

# Where's Phi? Agreement as a Postsyntactic Operation

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## 10.1 Introduction

One striking aspect of the study of  $\varphi$ -features (person, number, gender) is their propensity to enter into agreement dependencies, morphologically signaled on elements in the clause distant from their source. Russian (1) illustrates: morphemes expressing the  $\varphi$ -features of the NP meaning “girl(s)” surface on the finite verbs and on coreferential pronouns.

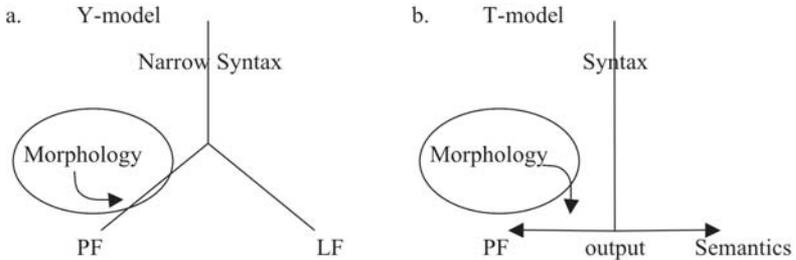
- (1) a. Devočk-a poigral-a v komnate. Potom on-a pospal-a.  
 girl-FEM played-FEM in room then PRON-FEM slept-FEM.  
 “The girl played in the room. Then she slept.”
- b. Devočk-i poigral-i v komnate. Potom on-i pospal-i.  
 girl-PL played-PL in room then PRON-PL slept-PL.  
 “The girls played in the room. Then they slept.”

In this paper, I argue that agreement (copying or sharing of  $\varphi$ -features) is a morphological, not a (narrowly) syntactic process (see also Marantz 1991, cf. Heim this volume on pronominal agreement). I assume a theoretical model in which the syntactic component generates (via Merge and Move) an abstract

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representation which in turn serves as the input to two interpretive components, as sketched in (2a), or (2b).<sup>1</sup> This conception of grammar follows the general GB/Minimalist Program (MP) architecture, supplemented by the postulation of a *Morphology* component as part of Spell Out (Halle and Marantz 1993). That is, Morphology refers to a part of the mapping procedure that takes a syntactic structure as its input and incrementally alters that structure in order to produce a phonological form. A process may thus be “morphological”, yet make direct reference to syntactic configuration in the input, just as prosodic phrasing, sandhi rules, and the like are part of the phonology yet require reference to syntactic structure.

## (2) THE PLACE OF MORPHOLOGY



In what follows, I give two arguments in favor of treating agreement as an operation in the morphological component, as defined in (2). Both revolve around how the controller of agreement is determined. For the sake of concreteness, the general proposal will be that morphological agreement is governed by (3), at least for languages in which only one NP controls agreement on the finite verbal complex (i.e., the verb plus an Infl or Aux element; I will refer to this loosely as the “finite verb”).<sup>2</sup>

- (3) The controller of agreement on the finite verbal complex (Infl+V) is the *highest accessible NP* in the *domain* of Infl + V.

<sup>1</sup> The difference between these models lies in whether there is a separate cycle of covert syntax after Spell Out (as in (2a)). In the model in (2b) (see Bobaljik 2002, and references therein) the interpretive components see only the final syntactic representation, including the output of covert movement. This distinction is immaterial to the first part of this chapter, but adopting (2b) is important in Section 10.5.

<sup>2</sup> I take (3) to define a necessary, but not a sufficient, condition for agreement. UG imposes (3) at a minimum (thus no language may skip an accessible NP), but languages may impose additional restrictions whereby the controller identified by (3) may fail to agree (say, animacy, plurality, specificity, etc.). See Corbett (2006) for an extensive survey.

This hypothesis has three crucial parts, as italicized. The major focus of this paper is on *accessibility*. I argue that *accessibility* is defined in terms of morphological case (m-case), rather than abstract case, grammatical function (GF), or other syntactic relation (see also Falk 1997, Sigurðsson 1993). Within the architecture in (2), this is significant since there is independent reason to believe that m-case is itself a part of the morphological component (Section 10.2). This leaves us with an order-of-operations argument: if agreement is dependent on the outcome of a postsyntactic operation (m-case), then agreement must also be postsyntactic (Section 10.3).

