘historical precursor’, the Head Constraint (HC) of van Riemsdijk (1978) in (17), which he resurrects and—rightly, I believe (Boeckx & Grohmann 2007)—relates to the Phase Impenetrability Condition (PIC) first formulated in Chomsky (2000) in (18).^{11,12}

(17) *Head Constraint [adapted]* (from Abels’ version of van Riemsdijk 1978)

No rule may involve X_i (X_j) and Y in the structure ... X_i ... [_α ... Y ...] ... X_j ... if Y is c-commanded by the head of α, where α ranges over V, N, A, P.

(18) *Phase Impenetrability Condition [strong]* (Chomsky 2000: 108)

In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.

Abels (2003: 41) notes that “[t]he only difference between the two conditions is that van Riemsdijk includes a list of categories to which the [HC] applies, whereas Chomsky does not consider this list (i.e. the specification of which XPs are phases) part of the definition of the [PIC]”—but there is no need to, since phase heads are independently defined by Chomsky (2000, 2001); see Boeckx & Grohmann (2007) for discussion and further references. HC and PIC are thus virtually identical, both banning an element outside (phase) XP relating to the complement of the (phase) head or any other element properly contained in it.

(19) a. $*$

b. \checkmark

As far as I can see, all of Abels' cases (including those not discussed here^{13,14}) are covered by the CCL—whether the Original CCL from (i) in note 7, the Classic CCL from (6), or the Modified CCL from (13). The question is whether the CCL is a 'deep' enough explanation (if any at all; see also note 9). As just suggested, if correct, economy considerations would be enough to rule out vacuous Merge and derivational steps akin to (19a)—that is, Spec-to-Adj and Compl-to-Spec (or even Compl-to-Adj, not discussed here) would be in admissible movement steps from a checking perspective. However, such a conclusion rests on the legitimacy of assumed checking configurations and the stipulation that all movement is feature-driven; not entering into a discussion on Spec-Head checking versus Agree, see also note 18 for further complications. In sum, the status of the CCL does not appear crystal clear at this point. In the next sub-section, I will thus present yet another take on anti-locality and initially suggest a reformulation of the CCL to cover the new sets of data. This will lead us to a fresh look at the relevant domain within which movement is banned. Since I will concentrate on a slightly expanded view of anti-locality, the kind of "deeper" explanation on independent grounds I am looking for will be formulated in somewhat different terms, which requires additional discussion. This is what sections 3 and 4 will be concerned with.

2.3. Ban on Domain-Internal Dependencies

The first attempt to systematically investigate and capture too short (or as used here, anti-local) movement steps—that is, too-close relations in phrase structure—was originally presented in Grohmann (2000b). There the term ‘anti-locality’ was also first offered to this class of linguistic structures, which I refined in follow-up work (much of it carried out in collaboration with, but also independently by, a number of other researchers). It centered around the ungrammaticality of ‘paradigmatic structures’ such as the a-examples in the following, and a very particular interpretation thereof.

- (20) a. *John likes.
b. John likes himself.
- (21) a. *Him (softly) kissed her.
b. He (softly) kissed her.
- (22) a. *What/Which vegetable, Mary detests?
b. What/Which vegetable does Mary detest?

To put the intended interpretation into context, one may wonder why—within the copy theory of movement (Chomsky 1993; Nunes 1995) and in a framework that reinterprets the Theta Criterion derivationally (Bošković 1994; Hornstein 2001; Nunes 2004)—the theta-marked object *John* in (20a) cannot move from its base-generated patient position [Compl,VP] to the position of external argument [Spec,vP] to get theta-marked again: (20a) cannot be derived as in (23) with the interpretation of (20b), or any other. In other words, objects may not move to subject-position within the thematically relevant part of the derivation, argument structure within vP.

- (23) #_[vP] John v⁰ [_{VP} likes-V⁰ ~~John~~]]

As noted for (14) above, the same hypothetical derivation was used by Bošković (1994) to support the ban on Compl-to-Spec movement; however, Bošković assumed a bare VP to host internal and external arguments alike, which, in the light of Larson’s (1988) VP-shell or Hale & Keyser’s (1993) light-verb approaches, is probably not the most accurate analysis for verbal argument structure. Once ‘blown up’ to include (at least) two separate projections, none of the versions of the CCL discussed so far would help in ruling out (14a)/(20a).

Likewise, employing a Pollock-inspired analysis of agreement projections in the split-Infl part of the part of clause structure below CP and above VP (Pollock 1989; Belletti 1990; Chomsky 1991), the question arises why the external argument may not be inserted into the derivation with an accusative case feature, move to the accusative-licensing position—such as [Spec,AgrOP] in Checking Theory (Chomsky 1993)—and then move to [Spec,TP] in order to satisfy the EPP; it could be argued that, in the absence of moving to a case-licensing position, the *in-situ* object receives accusative

case as some default option: (21a) cannot be derived as in (24) with the interpretation of (21b), or any other. In other words, (21a) might represent an example of the impossibility from moving a maximal projection within a split Infl, or expanded TP.

(24) #_{[TP him T⁰ [_{AgrOP ~~him~~ AgrO⁰ [_{vP softly [_{vP ~~him~~ v⁰ [_{vP kissed-V⁰ her]]]]]]]]}}}}}

It goes without saying that in the absence of a fully fledged framework, a ‘default case’ story for the *in-situ* object seems unlikely. Not focusing on licensing case of *her* in (24a), however (perhaps via Agree or covert movement), the point is that within a single clause, an argument cannot move to two case-licensing positions and check two different cases—one possible motivation for the hypothetical movement of *him* in (24); other illicit instances to illustrate this point can be imagined.

Lastly, considering (22), we see that it is not possible to topicalize a *wh*-phrase within the same clause. Assuming a split Comp-layer (see Rizzi 1997 and much subsequent work¹⁵)—where Foc(us)P would license interrogative *wh*-elements and Top(ic)P would license syntactically displaced topicalized expressions—it looks like the movement indicated, from one specifier position to the other, is not allowed: (22a) cannot be derived as in (25) with the interpretation of (22b), or any other. Or in other words, phrasal movement within split Comp, an articulated CP, is not permitted.

(25) #_{[TopP who Top⁰ [_{FocP ~~who~~ Foc⁰ [_{TP Mary T⁰ ... ~~who~~]]]]}}}

(22) also includes a D(iscourse)-linked *wh*-phrase (Pesetsky 1987), *which vegetable*, which is as bad as the bare *wh*-item *what* (or any other). This is relevant as far as the syntax of D-linking goes, which has been likened to topicalization (see Grohmann 2006 for discussion and references). Neither should one worry about the fact that the a- and b-structures in (22) do not form a symmetrical minimal pair as they do in (20) and (21), where (22a) lacks T-to-C movement/*do*-insertion (Lanko Marušič, p.c.): (22b) with comma intonation after the intended *wh*-topic is as bad as (21a):

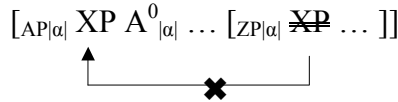
(26) *What/Which vegetable, does Mary detest?

What I argued in earlier work (Grohmann 2000b, 2003a, 2003b) was that data such as (20)–(22) are instantiations of a common pattern—hence ‘paradigmatic structures’, each exemplifying one type of anti-locality domain on the clausal level—allowing us to generalize over the relevant derivational steps highlighted in (23)–(25). Note that this need not be the case, of course: Apart from the specific analytical suggestions raised here, other reasons may come to mind to not even group hypothetical constructions such as those in (20)–(22) together in the way summarized above. But if these three types of linguistic structures can—or perhaps even should—be related, this pattern might be captured by a condition like (27), repeated from (1):

(27) *Anti-Locality Hypothesis* (Grohmann 2003b: 26)
Movement must not be too local.

This is to say that within a domain of clause structure yet to be specified, too-close movement is not allowed, very much in line with previous approaches to anti-locality discussed above. The Anti-Locality Hypothesis could then be presented schematically as in (28), where $|\alpha|$ is some structurally relevant domain within which movement is banned, or more theory-neutrally, within which dependencies cannot be formed.

(28) *Ban on Domain-Internal Dependencies* (Grohmann 2007: 183)



In line with the work presented in the previous sub-sections, α (or rather, $|\alpha|$ in this specific notation) in (28) could perhaps be identified as a maximal projection XP; it would then be captured by the CCL in (13), or its variants in (6) and note 7. However, it is quite obvious that by any standards, most, if not all, of the structures in (23–25) go beyond a single maximal projection (the ‘XP’ referred to in the CCL definitions). That is, if cases such as (20)–(22) cannot be analyzed as involving a single projection, which I take to be a reasonable take, the illicit movement steps in (23)–(25) do not fall under the structural bans the current versions of the CCL would capture, be it Spec-to-Adj (29a), Comp-to-Spec (29b), or Comp-to-Adj (29c):

- (29) a. $*[_{XP} YP [_{XP} \cancel{XP} [_{X'} X \dots]]]$ *Ban on Spec-to-Adj* (cf. (5), note 4)
 b. $*[_{XP} YP [_{X'} X \cancel{XP}]]$ *Ban on Comp-to-Spec* (cf. (16))
 c. $*[_{XP} YP [_{XP} Spec [_{X'} X \cancel{XP}]]]$ *Ban on Comp-to-Adj* (not discussed)

In other words, a ban generalized from (23)–(25) would have to be expressed as something along the lines of (31)—and the question is how, since this clearly runs counter to virtually all standard assumptions about movement.

(30) $*[_{XP} YP [_{X'} X (\dots) [_{ZP} \cancel{XP} [_{Z'} Z \dots]]]]$

A first approximation of an updated version of the CCL required to capture the cases of anti-locality presented in this sub-section could look as follows, where $\Pi\Delta$ stands for ‘Prolific Domain’—for now, a relevant chunk of phrase structure within which movement is ruled out that, unlike (30), integrates $|\alpha|$ from (28).

(31) *Constraint on Chain Links [extended]*

Each chain link must be at least of length 1, where a chain link from α to β is of length n iff there are n $\Pi\Delta$ s that contain α but not β .

The next section is going to introduce the notion of Prolific Domains and ties in their relevance to anti-locality. As a consequence, a differentiated identification of anti-locality and ways of capturing it vis-à-vis the CCL will be presented first, followed by a discussion of some issues arising for a formulation of the Anti-Locality Hypothesis within Phase Theory (Chomsky 2000 *et seq.*).

3. Prolific Domains

What (28) expresses is the idea that a structural configuration can be found that may include a number of projections (such as AP...ZP)—which all, however, share a common ‘contextual index’, indicated by $|\alpha|$ —that is, something I baptized a Prolific Domain, understood as follows (originally proposed in Grohmann 2000b: 58):

- (32) *Prolific Domain* (Grohmann 2007: 183; adapted from Grohmann 2003b: 75)
 A Prolific Domain is a contextually defined part of the computational system,
 i. which provides the interfaces with the information relevant to the context
 and
 ii. which consists of internal structure interacting with derivational operations.

Now, if we can identify a group of projections that share some common contextual properties, we might have at our hands a deeper explanation for anti-locality, given that the following consequence can be demonstrated to be viable: Each such Prolific Domain directly feeds the interpretive components of the grammar (i.e. LF and PF, viz. (32.i)), yet is structurally complex, allowing for movement operations applied within and beyond (viz. (32.ii)).

I suggest that there exists a natural class of such domains within the clause which make up a tripartition of the clause along the lines laid out here (originally proposed in Grohmann 2000b: 55):

- (33) *Clausal Tripartition* (Grohmann 2003b: 74)
 i. Θ -Domain: part of derivation where thematic relations are created
 ii. Φ -Domain: part of derivation where agreement properties are licensed
 iii. Ω -Domain: part of derivation where discourse information is established

Structures contained within each of these Prolific Domains share what I call a “common context” ($|\alpha|$ from (28), where the specific context is thus $|\Theta|$, $|\Phi|$, or $|\Omega|$ for Theta-/ Θ -Domain, Agreement-/ Φ -Domain, or Discourse-/ Ω -Domain, respectively):

- (i) *thematic relations* correspond to the kind of argument structure known to be created within ν P and projections contained within it (at least VP, but possibly also other projections such as inner aspect or applicatives);
- (ii) *agreement properties* correspond to the kind of structural configurations known to be licensed within TP and projections contained within it (agreement, outer aspect, negation, and possibly other projections in a split Infl); and
- (iii) *discourse information* corresponds to the kind of semantically/pragmatically prominent elements, including quantification/scope-relations, known to be established within CP and projections contained within it (such as TopP, FocP, and possibly other projections in a split Comp).

In other words, we yield a clausal tripartition into a finer articulated vP, a finer articulated TP, and a finer articulated CP.¹⁶

In addition, I suggest the Condition on Domain Exclusivity (CDE) to be exactly the kind of “viable consequence” alluded to above (originally proposed in Grohmann 2000b: 61):

(34) *Condition on Domain Exclusivity* (after Grohmann 2003b: 78)

An object O in a phrase marker must have an exclusive Address Identification AI per Prolific Domain $\Pi\Delta$ unless duplicity yields a drastic effect on the output.

- i. An AI of O in a given $\Pi\Delta$ is an occurrence of O in that $\Pi\Delta$ at LF.
- ii. A drastic effect on the output is a different realization of O at PF.

The idea behind anti-locality thus understood is that Prolific Domains are structural chunks relevant for interface computations, that is, Spell-Out/Transfer (see especially Grohmann 2007), and that any given XP may only have one occurrence within such a Prolific Domain. The CDE, and sub-clause (34.ii) in particular, will be discussed presently, in the next section.

First, let us return to the introduction of this chapter, where I pointed out one of the central questions for a theory, or even a meaningful formulation, of anti-locality: the evaluation metric to be considered. So far we have considered two types of metrics, one concerning the domain within which movement is ruled out and one concerning the length to be measured.

Concerning the former, the XP-motivated approach to anti-locality (sections 2.1 and 2.2), from Saito & Murasugi (1999 [1993]) to Abels (2003), bans all kinds of phrase-internal movement steps: Compl-to-Spec, Spec-to-Spec, Spec-to-Adj, and Compl-to-Adj presumably (not shown here, cf. (29c)). Note that within the ‘classic’ Checking Theory of Chomsky (1993, 1995), these movement steps would arguably be ruled out independently, since no new checking configuration would be achieved by the intended movement. Kayne (2005) discusses some aspects bearing on this issue; see also note 18 below. Under such reasoning, where the relevant barred movement steps are ruled out independently, it is on the one hand not clear whether anti-locality should actually enjoy a special status in syntactic theorizing. On the other hand, this would leave us without an account for the additional sets of data discussed in the previous sub-section.

The second type of evaluation metric is the domain-motivated approach from that previous sub-section (section 2.3), namely my own (Grohmann 2000b *et seq.*), where chunks of phrase structure larger than a single maximal projection are considered, some kind of contextually defined domain (Prolific Domain). Here, these movement steps are not ruled out by virtue of applying within a single phrase, but by being $\Pi\Delta$ -internal. This approach is in line with classic Checking Theory and thus would make a substantive contribution to identifying a new concept relevant for syntactic theorizing. Yet, as it is formulated, it actually seems to rely exclusively on a licensing mechanism captured by Checking Theory and, unlike extensions of the CCL approach (especially Abels 2003), does not contribute anything to Agree.¹⁷

The first question to ask, then, is whether we can already choose between either of these two suggestions on the size of the anti-locality domain. It may be worth noting, as Richards & Biberauer (2005) observe, that the Ban on Compl-to-Spec as understood in the CCL-driven approach, especially Abels' take on it, does not prohibit the complement of a (phase) head to raise into its specifier in every single case; it only does so if followed by feature-checking/valuation in the traditional sense, discussed at length by Abels. But what if the feature to be licensed by Compl-to-Spec movement is of a different nature, one that could not have been licensed prior to such movement? Richards & Biberauer suggest exactly this (see also Biberauer & Richards 2006: 63, n. 9) and propose, in the wake of Alexiadou & Anagnostopoulou's (1998) opening of the discussion on EPP-licensing cross-linguistically, that the EPP of T may in some language be satisfied by raising *v*P into its specifier position.¹⁸ Arguably, whatever the 'classic EPP' is, this requirement seems to be met only by establishing a Spec-Head configuration and no other feature-checking or valuation. For the domain-motivated approach, this question never arises as (the specifier of) T is in a different Prolific Domain from *v*P to begin with (see the discussion around (33) above).

Concerning the latter type of metric, we also have a two-way split, namely the CCL-driven measurement in terms of chain links (based on the concept '(Form) Chain') and the CDE-driven address identification in terms of occurrences (per Prolific Domain $\Pi\Delta$).¹⁹ This is not the right place to engage in an extended critique of chains; Hornstein (2001) and Epstein & Seely (2006), among others, have already done this admirably, questioning the very concept of 'chain' as a formal device to be entertained in syntactic theorizing. Such concerns aside, one problem immediately arises for chains in the context of anti-locality and Spell-Out domains (such as phases, as assumed, even intended to be deduced, by Abels). As Terje Lohndal (p.c.) puts it, if one assumes the Merge/Move distinction—understood as External Merge and Internal Merge, respectively—and a cyclic mapping from narrow syntax to the interpretive interfaces, it seems that it becomes hard to use chains, at least chains that span such Spell-Out domains: After all, a chain would have to be formed containing one link in a spelled out chunk of structure, inaccessible to further operations outside the phase (cf. the PIC in (18) and note 12), and one new link in the 'window of opportunity', the current derivational phase-chunk. Since Prolific Domains are taken to be Spell-Out units *en bloc*, as per (32.i)—to be expanded presently, in section 4.1—this is not a problem that the CDE-driven understanding of anti-locality faces: Once a $\Pi\Delta$ is formed, that chunk of structure undergoes Spell-Out (or rather, Transfer, in the sense of Grohmann 2007); anti-local movement within will then be 'detected' when the domain contains both occurrences, the original copy and the anti-locally moved copy.

It thus might suggest that a larger domain within which movement is to be banned is advantageous over the more restrictive formulation.²⁰ The next section is going to develop this idea and discuss core cases of repairing anti-local movement, a concept that could not even be formulated in the strict CCL-driven approaches. After developing my own framework of Prolific Domains in the computation, I will sketch the beginnings of possible synthesis between CCL- and CDE-driven approaches to anti-locality.

4. A Theory of Anti-Locality

This section will inspect more carefully and look at more evidence for the existence of Prolific Domains, and by doing so provide additional arguments to be made for anti-locality, in natural language syntax across languages and linguistic structures. This presentation is largely based on my own work and collaborative research efforts, but also contributions by other colleagues—some even critical, to be examined more closely towards the end, jointly with an attempt to align the CDE-driven approach to anti-locality with phase-theoretic considerations.

4.1. Interface Conditions and Spell-Out

As alluded to above, the Condition on Domain Exclusivity (CDE) from (34) is meant, or was at least proposed, as an explanatory way of capturing anti-locality effects in grammar—or rather, preventing them. (32.i) is stated such that Prolific Domains are by definition Spell-Out units that, once formed, send “the information relevant to the context” (i.e. their content) to the LF- and PF-interface components. In Grohmann (2007), I made a distinction between the operation Transfer and the operation Spell-Out in the sense that one takes a sub-part of the derivation and ships it to PF *cyclically* (where operations like building prosodic domains apply; cf. Grohmann & Putnam 2007), and the other feeds the sensorimotor system once the PF-branch is complete—*uniquely*, i.e. once the computation has assembled all Prolific Domains).

(35) *Transfer* (Grohmann 2007: 190)

Transfer cyclically sends the structure of each Prolific Domain to PF.

(36) *Spell-Out* (Grohmann 2007: 190)

Spell-Out phonetically interprets the final PF output once.

The CDE, then, is an interface condition. In fact, the CDE, repeated here for convenience, can be expressed structurally in a simplified manner, as in (38):

(37) *Condition on Domain Exclusivity* (after Grohmann 2003b: 78)

An object O in a phrase marker must have an exclusive Address Identification AI per Prolific Domain $\Pi\Delta$ unless duplicity yields a drastic effect on the output.

- i. An AI of O in a given $\Pi\Delta$ is an occurrence of O in that $\Pi\Delta$ at LF.
- ii. A drastic effect on the output is a different realization of O at PF.

(38) *The CDE @ PF* (Grohmann 2007: 184)

*[$\Pi\Delta$ XP ... ~~XP~~], unless Copy Spell-Out applies to ~~XP~~.

However, the shorthand illustration in (38) does not make explicit reference to the “different realization” of Copy Spell-Out, which means that Copy Spell-Out should be defined separately. (39) is a first informal approximation:

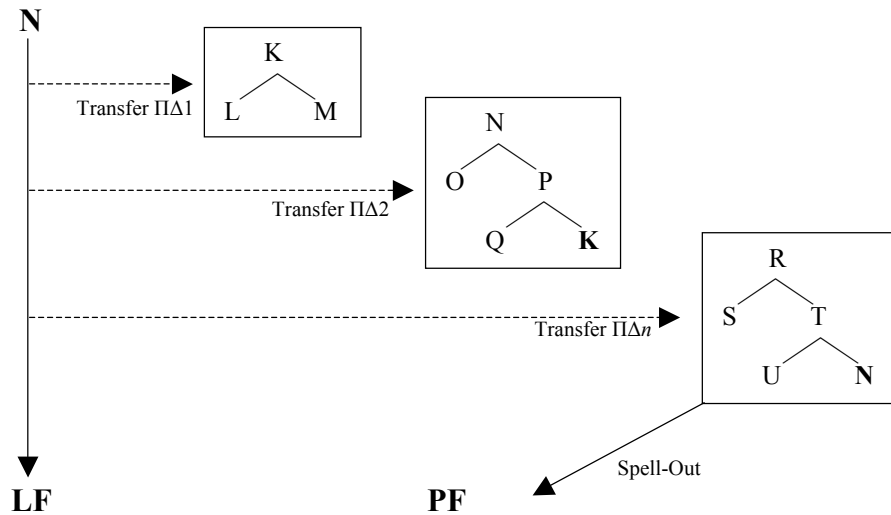
(39) *Copy Spell-Out*

In a given Prolific Domain $\Pi\Delta$, spell out the lower of two copies of some object O through the insertion of a (minimal feature-matching) grammatical formative.