In Section 10.4 I will briefly discuss the role of *highest*, in particular, focusing on how the interaction of *highest* and *accessibility* yields a new account of an old typological generalization about ergative splits. Section 10.5 turns briefly to *domains*, providing converging evidence for the hypothesis in (3) from a “close enough” effect—an NP need bear no relation to a verb other than satisfying morphological accessibility and locality in order to trigger agreement on that verb. This contrasts with the proposal in Chomsky (2001) under which agreement is a reflection of core-licensing (feature-checking) relations in the syntax. The evidence for the “close enough” effect comes from Long-Distance Agreement constructions which appear to span domains, though, for now, it is sufficient to think of domains as imposing a clausemate condition on agreement. In the final section of the chapter, I touch rather superficially on some points of contact between the proposals here and some alternatives, in particular arguing in Section 10.6 that “defective intervention” constraints in Icelandic (in which an inaccessible NP appears to block agreement with an accessible one) are plausibly better analyzed as involving restrictions on either movement or domains, but not agreement.

## 10.2 On case and licensing

Before turning to the main points of this paper, it will be useful to review some of the arguments for distinguishing m-case from syntactic licensing, and for treating the former as a morphological operation, since it is this assumption that forms the lynchpin of the order-of-operations argument to be given below. The canonical discussion of this distinction comes from the phenomenon of “quirky case” in Icelandic.

### 10.2.1 *Quirky case*

As has been known since at least Andrews (1976) and Thráinsson (1979), Icelandic has a range of subjects that bear a morphological case other than nominative. Dative subjects, for example, occur as external arguments to a

range of experiencer predicates (4a,b) and also as the derived subjects in the passives of goal-selecting verbs (4c,d). Note that dative subjects cooccur with nominative objects.<sup>3</sup>

- (4) a. Jóni líkuðu þessir sokkar  
 Jon.DAT like.PL these socks.NOM  
 “Jon likes these socks.” (JGJ, 143)
- b. Það líkuðu einhverjum þessir sokkar  
 EXPL liked.PL someone.DAT these socks.NOM  
 “Someone liked these socks.” (JGJ, 153)
- c. Þeim var hjálpað  
 them.DAT was.SG helped  
 “They were helped.” (ZMT, 97)
- d. Um veturinn voru konunginum gefnar ambáttir  
 In the winter were.PL the king.DAT given slaves.NOM  
 “In the winter, the king was given (female) slaves.” (ZMT, 112)

As Icelandic is a Verb-Second language, clause-initial position is not a reliable diagnostic of subjecthood, but there is an extensive literature presenting more than a dozen subjecthood diagnostics that all converge on the dative NP in examples like (4) (see especially Zaenen et al. 1985, Sigurðsson 1989 et seq.). In addition, Harley (1995) and Jónsson (1996) have carefully established that the nominative objects in such quirky-subject constructions are indeed objects, and systematically fail the corresponding subjecthood tests. For example, (4b) involves an expletive in clause-initial position, which forces the subject (the dative NP), but not the object (nominative), to be indefinite, while in (4d), the position between finite auxiliary and participle is a reliable diagnostic for subjecthood, again, uniquely picking out the dative NP. Control constructions provide another diagnostic: in the infinitival clause, the subject must be PRO, while the object cannot be. The contrast in (5) shows that the dative is the subject, and the nominative is the object.

- (5) a. Jón vonast til [ að \_\_\_ líka þessi bók ]  
 Jon.NOM hopes for to PRO.DAT like this book.NOM  
 “Jon hopes to like this book.” (JGJ, 115)
- b. \*María vonast til [ að \_\_\_ líka Jóni ]  
 Maria.NOM hopes for to PRO.NOM like Jon.DAT  
 “Maria hopes that John likes her.” (JGJ, 116)

<sup>3</sup> In (4) and subsequent examples, “JGJ” refers to Jónsson (1996); “ZMT” to Zaenen, Maling, and Thráinsson (1985).

German provides an instructive minimal contrast. German also has dative–nominative case arrays in which the dative c-commands the nominative (see Frey 1993, Haider and Rosengren 2003, Wurmbrand 2006) but German lacks quirky case and it is the nominative, not the dative, which passes the subject tests, including replacement by PRO in control infinitives (6).