Section 4.2 will address Copy Spell-Out in more detail and provide implementations of this concept in anti-local contexts for selected structures in selected languages, but the parenthetical specification will not be discussed here any (cf. Grohmann, in press).

As summarized and embellished with a host of references elsewhere (see the overview provided in Grohmann 2009, for example), according to Chomsky (1995: 169ff., 219ff.), the architecture of the grammar comprises those entities which are either motivated by ‘(virtual) conceptual necessity’ (VCN) or follow from what used to be known as ‘bare output conditions’, now referred to as interface conditions (ICs) in the terminology introduced by Chomsky (2004: 2). One VCN component of the grammar is arguably the Lexicon, the collection of lexical items and functional elements in the human mind/brain; the two components which follow from ICs are LF and PF, (linguistic) levels of representation which the relevant language-external systems read off—the conceptual-intentional system (C-I) and the sensorimotor system (SM), called the articulatory-perceptual system in Chomsky (1995), are clearly VCN if there is anything to the characterization that language is the pairing of sound and meaning.

What the CDE-driven approach to anti-locality through the concepts introduced above assumes is depicted in (39): Transfer to the phonological component applies to each Prolific Domain $\Pi\Delta_1, \Pi\Delta_2 \dots \Pi\Delta_n$, and the entire ‘collection’ undergoes Spell-Out (see Grohmann 2007, 2009, and relevant references cited for details).²¹

(40) *Architecture of the Grammar* (adapted from Grohmann 2007: 189)

Understood this way, CDE-driven anti-locality is an IC-motivated constraint on the grammar that each transferred $\Pi\Delta$ contain at most one occurrence of any given syntactic object and rather naturally so—other than a unique Address Identification in the sense of the CDE in (34)/(37) does not require any additional stipulations.

4.2. Copy Spell-Out and Anti-Locality

Section 2.3 presented the primary evidence for XP-extended, domain-motivated anti-locality. With the IC-motivated, CDE-driven approach to anti-locality—a ‘theory of anti-locality’ perhaps even—on the table, I would now like to showcase some of the data that, in my view, display the interplay of domain- and CDE-driven anti-locality best, namely, anti-local movement ‘repaired’ by Copy Spell-Out (Grohmann 2000a, 2000b, 2003b).²² What these data share is a dependency between a contentful, fully projected syntactic object XP and a functional (usually pronominal or otherwise copied/doubled) element ~~XP~~, where both occur within one and the same Prolific Domain $\Pi\Delta$ at some point in the derivation. By the CDE (37), this should be ruled out: If there exists a real dependency in the sense used here (‘movement’), it is anti-local and as such should be clearly ruled out on IC-motivated grounds.

There are two major approaches to such structures (as per note 22, for some perhaps more reasonable than for others, but that shall not be of concern here):

- (i) the ‘Big-DP approach’ which generates the two elements within a single, large projection and moves one out, stranding the other (see Boeckx 2003 for discussion and references²³), and
- (ii) the ‘Spell-out approach’, where the pronominal element is interpreted as the phonetic realization of a copy of XP (going back to at least Pesetsky 1998²⁴).

It should be obvious that the theory of anti-locality defended here adopts option (ii), indicated by strikethrough of the lower copy or occurrence of the object O referred to in the CDE: ~~XP~~. The fact that the copy is realized as a pronominal or other functional element from a restricted set derives from common assumptions about economy: It is the smallest linguistic unit that contains a minimal feature-specification of the copy, such as phi-features (dubbed ‘grammatical formative’ in Hornstein 2001 and adopted in the characterization of Copy Spell-Out in (39); see also Lidz & Idsardi 1998). Starting with Grohmann (2000a), and in several co-authored works, I continuously tried to make the case that the approach under (ii) is more prevalent in grammar than restricted to instances of ‘standard’ resumption and call it Copy Spell-Out, where a lower, anti-local copy gets spelled out (for similar options for pronouncing non-top copies and discussing other issues around multiply pronounced copies/occurrences, see e.g. Nunes 2004, Kobele 2006, Boeckx, Hornstein & Nunes 2007, Kandybowicz 2008; for a larger perspective of such copy modification, see Grohmann, in press).²⁵

The paradigmatic case—because it is in a sense the least contended analysis to some extent—is so-called contrastive left dislocation, as found in Germanic, which is to be distinguished from the at first glance similar topicalization and hanging topic constructions (which show similar interpretive effects in English, not discussed here). The following is a brief, very rough guide to contrastive left dislocation in German, and relevant extensions across structures, along these lines (Grohmann 2000a *et seq.*), where the structure in (41b) entertained for the datum in (41a) goes back several decades in different guises:²⁶

- An alternative derivation takes the demonstrative *den*, glossed as resumptive pronoun (RP), to be a grammatical formative that, following (39), surfaces as the Copy Spell-Out of the anti-locally moved XP *seinen Vater*, indicated by the circled arrow ‘ \odot ’; as per the conditions in (37) to (39), Copy Spell-Out applies to rescue the otherwise illicit movement within a single $\Pi\Delta$, here the Ω -Domain:

- This analysis allows us to capture all the interesting properties of this type of left dislocation as compared with other constructions with comparable interpretation, such as topicalization and hanging topic left dislocation, that have been discussed for many years (for extensive discussion and references, see Grohmann 2003b: chap. 4, but also e.g. Salzmann 2006 for considerable critical remarks).

Grohmann & Nevins (2005) identified pejorative *shm*-reduplication in English as another relevant phenomenon, in which a (discourse) topic moves anti-locally in order to lend a pejorative interpretation to the linguistic expression:

- In addition, several studies on the left periphery in Bantu benefited from anti-locality considerations, even if with slight differences from the system presented here. For example, Cheng (2006) extends the applicability of Copy Spell-Out in interesting ways to Bantu relatives (see also Henderson 2007) and Schneider-Zioga (2007) finds anti-agreement in Bantu (Kinande) to relate to domain-motivated (anti-)locality.

These structures all concern anti-locality (possibly followed by Copy Spell-Out) in the Ω -Domain. At the other end of the spectrum, we are also on a sound footing when we look closer at the Θ -Domain. Taking my cue from Hornstein's (2001) revival of an old idea to transformationally relate antecedent and local anaphor,²⁷ something like a derivational history for (20a) sketched in (23) with the interpretation of (22b) can be extended after all—only, the lower copy spells out to satisfy the CDE:

- (44) [_{TP} John T⁰ [_{VP} John likes-v⁰ [_{VP} t_{VP} ~~John~~ \Rightarrow himself]]]

Other instances of $\Theta\Delta$ -internal Copy Spell-Out are discussed in Grohmann (2003b).

What makes the tripartition of phrase structure into Prolific Domains doubly attractive, in my eyes (though not necessarily from a phase-theoretic perspective), is that evidence for the existence of the same Prolific Domains can be found within the nominal layer.²⁸ Starting with Grohmann & Haegeman's (2003) implementation of a CDE-driven account of prenominal possessive doubling across Germanic varieties, evidence accumulates that once again, the underlying assumptions are indeed more widespread.²⁹ CDE-driven anti-locality effects have also been successfully used to deal with demonstrative doubling in Modern Greek (Grohmann & Panagiotidis 2005). An interesting aspect of that analysis is that the notion of "syntactic object O" from the CDE in (37) does not require phonetic content: As (45b) shows, the relevant O triggering Copy Spell-Out may also be a null operator. In addition, a finer inspection of the Greek DP allowed us to distinguish the two possible word orders in (45) on discourse-interpretive grounds: A fronted demonstrative has a strong deictic reading, understood as nominal focalization, whereas the Op-structure is discourse-anaphoric, taken to be an instance of nominal topicalization. Both points come out in the derivations (46a) and (46b) underlying (45a) and (45b), respectively:

- (45) a. *afta ta nea ~~afta~~ fenomena*
 b. *OP ta nea afta fenomena*
 ART new these phenomena
 'these new phenomena'
- (46) a. [_{$\Omega\Delta$} *afta* ... ~~*afta*~~ \Rightarrow *ta* [_{$\Phi\Delta$} ... ~~*afta*~~ ...]] *deictic/focus-movement*
 b. [_{$\Omega\Delta$} *OP* ... ~~*OP*~~ \Rightarrow *ta* [_{$\Phi\Delta$} ... *afta* ...]] *anaphoric/topic-movement*

Please bear in mind that this chapter is meant to provide an overview of anti-locality in grammar rather than full coverage of Copy Spell-Out analyses (for the latter, see the references cited). This also applies to the non-trivial question which languages may make available which grammatical formative in which structures.

4.3. Extending the Anti-Locality Hypothesis

Intuitively, it might be nice—though by no means necessary—if the lower bound of distance that may span a well-formed dependency ('anti-locality') and the upper bound ('standard locality') could be related. Standard locality is discussed elsewhere,³⁰ and it concerns much more than just 'distance' (islands, for one, which so far still have resisted a satisfactory minimalist formulation). In this sense, the following are just preliminary remarks, meant as food for thought in the same sense as the CDE-driven take on anti-locality extended CLL-driven formulations. In the same vein, the next sub-section can be seen as an even more speculative follow-up on this one, all aimed at getting to the root of the status of anti-locality in grammar.

What we have seen with respect to anti-locality is that movement within a defined domain (whether a single XP or extended to Prolific Domains) is banned—but what is the minimal possible movement, and can this somehow be forced to be the optimal one as well? In Grohmann (2003a), I suggested it could be, and called it intra-clausal movement, to be forced to always target a position in the next higher Prolific Domain, expressed by the Intra-Clausal Movement Generalization (see also Grohmann 2003b: 307):³¹

- (47) *Intra-Clausal Movement Generalization* (adapted from Grohmann 2003a: 305)
- i. A-movement of arguments proceeds from Θ - to Φ -Domain.
 - ii. A'-movement of arguments proceeds from Θ - to Φ - to Ω -Domain.
 - iii. A'-movement of non-arguments proceeds from Θ -/ Φ - to Φ -/ Ω -Domain.

On a par, the Inter-Clausal Movement Generalization was meant to capture movement across clause boundaries, also in an attempt to come to grips with so-called successive-cyclic movement, which does not only appear to be a well-established fact of displacement in natural language but also poses a serious challenge for economy-driven computations of Last Resort within virtually any version of Checking Theory:

- (48) *Inter-Clausal Movement Generalization* (adapted from Grohmann 2003a: 305)
- i. Successive-cyclic Θ -movement proceeds from Θ -Domain to Θ -Domain.
 - ii. Successive-cyclic A-movement proceeds from Φ -Domain to Φ -Domain.
 - iii. Successive-cyclic A'-movement proceeds from Ω -Domain to Ω -Domain.