- (6) a. \*Ich hoffe [ \_\_\_ der Leo zu gefallen ]  
 I hope PRO.DAT the.NOM Leo to like  
 “I hope to like Leo.”
- b. Ich hoffe [ \_\_\_ dem Leo zu gefallen ]  
 I hope PRO.NOM the.DAT Leo to like  
 “I hope that Leo likes me.”

With the exception of their morphological case (and agreement) properties, quirky subjects are subjects, and nominative objects are objects, in whatever manner these terms are to be theoretically defined. This is particularly relevant within GB/MP approaches, since the distributional diagnostics at issue (for example, the distribution of PRO versus lexical NP) have been seen as the purview of *Case Theory* since Chomsky (1981). The star witness for invoking Case Theory in this context is the ECM/Raising-to-Object configuration. When the infinitive is embedded under a case-assigning verb such as *believe*, the PRO requirement is lifted and a lexical NP subject is allowed (see (7)).

- (7) Hann telur **Maríu** vita svarið.  
 He believes Maria.ACC to know answer  
 “He believes Maria to know the answer.” (JGJ, 168, adverb omitted)

Quirky subject NPs have exactly the same distribution as non-quirky subjects. They are obligatorily replaced by PRO in infinitive clauses (5a), except when the infinitival clause is the complement to an ECM verb (8).

- (8) Ég tel **þeim** hafa verið hjálpað í prófinu  
 I believe them.DAT to have been helped in the exam  
 “I believe them to have been helped in the exam.” (ZMT, 107)

In sum, the moral of Zaenen et al. (1985) is that all of the syntactic effects attributed to Case Theory in GB are robustly evident in Icelandic, but can only be understood if one ignores the case that NPs actually happen to bear. We must conclude that the syntactic distribution of NPs is not governed by considerations of case as manifest morphologically, but rather by some more abstract system of syntactic licensing. Within GB/MP, this abstract system is

called “Structural Case” (Cowper 1988, Freidin and Sprouse 1991). Terminology aside, whatever the nature of the abstract syntactic licensing responsible for “Case Theory” effects, Icelandic shows that this system is distinct from the algorithms that assign m-case.

### 10.2.2 *M-case*

The literature contains a variety of proposals for the characterization of the m-case algorithms (see Zaenen et al. 1985, Yip et al. 1987, Marantz 1991, and recently McFadden 2004). While these differ in many respects, a common property is that the m-case assignment rules must make reference to syntactic structure in their structural description (input), but they effect no change to the syntactic representation (output). No rules of the syntax proper make reference to the output of the rules of m-case assignment. Within the models in (2), the proper place of the rules of m-case assignment is thus the Morphological component, a part of the PF interpretation of syntactic structure. One proposal in this vein is that of Marantz (1991), the essentials of which I will adopt here.

Marantz proposes that there are three primary types of morphological case: (i) lexical (including quirky) case assigned idiosyncratically by particular lexical items; (ii) unmarked case (conventionally called nominative for nominative–accusative languages, and absolutive for ergative languages); and (iii) “dependent” case. Dependent case is assigned only when more than one NP in a single domain is eligible to receive m-case from the case-assignment rules. For nominative–accusative languages, the dependent case is accusative, and is assigned to the lower NP in the domain, while for ergative languages, the dependent case is ergative, assigned to the higher NP. Marantz suggests that the assignment of morphological cases proceeds via a disjunctive hierarchy, as follows.<sup>4</sup>

<sup>4</sup> Unmarked case is unmarked for a particular syntactic environment, such as clauses. For Marantz, genitive is the unmarked case for an NP-internal configuration. I lay aside discussion of genitive case throughout this chapter. To simplify, I also draw no distinctions among the oblique cases, lumping them together under the “lexical” rubric (but see n. 8). Marantz also recognizes a fourth type of case, namely default case, assigned in extra-syntactic environments when no other rules apply. For English, the default case is the accusative, and is used in a heterogeneous set of environments, such as the pronouns in “Me too”, “That’s me” (see Schütze 1997). Finally, morphological case as used here refers to the morphological features, that are in turn subject to rules of exponence/realization, and is thus distinct from surface phonological form. Thus even in a language with a relatively rich case system like Russian or Icelandic, nominative and accusative for certain classes of nouns may be syncretic/homophonous, but nominative and accusative must still be distinguished for the purposes of accessibility. Thus I retain a certain degree of abstractness to case, but this abstractness is only relevant to rules of realization and patterns of syncretism.

- (9) CASE REALIZATION DISJUNCTIVE HIERARCHY      Domain: government  
by V+I
- a. lexically governed case
  - b. dependent case (accusative, ergative)
  - c. unmarked/default case

The workings of the hierarchy are schematized roughly as in the derivations in (10), which represent the case arrays for a regular nominative/accusative verb “love” and a quirky-dative-assigning verb “like” in Icelandic.

- |      |    |            |       |            |    |      |            |            |           |
|------|----|------------|-------|------------|----|------|------------|------------|-----------|
| (10) | a. | Subj       | loves | Obj        | b. | Subj | likes      | Obj        |           |
|      |    | —          |       | —          |    |      | <b>DAT</b> | —          | lexical   |
|      |    | —          |       | <b>ACC</b> |    |      | <b>DAT</b> | —          | dependent |
|      |    | <b>NOM</b> |       | <b>ACC</b> |    |      | <b>DAT</b> | <b>NOM</b> | unmarked  |

The first m-case assigned is lexical; this applies only in (10b), as the verb meaning “like” assigns quirky dative to its subject (4a–b). Next, dependent cases are assigned. In (10a), there are two NPs requiring m-case, and the lower one receives accusative. In (10b), since the subject has received lexical case, it is out of contention, and thus dependent case is not assigned. Finally, the remaining caseless NP in each derivation receives unmarked case. In (10a) this is the subject, yielding the NOM–ACC array, while in (10b) only the object is without m-case and hence it receives nominative (as in (4a,b,d)).<sup>5</sup> Further details of the algorithm are not important, and the reader is referred to the literature cited for a deeper understanding and for various refinements.

What is important here is the flow of information in the system. The morphological case-assignment algorithm makes reference to syntactic structure; at a minimum, in order to correctly allocate dependent cases, the relative hierarchical positions of two competing NPs must be known, a property that is established by the syntax. On the other hand, there is no evidence that syntax ever sees the output of the morphological case-assignment algorithms. This was the point of the separation of licensing (GB/MP’s Case-checking) and m-case. These properties follow of course if morphological case-assignment is part of a postsyntactic morphological component (see (2))—m-case assignment happens “too late” in the derivation for syntax to make reference to it.

<sup>5</sup> Nominative case assignment is not an obligatory property of finite clauses. If the only argument in the clause bears a lexical case, such as dative (as in (4c)), no further case assignment takes place, and the verb shows default agreement. There is, crucially, no evidence for a (null) expletive here: Icelandic has expletives, and these impose various requirements on the subject NP, including a definiteness restriction. This applies equally to dative subjects (Jonas 1996), hence the absence of any such effect in (4c) argues against positing such an element. See Wurmbrand (2006) for additional discussion.

Armed with this understanding of m-case, we may now proceed to a discussion of the relationship between m-case and agreement.

### 10.3 Accessibility: agreement, case, and grammatical function

I turn now to the evidence that agreement is sensitive to the output of the m-case algorithms, from which I draw the conclusion that agreement, like m-case, is a postsyntactic operation.

#### 10.3.1 *The Moravcsik Hierarchy*

Moravcsik (1974) presented a set of universals regarding (NP–predicate) agreement. The universals are formulated in terms of GFs (subject, object, etc.), and include the implicational hierarchy in (11) (see Moravcsik 1978 for revisions).

- (11) THE MORAVCSIK HIERARCHY  
 Subject > Object > Indirect Object > Adverb

This hierarchy ranges over languages, not sentences, and conflates a set of implicational universals. If in some language the verb agrees with anything, it agrees with some or all subjects. Likewise, if the verb in some language agrees with anything other than subjects, it agrees with some or all direct objects. And so on.<sup>6</sup> A survey of 100 genetically and areally diverse languages (Gilligan 1987) confirms this broad picture. As shown in (12), the hundred languages in Gilligan's survey are divided roughly equally among the four types that are consistent with the hierarchy, while the four types that are not consistent with the hierarchy are unattested.<sup>7</sup> For example, no language has agreement with nonsubject arguments, but systematically lacks subject agreement.