The interplay of these two generalizations might give us a first clue as to how to go about finding a possible unification of locality conditions imposed by UG.³²

Other than that, further extensions of a clausal tripartition into Prolific Domains, of the dynamic interplay between narrow syntax and interpretive interfaces, and of anti-locality derived through the CDE, followed or not by Copy Spell-Out—or any combination thereof—have been proposed in recent years. In an empirically driven study, Putnam (2007) adopts the general framework and applies it to Germanic clause structure in order to get a handle on scrambling data. The guiding intuition is here that, while scrambling through movement may result in ‘free’ word order, anti-locality constrains possible displacement operations in this empirical domain as well, and Prolific Domains contribute to the types of displacement observed. In joint work, we then took some of these details and suggested a $\Pi\Delta$ -compliant, dynamic mechanism for prosodic stress assignment in Germanic (Grohmann & Putnam 2007). It is too early to judge the viability of either approach yet, but initial results look promising.

As does a fresh look at mixed projections (or mixed categories). If the data from English, Dutch, Greek, and Spanish discussed in Panagiotidis & Grohmann (2009) hold more widely, across more languages, an interesting twist on the licensing of such mixed projections (as in nominalizations) emerges: Verbal roots may ‘become nominal’ (or vice versa) specifically in those places where a Prolific Domain is

created. In other words, if one would assume a ‘switch’—some functional head that turns something verbal into something nominal (and the other way round)—as argued there, the position of this switch seems to coincide with boundaries of all three $\Pi\Delta$ s: Switch may take a νP , a TP, and a CP as its complement (as well as their nominal counterparts)—but not, say, a VP or an AspP, or a TopP.

Let me close this section by saying a couple of things concerning the conceptual underpinnings of Prolific Domains. Holding fast to the minimalist desiderata to only invoke constraints following from ICs, if they are not VCN in human language, anti-locality derived from the CDE seems to be well motivated—in other words, as I hope to have demonstrated, the CDE looks like a reasonable candidate to explain something ‘deeper’ about anti-locality.³³ This section has pointed to some interesting possibilities of extending a CDE-driven theory of anti-locality—but it also highlighted some issues. Both will be elaborated next, where a return to the CLL-driven approach to anti-locality will be discussed within Phase Theory. The young age of anti-locality studies is responsible for the tentative nature of the present discussion, but it may also prompt much-needed further research activities in this area.

4.4. *Alternative Conceptions of Anti-Locality*

Section 2 devoted considerable space to the origins of anti-locality considerations in recent syntactic theorizing. The distinction between what I call here XP- and domain-motivated anti-locality on the computational chunk to be evaluated, respectively, along with the technical implementations qua a CCL- or a CDE-driven approach, already makes room for maneuvering conceptions of anti-locality—with possibly diverging predictions as well as empirical and theoretical consequences. Some discussion on distinguishing different approaches to (either type of) locality effects can be found in Boeckx (2008: 111ff.), but much more can, and indeed need, be said.

In addition to these two camps, and the empirical phenomena they cover, so-called ‘syntactic OCP’ effects may also be considered potential interest for anti-locality studies. Haplology effects in syntax have been investigated for quite some time (see e.g. Neeleman & van de Koot 2006 for an overview and Richards 2006 for additional references). More recently, Richards (2006) proposed a distinctness condition that rules out the linearization of $\langle \alpha, \alpha \rangle$, two elements “too close together”.

Virtually the same idea underlies identity avoidance in the form of a *XX-filter (van Riemsdijk 2008), reporting on a series of works spanning at least 20 years. These go beyond phenomena captured by independent principles proposed in the (pre-)GB-literature, such as the Doubly-Filled Comp Filter (Chomsky & Lasnik 1977) or the Avoid Pronoun Principle (Chomsky 1981), and deal, among others, with resumption—or rather, reduction in the sense of *XX, where a sequence of XX reduces to a single X—in Swiss German relative clauses.

What makes Richards’ cases interesting is that reference is not restricted to phonetically identical elements, but includes adjacency of elements of the “same type” that are somehow “too close together”, such as the post-verbal two DPs in (49c) as opposed to the grammatical alternative (49b), taken from Richards (2006: 1):

- (49) a. “It’s cold”, said John.
 b. “It’s cold”, said John to Mary.
 c. **“It’s cold”, told John Mary.*

From a theoretical perspective, one of the bigger questions concerns a possible formulation of anti-locality in Phase Theory, first proposed in Chomsky (2000) and captured by the PIC in (18), reformulated in Chomsky (2001), as mentioned in note 12, and further explored in subsequent work (Chomsky 2004, 2005, 2007, 2008). The CDE-driven anti-locality theory has little to say about such an integration; for an explicit rejection of phases within this framework, see Grohmann (2003b: 296–303).

The CCL-driven version, however, could possibly be integrated. Abels (2003), of course, formulates his Stranding Generalization in phase-theoretically compatible terms (see note 9). Still, the details between the various versions of the CCL provided here and the Stranding Generalization differ. An adjusted, phase-theoretic formulation of the CCL might look as follows, where XP is now replaced by the phase PH:

(50) *Constraint on Chain Links [adjusted]*

Each chain link must be at least of length 1, where a chain link from α to β is of length n iff there are n PHs that dominate α but not β .

The Adjusted CCL is now very similar to the CDE except that it does not give prominence to (a split) T/Infl—which, as briefly mentioned in note 28, is arguably the weakest point empirically for the CDE-driven approach (at least on the clausal level). It builds on a domain-motivated evaluation metric for the size of computational chunk within which anti-locality applies. However, since phases are commonly restricted to v and C on the clausal level (in addition to D and P, possibly), one obvious difference is the bipartition within Phase Theory as opposed to the tripartition into Prolific Domains. Note, though, that, as Scheer (2009: 36) assesses the situation, for example, the phasehood of “TP is also under debate: [W]hile Chomsky (e.g. 2000: 106, 2004: 124) is explicit on the fact that TP does not qualify as a phase head (because it is not propositional), den Dikken (2007[a]) points out that according to Chomsky’s own criteria, this conclusion is far from being obvious.”³⁴ And indeed, suggestions have been made to include a larger number of phase heads, such as VoiceP (Baltin 2007) or AspP (Hinterhölzl 2006). So perhaps the jury is still out on the possible success of the Adjusted CCL.

Another difference concerns the edge of phase heads, (possibly more than one) [Spec, v P] and [Spec,CP], respectively. The issue that now arises is that in the $\Pi\Delta$ -based approach to the computation, multiple specifiers are ruled out (Grohmann 2000b, 2001, 2003b). The obvious problem for the Adjusted CCL is the frequently observed movement, in Phase Theory, from a direct object in [Compl,VP] to the phase edge (outer) [Spec, v P]—at least needed even in English for overt movement of object *wh*-phrases to abide by the PIC. Perhaps this could be fixed by stipulating (or, with additional work, possibly deriving) that the first-merged, inner specifier of a phase head is part of PH in the sense used in (50), but that later-merged ones are not.

This would include the external argument in the relevant evaluation domain of v for anti-locality, but exclude moved objects, for example. Note that the CDE-driven analysis of local reflexives could still be adopted, where Copy Spell-Out applies as illustrated in (44) above. But what may make a more thorough investigation of the Adjusted CCL, or some alternative, appealing is the important message: The length relevant for calculating the anti-locality domain is defined over ICs or IC-motivated chunks (with $\Pi\Delta$ s or PHs as the relevant units for Spell-Out and/or Transfer).

A very different route of banning anti-internal movement within Phase Theory, possibly more in the sense of Abels (2003), might be to extend it to phrase-internal movement. Starting with Epstein *et al.* (1998), an interesting line of research takes the computational ‘window of opportunity’ to be even more restricted—basically, to every instance of Merge or, in Müller’s (2004, 2007) approach, to every phrase (where the PIC is replaced by Phrase Balance); for discussion, see e.g. Boeckx (2003, 2008), Epstein & Seely (2006), den Dikken (2007a), Preminger (2008), Epstein, Seely & Kitahara (this volume), and Uriagereka (this volume). These works are concerned with the identification of the computationally relevant structural domains.

In addition, there are other explorations of Phase Theory with potential consequences for formulating anti-locality in slightly different terms—whether, as pointed out in section 3 above, concerning the domain within which movement is ruled out or the length to be measured. Marušič (2005), for example, alters the effect of phasehood by suggesting non-simultaneous Spell-Out, where a given phase may send its information to one interpretive interface component but not the other. Gallego (2007) proposes the powerful tool of phase sliding and den Dikken (2007a) argues for other ways of extending phases and the effects on the computation.

5. Outlook

Locality conditions qua upper bound on the distance (movement) dependencies may span in a given derivation/phrase-marker are well established in syntactic theorizing. This chapter provided an overview of the more recent line of investigation pursuing the possibility that there is also a lower bound on distance—anti-locality. Put in this context, just posing the question should appear fully justified and a worthwhile effort. What remains to be seen is whether ‘standard locality’ and ‘anti-locality’ follow from similar design specifications and, if not, whether they can still be related in any other meaningful way. This remains a task for the future and was not addressed here at all.

What the preceding sections have done is offer an overview of existing work on anti-locality along two dimensions: (un)grammatical phenomena in language that may fall under the rubric ‘anti-locality’ in general and ways of formulating something like an anti-locality constraint in grammar. Despite the differences among the approaches reported, they all share the same intuition, namely, that syntactic operations adhere to something like the Anti-Locality Hypothesis, that movement must not be too local.

The existing literature on anti-locality can be grouped into two camps, where anti-locality is either understood by some version of the Constraint on Chain Links

(CCL) or results from the Condition on Domain Exclusivity (CDE). The former camp was further characterized by the Classic CCL (Saito & Murasugi 1999 [1993]), the Modified CCL (Bošković 1994), plus basically either version phrased in a slightly different framework (Abels 2003), all of which capture anti-locality by banning movement within one and the same maximal projection XP. In addition, I offered a formulation in the form of the Extended CCL, subsequently revised further as the Adjusted CCL, to deal with a larger structure within which movement is barred, be it the derivational sub-unit identified here as a Prolific Domain $\Pi\Delta$ (the Theta-/ Θ -, Agreement-/ Φ -, and Discourse-/ Ω -Domains, i.e. ν P, TP, and CP on the clausal level) or in terms of Phase Theory (with the phase heads ν and C on the clausal level).

The latter camp follows the CDE more closely in both aspects, concerning the structure over which anti-locality applies (Prolific Domains) and deriving the Anti-Locality Hypothesis on independent grounds (motivated by interface conditions)—my own version, described in most detail in Grohmann (2003b).

Despite some (I hope) appeal and success, a number of issues need to be addressed first and put on a sound footing, as remarked throughout. This said, various interesting research avenues can be envisioned that either follow up on anti-locality studies in grammar from one of the perspectives outlined here (XP-based and CCL-driven or domain-based and CDE-driven, or perhaps a unification) or take the matter even further by zooming in on the nature of the phase edge (with the innermost position possibly differentiated from the rest), the structure of the clause (a radically reduced repertoire of labeled nodes with a vastly refined understanding of standard and anti-local relations), and so on.

References

- Abels, Klaus. 2003. *Successive Cyclicity, Anti-Locality, and Adposition Stranding*. Doctoral dissertation, University of Connecticut, Storrs.
- Agbayani, Brian. 2006. Pied-piping, feature movement, and *wh*-subjects. In Lisa L.-S. Cheng & Norbert Corver (eds.), *Wh-Movement: Moving On*, 71–93. Cambridge, MA: MIT Press.
- Alexiadou, Artemis & Elena Anagnostopoulou. 1998. Parametrizing Agr: Word order, verb-movement and EPP-checking. *Natural Language and Linguistic Theory* 16: 491–539.
- Asudeh, Ash. 2004. *Resumption as Resource Management*. Doctoral dissertation, Stanford University.
- Baltin, Mark R. 1982. A landing site theory of movement rules. *Linguistic Inquiry* 13: 1–38.
- Baltin, Mark R. 2007. Deletion versus pro-forms: A false dichotomy? Ms., New York University.
- Belletti, Adriana. 1990. *Generalized Verb Movement*. Turin: Rosenberg & Sellier.

- Beys, Michael. 2006. The status of linkers in Bantu languages: A reply to Baker & Collins (2006). Ms., University of Cyprus, Nicosia.
- Biberauer, Theresa & Marc Richards. 2006. True optionality: When the grammar doesn't mind. In Cedric Boeckx (ed.), *Minimalist Essays*, 35–67. Amsterdam: John Benjamins.
- Boeckx, Cedric. 2003. *Islands and Chains*. Amsterdam: John Benjamins.
- Boeckx, Cedric. 2007. *Understanding Minimalist Syntax: Lessons from Locality in Long-Distance Dependencies*. Malden, MA: Blackwell.
- Boeckx, Cedric. 2008. *Bare Syntax*. Oxford: Oxford University Press.
- Boeckx, Cedric & Kleanthes K. Grohmann. 2007. Putting phases in perspective. *Syntax* 10: 204–222.
- Boeckx, Cedric, Norbert Hornstein & Jairo Nunes. 2007. Overt Copies in Reflexive and Control Structures: A Movement Analysis. *University of Maryland Working Papers in Linguistics* 15: 1–46.
- Bošković, Željko. 1994. D-structure, θ -theory, and movement into θ -positions. *Linguistic Analysis* 24: 247–286.
- Bošković, Željko. 1997. *The Syntax of Nonfinite Complementation: An Economy Approach*. Cambridge, MA: MIT Press.
- Bošković, Željko. 2002. A-movement and the EPP. *Syntax* 5: 167–218.
- Bošković, Željko. 2004. Be careful where you float your quantifiers. *Natural Language and Linguistic Theory* 22: 681–742.
- Bošković, Željko. 2005. On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59: 1–45.
- Bošković, Željko. 2008. On the operator freezing effect. *Natural Language and Linguistic Theory* 26: 249–287.
- Bošković, Željko & Jairo Nunes. 2007. The copy theory of movement: A view from PF. In Norbert Corver & Jairo Nunes (eds.), *The Copy Theory of Movement*, 13–74. Amsterdam: John Benjamins.
- Buesa García, Carlos. Forthcoming. The interaction between locality and the subject-gap restriction in Spanish questions. *NELS* 39.
- Cheng, L.-S. Lisa. 2006. Decomposing Bantu relatives. *NELS* 36: 197–215.
- Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1973. Conditions on transformations. In Stephen R. Anderson & Paul Kiparsky (eds.), *A Festschrift for Morris Halle*, 232–286. New York: Holt, Reinhart and Winston.
- Chomsky, Noam. 1986. *Barriers*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1991. Some notes on economy of derivation and representation. In Robert Freidin (ed.), *Principles and Parameters in Generative Grammar*, 417–454. Cambridge, MA: MIT Press. [Reprinted in Chomsky (1995), 129–166.]
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In Ken Hale & Samuel Jay Keyser (eds.), *The View from Building 20: Essays in Honor of Sylvain Bromberger*, 1–52. Cambridge, MA: MIT Press. [Reprinted in Chomsky (1995), 167–217.]
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David

- Michaels & Juan Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, 89–155. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale. A Life in Language*, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2004. Beyond explanatory adequacy. In Adriana Belletti (ed.), *Structures and Beyond: The Cartography of Syntactic Structures*, vol. 3, 104–131. New York: Oxford University Press.
- Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36: 1–22.
- Chomsky, Noam. 2007. Approaching UG from below. In Uli Sauerland & Hans-Martin Gärtner (eds.), *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics*, 1–29. Berlin: Mouton de Gruyter.
- Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos P. Otero & María Luisa Zubizarreta (eds.), *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, 133–166. Cambridge, MA: MIT Press.
- Chomsky, Noam & Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8: 425–504.
- Chomsky, Noam & Howard Lasnik. 1993. The theory of principles and parameters. In Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld, & Theo Vennemann (eds.), *Syntax: Ein internationales Handbuch zeitgenössischer Forschung — An International Handbook of Contemporary Research*, vol. I, 506–570. Berlin: Mouton de Gruyter. [Reprinted in Chomsky (1995), 13–127.]
- den Dikken, Marcel. 2005. A comment on the topic of topic-comment. *Lingua* 115: 691–710.
- den Dikken, Marcel. 2007a. Phase extensions: Contours of a theory of the role of head movement in phrasal extraction. *Theoretical Linguistics* 33: 1–41.
- den Dikken, Marcel. 2007b. Phase extensions: A reply. *Theoretical Linguistics* 33: 133–166.
- Doherty, Cahal. 1993. The syntax of subject contact relatives. Ms., University of California, Santa Cruz.
- Emonds, Joseph. 1985. *A Unified Theory of Syntactic Categories*. Dordrecht: Foris.
- Epstein, Samuel David, Erich M. Groat, Ruriko Kawashima & Hisatsugu Kitahara. 1998. *A Derivational Approach to Syntactic Relations*. Oxford: Oxford University Press.
- Epstein, Samuel David & T. Daniel Seely. 2006. *Derivations in Minimalism*. Cambridge: Cambridge University Press.
- Ernst, Thomas. 2002. *The Syntax of Adjuncts*. Cambridge: Cambridge University Press.
- Fanselow, Gisbert. 2006. Partial *wh*-movement. In Martin Everaert & Henk van Riemsdijk with Rob Goedemans & Bart Hollebrandse (eds.), *The Blackwell Companion to Syntax*, vol. III, 437–492. Oxford: Blackwell.
- Frampton, John. 1990. Parasitic gaps and the theory of *wh*-chains. *Linguistic Inquiry* 21: 49–77.
- Gallego, Ángel J. 2007. *Phase Theory and Parametric Variation*. Doctoral dissertation, Universitat Autònoma de Barcelona.

- Giannakidou, Anastasia. 2006. N-words and negative concord. In Martin Everaert & Henk van Riemsdijk with Rob Goedemans & Bart Hollebrandse (eds.), *The Blackwell Companion to Syntax*, vol. III, 327–391. Oxford: Blackwell.
- Grohmann, Kleanthes K. 2000a. Copy left dislocation. *WCCFL* 19: 139–152.
- Grohmann, Kleanthes K. 2000b. *Prolific Peripheries: A Radical View from the Left*. Doctoral dissertation, University of Maryland, College Park.
- Grohmann, Kleanthes K. 2001. ‘Natural relations’: A note on X'-structure. *ZAS Papers in Linguistics* 21: 67–87.
- Grohmann, Kleanthes K. 2003a. Successive cyclicity under (anti-)local considerations. *Syntax* 6: 260–312.
- Grohmann, Kleanthes K. 2003b. *Prolific Domains: On the Anti-Locality of Movement Dependencies*. Amsterdam: John Benjamins.
- Grohmann, Kleanthes K. 2006. Pied-piping, feature movement, and *wh*-subjects. In Lisa L.-S. Cheng & Norbert Corver (eds.), *Wh-Movement: Moving On*, 249–288. Cambridge, MA: MIT Press.
- Grohmann, Kleanthes K. 2007. Transfer vs. spell-out and the road to PF. *Linguistic Analysis* 33: 176–194.
- Grohmann, Kleanthes K. 2009. Phases and interfaces. In Kleanthes K. Grohmann (ed.), *InterPhases: Phase-Theoretic Investigations of Linguistic Interfaces*, 1–22. Oxford: Oxford University Press.
- Grohmann, Kleanthes K. In press. Spell-out rules. In Hans Broekhuis & Ralf Vogel (eds.), *Derivation and Filtering*. London: Equinox.
- Grohmann, Kleanthes K. To appear. Copy spell-out. In Patrick Brandt & Eric Fuß (eds.), *Repairs*. Berlin: Mouton de Gruyter.
- Grohmann, Kleanthes K. & Liliane Haegeman. 2003. Resuming reflexives. *Nordlyd* 31: 46–62.
- Grohmann, Kleanthes K. & Andrew Ira Nevins. 2005. On the expression of pejorative mood. In Pierre Pica with Johan Rooryck & Jeroen van Craenenbroeck (eds.), *Linguistic Variation Yearbook 4 (2004)*, 143–179. Amsterdam: John Benjamins.
- Grohmann, Kleanthes K. & E. Phoevos Panagiotidis. 2005. An anti-locality approach to Greek demonstratives. In Laura Brugè, Giuliana Giusti, Nicola Munaro, Walter Schweikert & Giuseppina Turano (eds.), *Contributions to the Thirtieth “Incontro di Grammatica Generativa” (Venice, February 26–28, 2004)*, 243–263. Venice: Università Ca’ Foscari Venezia, Department of Language Sciences/ATTI 2.
- Grohmann, Kleanthes K. & Michael T. Putnam. 2007. Dynamic stress assignment. *Linguistic Analysis* 33: 326–363.
- Haddad, Youssef A. 2007. *Adjunct Control in Telugu and Assamese*. Doctoral dissertation, University of Florida, Gainesville.
- Hale, Ken & Samuel Jay Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In Ken Hale & Samuel Jay Keyser (eds.), *The View from Building 20: Essays in Honor of Sylvain Bromberger*, 53–109. Cambridge, MA: MIT Press..
- Henderson, Brent. 2007. The syntax of agreement in Bantu relatives. In Frederick Hoyt, Nikki Seifert, Alexandra Teodorescu & Jessica White (eds.), *Texas*