- |                    |    |               |     |
|--------------------|----|---------------|-----|
| (12) No Agreement: | 23 | IO only:      | 0   |
| S only:            | 20 | DO only:      | 0   |
| S–DO:              | 31 | IO, DO only:  | 0   |
| S–IO–DO:           | 25 | S–IO, not DO: | (1) |

In this section, I argue that the Moravcsik Hierarchy should be restated in terms of m-case rather than GF. More specifically, I argue that the hierarchy should be stated in terms of the categories of morphological cases suggested

<sup>6</sup> The “some or all” phrasing accommodates the observation that the accessibility hierarchy imposes a necessary, but not a sufficient, condition for agreement (see n. 2).

<sup>7</sup> Gilligan's survey does not include the Adverb category. Note also that one language, *Waskia*, is given as having indirect-object agreement but lacking direct-object agreement. The phenomenon he reports (p. 191) as IO-agreement is suppletion of the verb meaning “give” for person and number of the indirect object. Person-governed suppletion with “give” seems to be a phenomenon independent of agreement as such (see Comrie 2000).

by Marantz (1991) as discussed in section 10.2.2. That is, I argue here that (11) should be reformulated as (13).<sup>8</sup>

- (13) THE REVISED MORAVCSIK HIERARCHY (M-CASE)  
 Unmarked Case > Dependent Case > Lexical/Oblique Case

My proposal is that morphological case delineates an accessibility/markedness hierarchy for morphological agreement.<sup>9</sup> If, in language *L*, accusative NPs (a dependent case) are accessible for agreement, then, by (13), nominative NPs in *L* must also be accessible for agreement. In languages with rather boring morphological case systems, where m-case tracks GF fairly neatly (for example, Russian and German), (13) is equivalent to (11). The interest comes from languages in which case and GF do not always line up. The thesis I pursue here is the following (see also Falk 1997):

- (14) When case and GF diverge, it is m-case, not GF, that defines accessibility for agreement.

In the next subsections, I turn to an examination of case–GF mismatches that illustrate (14). In each case the controller of agreement is determined by m-case and not GF. For example, when there are non-nominative subjects, and nominative non-subjects, it is nominative (unmarked) case and not subjecthood that is the correct predictor of agreement. This state of affairs has generally been recognized for each of the languages discussed; what I contend here, following Falk (1997), is that this is the normal, universal state of affairs, at least for single-agreement languages.<sup>10</sup> Finally, in Section 10.3.3, I note that the hierarchy as presented here provides a straightforward explanation for an

<sup>8</sup> I have also left off Moravcsik's "adverb" category as this is not relevant to the discussion below. The simplifications in notes 2 and 4 are carried over here. For example, many languages that allow or require agreement with some dative NPs do not permit agreement with all datives. In a not uncommon type, among dative NPs only the goal argument of verbs meaning "give" governs agreement (as in Chukchi; Comrie 1979); more complicated systems are exemplified by Basque, as discussed in Řezáč (this volume).

<sup>9</sup> The hierarchy in (13) converges with the markedness hierarchy proposed in Blake (2001, chapter 5) for morphological case systems (independent of agreement). Note that although I will use the term markedness in the discussion below, nothing in my use of the term should imply a commitment to any of the many uses to which this term has been put. By more or less "marked", I mean only the status on the hierarchy in (13) and the associated case-algorithm discussed in Section 10.2.2. In particular, I make no claims about morphological markedness in the normal sense of "bearing a formal mark" as opposed to zero; thus unmarked case under (13) may bear a mark, as in Icelandic and other languages.

<sup>10</sup> The arguments from Icelandic and Hindi for the dependence of agreement on (m)-case follow Falk (1997). Falk encodes morphological markedness in the syntactic representation and draws a sharp two-way divide between unmarked and marked. As far as I can see, this does not extend to the (at least) three-way distinction needed to capture the Moravcsik Hierarchy. In further establishing the validity of the generalization, I have surveyed the theoretical literature, investigated all apparent counterexamples that have been brought to my attention, and sampled grammars from the 100-language WALS survey (Haspelmath et al. 2005). While I have found no counterexamples in the WALS grammars, this

often-noted universal asymmetry regarding case-agreement splits in ergative languages.