- Linguistic Society IX: The Morphosyntax of Underrepresented Languages*, 167–184. Stanford, CA: CSLI Publications.
- Henry, Alison. 1995. *Belfast English and Standard English: Dialect Variation and Parameter Setting*. Oxford: Oxford University Press.
- Hinterhölzl, Roland. 2006. The phase condition and cyclic spell-out: Evidence from VP-topicalization. In Mara Frascarelli (ed.), *Phases of Interpretation*, 237–259. Berlin: Mouton de Gruyter.
- Hornstein, Norbert. 2001. *Move! A Minimalist Theory of Construal*. Malden, MA: Blackwell.
- Hornstein, Norbert. 2009. *A Theory of Syntax: Minimal Operations and Universal Grammar*. Cambridge: Cambridge University Press.
- Ishii, Toru. 1997. *An Asymmetry in the Composition of Phrase Structure and Its Consequences*. Doctoral dissertation, University of California, Irvine.
- Ishii, Toru. 1999. Cyclic spell-out and the *that-t* effects. *WCCFL* 18: 220–231.
- Isobe, Miwa & Koji Sugisaki. 2002. The acquisition of pied-piping in French and its theoretical implications. Paper presented at *Going Romance 2002: Workshop on Acquisition*, Rijksuniversiteit Groningen (28–29 November 2002).
- Iwakura, Kunihiro. 1978. On root transformations and the structure-preserving hypothesis. *Linguistic Analysis* 4: 321–364.
- Jackendoff, Ray. 1977. *A-Bar Syntax: A Study of Phrase Structure*. Cambridge, MA: MIT Press.
- Jeong, Youngmi. 2007. *Applicatives: Structure and Interpretation from a Minimalist Perspective*. Amsterdam: John Benjamins.
- Jespersen, Otto. 1961. *A Modern English Grammar on Historical Principles*, vol. III. London: George Allen & Unwin.
- Jo, Jung-Min. 2004. *Grammatical Effects of Topic and Focus Information*. Doctoral dissertation, University of Illinois, Urbana-Champaign.
- Kandybowicz, Jason. 2007a. Fusion and PF architecture. *PLC 30 — University of Pennsylvania Working Papers in Linguistics* 13.1: 85–98.
- Kandybowicz, Jason. 2007b. On fusion and multiple copy spell-out: The case of verbal repetition. In Norbert Corver & Jairo Nunes (eds.), *The Copy Theory of Movement*, 119–150. Amsterdam: John Benjamins.
- Kandybowicz, Jason. 2008. *The Grammar of Repetition*. Amsterdam: John Benjamins.
- Kayne, Richard S. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard S. 2002. Pronouns and their antecedents. In Samuel David Epstein & T. Daniel Seely (eds.), *Derivation and Explanation in the Minimalist Program*, 133–166. Malden, MA: Blackwell.
- Kayne, Richard S. 2003. Antisymmetry and Japanese. *English Linguistics* 20: 1–40. [Reprinted as chap. 9 in Kayne, Richard S. 2005. *Movement and Silence*. New York: Oxford University Press.]
- Kayne, Richard S. 2005. Some notes on comparative syntax, with special reference to English and French. In Guglielmo Cinque & Richard S. Kayne (eds.), *The Oxford Handbook of Comparative Syntax*, 3–69. New York: Oxford University Press. [Reprinted as chap. 12 in Kayne, Richard S. 2005. *Movement and*

- Silence*. New York: Oxford University Press.]
- Kobelev, Gregory M. 2006. *Generating Copies: An Investigation into Structural Identity in Language and Grammar*. Doctoral dissertation, UCLA.
- Koster, Jan. 1978. *Locality Principles in Syntax*. Dordrecht: Foris.
- Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19: 335–391.
- Lasnik, Howard & Mamoru Saito. 1992. *Move α : Conditions on Its Application and Output*. Cambridge, MA: MIT Press.
- Law, Paul. 1991. *Effects of Head Movement on Theories of Subjacency and Proper Government*. Doctoral dissertation, MIT.
- Lee, Ju-Eun. 2004. *Ditransitive Structures and (Anti-)Locality*. Doctoral dissertation, Harvard University.
- Lee, Ju-Eun. 2005. Escape hatch effects and anti-locality in passivization of ditransitive verb phrases. *Studies in Generative Grammar* 15: 53–75.
- Lees, Robert & Edward Klima. 1963. Rules for English pronominalization. *Language* 39: 17–28.
- Lidz, Jeffrey & William J. Idsardi. 1998. Chains and phonological form. *PLC 22 — University of Pennsylvania Working Papers in Linguistics* 5.1: 109–125.
- Lipták, Anikó & Luis Vicente. 2009. Pronominal doubling under predicate topicalization. *Lingua* 119: 650–686.
- McCloskey, James. 1979. *Transformational Syntax and Model Theoretic Semantics: A Case Study in Modern Irish*. Dordrecht: Reidel.
- Manzini, M. Rita. 1994. Locality, minimalism, and parasitic gaps. *Linguistic Inquiry* 25: 481–508.
- Marušič, F. Lanko. 2005. *On Non-Simultaneous Phases*. Doctoral dissertation, Stony Brook University.
- Mayr, Clemens & Martin Reitbauer. 2004. Emphatische Topikalisierung ist Linksdislokation. Ms., University of Vienna.
- Mayr, Clemens & Martin Reitbauer. 2005. Left-dislocation, agreement, and the notion of anti-locality. Paper presented at the *2nd Left Periphery in Aphasia Meeting (LPIA 2): The Structure of the Left Periphery in Germanic Languages — CP- and IP-Related Elements in Normal and Impaired Speech*, University of Vienna (21–23 August 2005).
- Medeiros, David P. 2008. Optimal growth in phrase structure. *Biolinguistics* 2: 152–195.
- Müller, Gereon. 1997. Partial *wh*-movement and optimality theory. *The Linguistic Review* 14: 249–306.
- Müller, Gereon. 2004. Phrase impenetrability and *wh*-intervention. In Arthur Stepanov, Gisbert Fanselow & Ralf Vogel (eds.), *Minimality Effects in Syntax*, 289–325. Berlin: Mouton de Gruyter.
- Müller, Gereon. 2007. Towards a relativized concept of cyclic linearization. In Uli Sauerland & Hans-Martin Gärtner (eds.), *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax–Semantics*, 61–114. Berlin: Mouton de Gruyter.
- Müller, Gereon & Wolfgang Sternefeld. 1993. Improper movement and unambiguous

- binding. *Linguistic Inquiry* 24: 461–507.
- Murasugi, Keiko & Mamoru Saito. 1995. Adjunction and cyclicity. *WCCFL* 13: 302–317.
- Neeleman, Ad & Hans van de Koot. 2006. Syntactic haplology. In Martin Everaert & Henk van Riemsdijk with Rob Goedemans & Bart Hollebrandse (eds.), *The Blackwell Companion to Syntax*, vol. IV, 685–710. Oxford: Blackwell.
- Nunes, Jairo. 1995. *The Copy Theory of Movement and Linearization of Chains in the Minimalist Program*. Doctoral dissertation, University of Maryland, College Park.
- Nunes, Jairo. 2004. *Linearization of Chains and Sideward Movement*. Cambridge, MA: MIT Press.
- Panagiotidis, E. Phoevos & Kleanthes K. Grohmann. 2009. Mixed projections: Categorical switches and prolific domains. *Linguistic Analysis* 35: 141–161.
- Pesetsky, David. 1987. *Wh*-in situ: Movement and unselective binding. In Alice G. B. ter Meulen & Eric Reuland (eds.), *The Representation of (In)definiteness*, 98–129. Cambridge, MA: MIT Press.
- Pesetsky, David. 1998. Some optimality principles of sentence pronunciation. In Pilar Barbosa, Danny Fox, Martha McGinnis & David Pesetsky (eds.), *Is the Best Good Enough? Optimality and Competition in Syntax*, 337–383. Cambridge, MA: MIT Press/ MIT Working Papers in Linguistics.
- Pesetsky, David & Esther Torrego. 2001. T-to-C movement: Causes and consequences. In Michael Kenstowicz (ed.), *Ken Hale. A Life in Language*, 355–426. Cambridge, MA: MIT Press.
- Phillips, Colin. 1996. *Order and Structure*. Doctoral dissertation, MIT.
- Platzack, Christer. 2001. Multiple interfaces. In Urpo Nikanne & Emile van der Zee (eds.), *Cognitive Interfaces: Constraints on Linking Cognitive Information*, 21–53. Oxford: Oxford University Press.
- Pollock, Jean-Yves. 1989. Verb movement, UG and the structure of IP. *Linguistic Inquiry* 20: 365–424.
- Preminger, Omer. 2008. (Im)perfect domains: Yet another theory of syntactic movement. *WCCFL* 26: 402–410.
- Progovac, Ljiljana. 1994. *Positive and Negative Polarity: A Binding Approach*. Cambridge: Cambridge University Press.
- Putnam, Michael T. 2007. *Scrambling and the Survive Principle*. Amsterdam: John Benjamins.
- Quinn, Heidi. 2009. Downward reanalysis and the rise of stative HAVE *got*. In Paola Crisma & Giuseppe Longobardi (eds.), *Historical Syntax and Linguistic Theory*, 212–230. Oxford: Oxford University Press.
- Richards, Marc D. 2004. *Object Shift and Scrambling in North and West Germanic: A Case Study in Symmetrical Syntax*. Doctoral dissertation, University of Cambridge.
- Richards, Marc D. 2007. On feature-inheritance: An argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38: 563–572.
- Richards, Marc D. & Theresa Biberauer. 2005. Explaining *Expl*. In Marcel den Dikken & Christina Tortora (eds.), *The Function of Function Words and*

- Functional Categories*, 115–153. Amsterdam: John Benjamins.
- Richards, Norvin. 2006. A distinctness condition on linearization. Ms., MIT. [Published as chap. 2 ‘Distinctness’ in Richards, Norvin. 2010. *Uttering Trees*. Cambridge, MA: MIT Press, 3–142; shorter version appeared in *WCCFL* 20, 470–483.]
- van Riemsdijk, Henk. 1978. *A Case Study in Syntactic Markedness: The Binding Nature of Prepositional Phrases*. Dordrecht: Foris.
- van Riemsdijk, Henk. 2008. Identity avoidance. In Robert Freidin, Carlos P. Otero & Maria Luisa Zubizarreta (eds.), *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, 227–250. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of Grammar: Handbook in Generative Syntax*, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In Lisa L.-S. Cheng & Norbert Corver (eds.), *Wh-Movement: Moving On*, 97–133. Cambridge, MA: MIT Press.
- Saito, Mamoru & Keiko Murasugi. 1999. Subject predication within IP and DP. In Kyle Johnson & Ian Roberts (eds.), *Beyond Principles and Parameters: Essays in Memory of Osvaldo Jaeggli*, 167–188. Dordrecht: Kluwer.
- Salzmann, Martin. 2006. *Resumptive Prolepsis: A Study in A'-Dependencies*. Doctoral dissertation, Universiteit Leiden.
- Scheer, Tobias. 2009. Intermodular argumentation and the word-spell-out-mystery. In Kleanthes K. Grohmann (ed.), *Explorations of Phase Theory: Interpretation at the Interfaces*, 23–65. Berlin: Mouton de Gruyter.
- Schneider-Zioga, Patricia. 2007. Anti-agreement, anti-locality, and minimality: The syntax of dislocated subjects. *Natural Language and Linguistic Theory* 25: 403–446.
- Stowell, Tim. 1981. *Origins of Phrase Structure*. Doctoral dissertation, MIT.
- Sugisaki, Koji. 2008. The acquisition of preposition stranding and its theoretical implications. In Yukio Otsu (ed.), *The Proceedings of the Ninth Tokyo Conference on Psycholinguistics*, 27–55. Tokyo: Hituzi Syobo.
- Takahashi, Daiko. 1994. *Minimality of Movement*. Doctoral dissertation, University of Connecticut, Storrs.
- Temmerman, Tanja. 2008. Embedded left dislocation in southern Dutch. Paper presented at the *23rd Comparative Germanic Syntax Workshop (CGSW 23)*, University of Edinburgh (12–13 June 2008).
- Ticio, Emma. 2003. *On the Structure of DPs*. Doctoral dissertation, University of Connecticut, Storrs.
- Vikner, Sten. 1995. *Verb Movement and Expletive Subjects in the Germanic Languages*. New York: Oxford University Press.
- Wanner, Dieter. 1981. Surface complementizer deletion: Italian *che*-Ø. *Journal of Italian Linguistics* 6: 47–82.

Notes

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- ¹ Anti-locality will be used in this chapter exclusively for syntactic relations that are too close, as laid out presently. The term was first coined as such and described in detail by Grohmann (2000b), subsequently revised as Grohmann (2003b) and summarized in Grohmann (2003a). This chapter is based on these discussions, enriched by intellectual precursors, related work, and follow-up research presented or at least referenced here.

The notion of anti-locality does not denote, or bear any relation to, McCloskey's (1979) observation of the same name "from languages that rely heavily on resumption in relative clause constructions, such as the Celtic and Semitic languages, that relatives with resumptive pronouns are subject to an anti-locality condition that radically prevents the highest subject position from being lexicalised as a resumptive pronoun" (den Dikken 2005: 697, fn. 5; see also Asudeh 2004), even though Boeckx (2003: 85, in passing) puts the two in comparison.

Likewise, the term is not related to an "impossibility of the existential dependency under clausemate negation" (Giannakidou 2006: 371) pertaining to pronouns (e.g. Progovac 1994) nor to anti-locality effects observed in processing either (see Phillips 1996 for discussion and further references). Lastly, anti-locality is also not used for *what*-constructions in so-called 'partial movement' or 'scope-marking' constructions, as done by Müller (1997: 276), who says that "[p]artial *wh*-movement is 'anti-local', in the sense that the scope marker and the *wh*-phrase cannot be clause-mates", and Fanselow (2006: 453), who characterizes the structural configuration as one in which "the [*what*-phrase] cannot appear in the clause in which the real *wh*-phrase originates".

I am not aware of other technical uses of the term 'anti-locality', but simply state that, if they exist, they may also fall outside the scope of this chapter. This said, however, if future work can establish a connection between anti-locality as described here and one or more of the aforementioned phenomena—or potentially, if not obviously, related issues pertaining to distinctness ("syntactic OCP") put forth by Richards (2006) or the *XX-filter ("star double-x") of van Riemsdijk (2008) about which I have unfortunately nothing to say here—such work may help sharpen our understanding of too-close relations in grammar.

- ² I frequently use the term 'dependency' rather than 'movement' to at least leave the door open to a more theory-neutral capture of the relevant phenomenon. Leaving aside arising issues, suffice it to say that I do not discriminate among 'movement', 'dependencies', the compound 'movement dependencies', or any (parenthesized) version thereof.

³ But as Volker Struckmeier (p.c.) notes, embedded topicalization in English does seem to be co-dependent on the presence of CP. Topicalizing within an ECM-structure, arguably of label IP/TP, is infelicitous:

- (i) a. I want [_{TP} him to clean the car].
 b. *I want [the car [_{TP} him to clean *t*]].

For this reason, and many others, I will subsequently assume that topicalization targets a CP-related specifier position, such as Top(ic)P under Rizzi's (1997) split-CP approach or its non-cartographic counterpart if desired.

⁴ Substituting IP with its current projection TP and employing the present-day notation for movement in terms of copies (represented throughout with strikethrough or, as in (4), angled brackets), rather than traces, yields a more 'modern' representation of (5), perhaps as in (i):

- (i) *_{[TP XP_i [_{TP} ~~XP_i~~ T⁰ ...]]}

More generally, the ban can be schematically expressed as follows:

- (ii) *Ban on Specifier-Adjunction [generalized]*
 *_{[XP YP_i [_{XP} ~~YP_i~~ X⁰ ...]]}

⁵ Among others, Henry (1995) discusses this construction in Belfast English and proposes an analysis—like Doherty, though with a different implementation (Agbayani 2006: 89, n. 2)—that does not assume *wh*-movement as in regular relative structures. Den Dikken (2005: 694) notes that Appalachian English also has subject contact relatives. None of these varieties are null-subject or *pro*-drop languages, of course.

⁶ Observe, for example, that Bošković (1994) employs the CCL to rule out adjunction of a head to its own maximal projection as well as substitution of it into its specifier—those illicit phrase-structural configurations known as self-attachment (Chomsky 1995: 321). It also remains to be seen how much of Murasugi & Saito's (1995) 'adjunction paradox', not discussed here, relates to the purported phenomenon of anti-locality in grammar and whether it allows a sharper perspective on it.

Outside the 'Connecticut School' (the cited work by Abels, Bošković, Murasugi, and Saito), another line of research is also often cited in the context of anti-locality, provided by Ishii (1997, 1999) who discusses *that-t* effects. However, as Abels (2003: 132) points out, in essence "Ishii suggests that subjects are adjoined to TP (as in Kayne 1994) and that they are thereby in the minimal domain of the embedding complementizer". In other words, rather than capitalizing on phrase-structural properties, this approach is built around the notion of Minimal Domain (Chomsky 1993: 11, 1995: 299), within which movement is illicit due to Last Resort (Chomsky 1993, 1995)—which is essentially Abels' conclusion as well, albeit on different grounds (see also the following discussion in the text and note 9 below). For Ishii (1999), the illicit movement step is from a position adjoined to [Compl,XP] to [Spec,XP].

I will not discuss such cases any further since they touch on anti-locality only in the very periphery—as far as I can assess, an anti-locality account for one linguistic structure (*that-t* effects) not based on more general, architecturally or theoretically interesting,

considerations (other than Minimal Domains and the general condition Last Resort in grammar). But note that Bošković (2005) adopts a similar structure for cases of illicit left-branch extraction involving adjectival modifiers, where the AP is adjoined to the NP-complement of the (phase head) D.

- ⁷ This formulation is slightly different from Murasugi & Saito's (1995) published definition (see Bošković 1997: 27), apart from replacing the original A/B with α/β ; Bošković (1994: 261, n. 19) credits Mamoru Saito in his 1993 University of Connecticut class lectures (see also Bošković 1997: 184, n. 27) for what I refer to here as the Original CCL, which was phrased as follows:

- (i) *Condition on Chain Links [original]* (Bošković 1994: 261)
 - a. Each chain link must be at least of length 1.
 - b. A chain link from α to β is of length n if there are n XPs that cover β but not α .

See Bošković (1994, 1997) for additional discussion on the exact definition; it will not play a role here, although I will return to it later and (at least try to) adapt it in order to capture the Anti-Locality Hypothesis in terms of more current syntactic theorizing.

- ⁸ Pesetsky & Torrego (2001), Kayne (2003, 2005), and Jo (2004), among others, address Compl-to-Spec movement as well. See also Boeckx (2007: chap. 6, 2008: chap. 3) for more discussion, including issues concerning anti-locality and Abels' generalization, which can be restated as below (adapted from Boeckx 2007: 105 who reports on Abels' work), where (ib) is the result of a combination of (ia) and PIC, the Phase Impenetrability Condition (Chomsky 2000, 2001; see also note 11 and section 4.4 for more):

- (i) Given α , the head of a phase
 - a. Always: $*[\alpha t]$
 - b. Always: $*[\alpha_P \beta_i [\alpha t_i]]$

(ia) bans stranding a phase head, while (ib) rules out Compl-to-Spec movement within the projection of a phase head, something Abels generalizes to all heads.

Pesetsky & Torrego, developing an idea that goes back to their 1999 LSA Summer Institute course, suggest the Head Movement Generalization in (ii) to rule out movement of TP to [Spec,CP], among other things—i.e. the very same structural configuration captured by the Ban on Compl-to-Spec. In other words, this is yet another, different way of formulating anti-locality configurations in grammar through a ban on phrasal movement from complement to specifier position.

- (ii) *Head Movement Generalization* (Pesetsky & Torrego 2001: 363)

Suppose a head H attracts a feature of XP as part of a movement operation.

 - a. If XP is the complement of H, copy the head of XP into the local domain of H.
 - b. Otherwise, copy XP into the local domain of H.

- ⁹ In fact, he aims much higher: Abels' primary goal is to present and unravel what he calls the 'Stranding Generalization', the idea that the complement of a phase head α may not move to the specifier position of α , whereas any material in the complement domain of α must move through the edge of α —thereby capturing Chomsky's (2000 *et seq.*) Phase Impenetrability Condition but "enforced by general considerations of [I]locality" (Abels

2003: 13). Richards points out that this reduces PIC-effects to Relativized Minimality (Rizzi 1990, this volume), casting doubt on Abels' success in "deriv[ing] rather than stipulat[ing] the anti-locality condition" (Richards 2004: 58, fn. 3).

Abels' take on locality includes a particular perspective on anti-locality he expresses through the 'Anti-Locality Constraint' (see also (i) of note 8)—which again, as far as I can see, is nothing more than a generalized formulation of the Stranding Generalization, but this time it applies to all syntactic heads. I thus leave it open in how far Abels' self-assessment is met in his work:

The discussion of these two cases [presumably illicit cases of phrase-internal movement between complement, specifier, and adjunction positions] shows again that movement from complement to specifier within the same phrase is systematically ruled out by the Last Resort condition. Longer movements may be allowed. Similar anti-locality conditions are also assumed in Bošković (1994, 1997); Grohmann (2000b); Murasugi & Saito (1995); Ishii (1997, 1999) [and arguably Saito & Murasugi (1999)]. *Unlike these authors I have tried to derive rather than stipulate the anti-locality condition.* The [a]nti-locality conditions assumed by these authors have various degrees of overlap with the condition derived here, but I will not pursue the matter.

(Abels 2003: 106; references adapted and emphasis added—KKG)

¹⁰ Abels (2003: 121ff.) shows that TPs are, in principle, mobile—crucially, however, only when they are not embedded under a phase head. Raising structures, for example, can be fronted, suggesting that these are TPs rather than CPs. See Boeckx & Grohmann (2007), but certainly also Richards (2007, in particular fn. 9 on p. 65), for discussion in the context of Phase Theory (Chomsky 2000 *et seq.*), which is not the focus of the present chapter.

¹¹ The original formulation of the HC is given in (i):

(i) *Head Constraint* (van Riemsdijk 1978: 160, his (58))
No rule may involve X_i/X_j and Y_i/Y_j in the structure
 $\dots X_i \dots [_{Hn} \dots [_{H'} \dots Y_i \dots H \dots Y_j \dots]_{H'} \dots]_{Hn} \dots X_j \dots$
 (where H is the phonologically specified (i.e. non-null) head
 and H'' is the maximal projection of H)

¹² In later work, Chomsky actually proposes a weaker version of the PIC:

(i) *Phase Impenetrability Condition* (Chomsky 2001: 14)
The domain of H [H = phase head] is not accessible to operations at ZP [next phase], only H and its edge are accessible to such operations.

I will address phases briefly in section 4.4, but for this chapter, neither version of the PIC plays a role; see also e.g. Abels (2003), Müller (2004), Richards (2004), Gallego (2007).

¹³ For example, instances of preposition stranding, originally the main concern of Abels, also going back to van Riemsdijk (1978); see Koster (1978) and Emonds (1985) as well for pioneering contributions. The recent literature on P-stranding is rich, also with respect to anti-locality; see Bošković (2004) for additional references, and on the acquisition side, see Isobe & Sugisaki (2002) and Sugisaki (2008). (See also notes 6 and 8 above.)

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- ¹⁴ The other aspect of Abels' work, PIC-effects, are not discussed here either (and arguably are not captured by the CCL), since it seems to relate more to 'standard' locality than too-close relations (cf. note 9 above).
- ¹⁵ As a historical footnote, it should be pointed out that precursors of the split-Comp approach can already be founded in the context of CP-recursion (see Vikner 1995 for discussion and further references) and, in terms of a dedicated functional projection within CP, Müller & Sternefeld's (1993) T(topic)P.
- ¹⁶ See also Platzack (2001) for virtually the same insight (clausal tripartition), but differing details (each feeding a separate interface to the system of thought). Ernst (2002), too, implicitly assumes such a tripartition in classifying adverbial modifiers to relate to either VP or TP or CP, as pointed out to me by Lanko Marušič (p.c.). In a sense, the idea behind such a tripartition of the clause goes, of course, back to at least Chomsky's (1986) *Barriers*-framework, which originally implemented a structure for the entire clause conforming to X'-bar Theory, replacing the (R)EST S/S'-notation (cf. Chomsky 1965, Chomsky 1973, and Chomsky & Lasnik 1977, among many others; see e.g. Jackendoff 1977 and Stowell 1981).
- ¹⁷ The anti-locality framework of Grohmann (2003b) was couched in a revised Checking Theory that introduced the notion of 'natural relations' (see also Grohmann 2001), yet it stuck to 'classic' Checking Theory in that licensing of grammatical properties was done in local structural configurations (Spec-Head, Head-Head, Head-Compl). This stands in stark contrast to the long-distance licensing operation Agree, under which a Probe in need of valuing some (uninterpretable) feature scans its c-command domain to find an appropriate goal with a matching (interpretable) feature. The Checking/Agree issue will not be discussed here any further, but see Adger & Svenonius (this volume) and Bošković (this volume) for valuable background discussion and references.
- ¹⁸ Consider also Lee's (2005: 68) footnote 20 for the same observation:

It is suggested in Abels (2003) that Last Resort categorically disallows movement of the complement of some head to the specifier of that very same head, since the Head-Complement relation is the closest relation which may have all features satisfied in the relation, thus no reason to move a phrase from the complement position to the specifier position of the same head. However, this claim is incorrect. The EPP-feature, which attracts an element to a specifier position, is in fact a Spec-requirement, not a feature of a head, i.e. EPP is not a feature in the technical sense of the word. Thus, as far as Last Resort is concerned, a complement should, in principle, be able to move into its own specifier position.

See also den Dikken (2007a, 2007b: 153), who makes the same point.

In his 'toxic syntax'-approach, Preminger (2008) goes even one step further. There may be many more instances of Compl-to-Spec movement, namely, every time Compl moving to Spec does not enter any Agree or checking relation with Head (where [Compl-to-Spec, XP] in these cases serves to 'purify' XP). See also note 20 below.

Alternatively, as Željko Bošković (p.c.) points out, Abels's analysis could actually be taken as an argument against Chomsky's non-feature checking approach to the EPP. This

would open up the question again how intermediate movement steps are triggered, one of the difficulties with the classic Checking Theory of Chomsky (1993, 1995); see Boeckx (2007) for a comprehensive overview of ‘*what*-, *where*-, *when*-, and *why*-questions’ of successive cyclicity and intermediate movement steps in particular.

- ¹⁹ Here again, the first type corresponds to what was called ‘XP-motivated’ above and the second to ‘domain-motivated’. Since an explanation of anti-locality seems to be the more interesting question, I will subsequently refer to the two approaches by their motivating name, that is, ‘CCL-driven’ (referring to any version of the Constraint on Chain Links) versus ‘CDE-driven’ anti-locality (from the Condition on Domain Exclusivity in (34)).
- ²⁰ Note that the more restrictive version heavily depends on one’s take on phases. Müller (2004, 2007) provides a framework in which both phases and anti-locality domains are highly restrictive—every phrase is a phase. See also section 4.4 below.
- ²¹ The boldfaced symbols are shorthand notations corresponding to the previous ‘box’ ($K = [{}_K L M]$ and $N = [{}_N O [{}_P Q [{}_K L M]]]$). That is to say, what is spelled out at the end is the entire phrase-marker from R to M.
- ²² Space does not permit detailed discussion of the data collected and phenomena reported in this sub-section and the next, or a justification of the specific analyses applied; the reader is thus referred to the sources listed for a full set of references, discussion, and critical issues raised—suffice it to state that by amassing all this potential evidence, the particular interpretation favored here receives at least some interesting support. The ‘repair’ aspect of Copy Spell-Out is picked up most prominently in Grohmann (to appear).
- ²³ Boeckx’s approach is part of a larger framework on chain formation, which follows his Principle of Unambiguous Chains in (i), where a Strong Occurrence is “a position where a strong/EPP feature is checked” (Salzmann 2006: 285, which (i) is adapted from):
- (i) *Principle of Unambiguous Chains* (after Boeckx 2003: 13)
A chain may contain at most one Strong Occurrence (the instruction for PF to pronounce α in that context), where an occurrence OCC of α is a sister of α .
- But given the additional difficulties concerning chains raised above (see the end of section 3 above), this will not be pursued here any further; see also Hornstein (2009).
- ²⁴ See also note 27 below.
- ²⁵ Building on a host of research concerning the fate of syntactically created copies in the computation, I develop an explicit differential of several competing strategies, depending on the syntactic context, what I call (aspects of) ‘copy modification’ (Grohmann, in press). In its narrowest understanding, Copy Spell-Out can be conceived as a ‘repair’ strategy (Grohmann, to appear).
- ²⁶ CP designates the highest clausal projection, which Rizzi (1997) calls ForceP; for the details of this analysis, see Grohmann (2000a, 2003b) and other references mentioned in the text. The same applies for the phenomena subsequently touched on which cannot be discussed in any detail here for reasons of space.

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- ²⁷ See e.g. Lidz & Idsardi (1998) and Kayne (2002) for proposals in the same spirit, and Lees & Klima (1963) for a historical precursor.
- ²⁸ The Prolific Domain in the middle is at the same time rather iffy with respect to testing for CDE-rescue effects in terms of Copy Spell-Out: the Φ -Domain. For some—admittedly, somewhat problematic—attempts to reanalyze clitic left dislocation of the type found in Greek (but also Romance and Arabic), see Grohmann (2003b: chap. 5). However, applied to nominal structures, there might be many more phenomena that lend themselves rather naturally to a CDE-driven account of anti-locality, including Copy Spell-Out (see the following text for some references).
- Another issue that cannot be discussed here concerns Copy Spell-Out with head movement, which was excluded from being relevant for anti-locality (Grohmann 2003b: 80); see e.g. Quinn (2009), Beys (2006), and section 4.4 below, where some alternatives will be briefly presented (cf. Nunes 2004, Bošković & Nunes 2007, and Kandybowicz 2007a, 2007b, 2008).
- ²⁹ In fact, in an impressively detailed and well argued dissertation, Ticio (2003) provides a lot of strong evidence for the existence of Prolific Domains—and subsequently, domain-motivated anti-locality—in the Spanish DP. The type of evidence comes from all kinds of DP-internal operations and relations, yet does not invoke any instances of ‘repairing’ illicit movement steps by Copy Spell-Out. This makes the study attractive for anyone intrigued by anti-locality phenomena in general but, for whatever reasons, skepticism concerning Copy Spell-Out and/or grammatical formatives in the computation of natural language.
- ³⁰ In terms of minimality, see e.g. Rizzi (this volume). As Željko Bošković (p.c.) points out to me, however, the conflict between standard and anti-locality is particularly obvious if standard locality is Takahashi’s (1994) locality, briefly mentioned in section 2.1 above (see also Chomsky 2008). Bošković (1994) already noticed a serious problem for this approach: Once some syntactic object is adjoined to XP, it should keep adjoining to XP, since this is the shortest step. Bošković appealed to anti-locality in order to prevent this from happening (so, in addition to Spec-to-Adj and Compl-to-Spec, this ban on Adj-to-Adj within the same projection could be added to the list of too-close syntactic structures).
- ³¹ But see Bošković (2008) for the ban that “operators in operator-variable chains cannot undergo further operator movement” (his generalization (1) on p. 250)—something the CDE-driven approach to anti-locality captures for clause-internal movement (e.g., a version of (22a) with a *wh*-phrase touching down twice, to check [Foc]- and [*wh*]-features in separate positions within the same Ω -Domain). However, as Bošković (2008: 269, fn. 31) notes, the generalization seems to hold even of attempted movement into a higher clause—something that anti-locality under any understanding presented here cannot capture, as far as I can see. See also Rizzi (2006) for related discussion.
- ³² Following the Inter-Clausal Movement Generalization, Buesa García (forthcoming) makes a strong empirical case for the locality-unifying view in his treatment of subject-gap restrictions in questions in dialects of Castilian Spanish.
- In Grohmann (2003a, 2003b), I also addressed the issue of sideward movement (see Hornstein 2001, Nunes 2004, and references cited), but a discussion of this would lead us too far afield:

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- (i) *Sideward Movement Generalization* (adapted from Grohmann 2003a: 305)
 weak thesis: Movement targeting Θ -Domain is merged next in workspace.
 strong thesis: Movement from Ω - to Θ -Domain is merged next in workspace.

And Haddad (2007) reformulates (i) in his dissertation on adjunct control as follows:

- (ii) *Sideward Movement Generalization [revised]* (adapted from Haddad 2007: 180)
 If an element X targets a domain α when it undergoes first merge, X targets α when it undergoes sideward movement; a domain α can be a Θ -, Φ -, or Ω -Domain.

Further exploration of tying in sideward movement with standard and anti-locality issues looks like another exciting project for the future, as would a fresh look at the classic GB-distinction between A- and A'-properties (positions, movement, dependencies), also in tandem with the generalizations on Inter- versus Intra-Clausal Movement. On a related note, see Boeckx (2007) for detailed discussion of intermediate movement steps not triggered by feature-checking.

³³ In a pre-publication version of Medeiros (2008), the author suggests that his concept of C(omputational)-complexity might derive anti-locality—at least the type captured by the CCL banning phrase-internal movement—for free, trivially so. Working out this suggestion, again, has to be left for future research.

At this point, it should also be pointed out, however, that anti-locality as conceived within the CDE-driven approach—even when not accompanied by Copy Spell-Out (cf. note 29)—faces some serious challenges as well. A lot of work on applicative constructions across languages seems to suggest that vP , even in a phase-based approach, may contain more structure. Lee (2004), Jeong (2006), and Boeckx (2007) in particular provide arguments for necessary movement operations within a vP that would crucially involve anti-local movement steps. This challenge remains to be addressed more seriously.

³⁴ Note that in the most recent versions of Phase Theory, TP *cannot* be a phase, as shown convincingly by Richards (2007) and adopted by Chomsky (2007). Richards in particular shows how in Phase Theory, TP *should* be able to become a phase—but doesn't (see also Richards 2004). Thanks to Terje Lohndal (p.c.) and Gereon Müller (p.c.) for bringing this point to my attention.