### 10.3.2 *Icelandic nominative objects once more*

Recall from Section 10.2 that Icelandic has non-nominative subjects, and nominative non-subject NPs. Yet, as Sigurðsson (1993 et seq.) has stressed, agreement tracks m-case. Datives never control agreement, even when the dative passes all other subjecthood diagnostics (see (15)).

- (15) \* Morgum studentum líka verkið  
 many students.DAT like.PL job.NOM  
 “Many students like the job.” (Harley 1995: 208)

Similarly, a nominative NP controls agreement, even when it is unambiguously the object (see examples (4b,d) above).<sup>11</sup> Under the GF-based hierarchy, Icelandic would be described as a language that shows some object agreement, and agreement with some subjects. This description is consistent with the Moravcsik Hierarchy, but would have to be supplemented by (14), as a language-particular quirk. By contrast, the view I advocate here is that the only thing quirky about Icelandic is that it has quirky case. That it is (nominative) objects that control agreement, and not quirky subjects in the relevant constructions, follows as an automatic consequence of stating the implicational universals in terms of morphological case (13). My view, then, is that (14) is not a language-particular supplement to a set of universal implications; it is instead derivable directly from UG.

### 10.3.3 *Ergativity and the Moravcsik Hierarchy: A typological puzzle*

A different kind of m-case–GF mismatch is exemplified by the phenomenon of ergativity. In an ergative case system (16b), the subject of an intransitive verb (S) is formally marked in the same manner as the object of a transitive verb (O), with the subject of the transitive verb (A) bearing a special mark. This

conclusion must be tempered by the fact that many of the grammars do not provide sufficient detail to identify possible case–GF mismatches. Note that I have excluded from consideration languages in which only a number contrast is marked on the verb, as it is often difficult from the evidence presented in available descriptions to distinguish between number agreement and the marking of “verbal number” (sometimes referred to as “pluractionality”) which may overlap semantically but are distinct phenomena; see Corbett (2000, chapter 8) and references therein.

<sup>11</sup> There are various additional qualifications to be made regarding agreement with non-subject nominatives in Icelandic. Some speakers accept or in some cases prefer default agreement over agreement with nominative objects, though Sigurðsson (1996) reports that agreement with the nominative object is obligatory for “most” speakers and most verbs. I return to some additional considerations in Section 10.6.

stands in contrast to the familiar nominative–accusative alignment, as shown in (16a). See Dixon (1994).

- (16) a. Nominative–Accusative                      b. Ergative–Absolutive



Despite the different groupings for case marking, it is well established that many diagnostics that one may be tempted to consider as subject–object asymmetries work in the same way across the language types, treating A and S as a natural class of “subjects”, as distinct from O. According to Dixon (1994), some grammatical processes universally target subjects. These include “subject-orientation” of reflexives, imperatives, and Control phenomena (cf. Section 10.2.2). In other words, while there is quite a bit of apparent syntactic variation among individual languages, there has been little success in showing that the syntax of subjects/objects is systematically different in a way that is correlated with ergativity.<sup>12</sup> By definition, then, ergative case systems constitute a case–GF mismatch.

Now, it turns out that implicational universals of the kind that motivated the Moravcsik Hierarchy are also attested in ergative languages. Some patterns of agreement are simply unattested. This is summarized in (17), cf. (12).<sup>13</sup>

- (17) a. no agreement (Dyirbal, Lezgian)                      e. \*ERG only  
 b. ABS only (Tsez, Hindi)                                      f. \*ERG DAT, not ABS  
 c. ABS ERG (Eskimo-Inuit, Mayan)                      g. \*DAT only  
 d. ABS ERG DAT (Basque, Abkhaz)                      h. (\*ABS DAT, not ERG)

Important here is the absence of type (e) languages, as compared to types (b) and (c). That is, alongside the valid implication in (18b), which holds of

<sup>12</sup> The one apparent case of a systematic difference is in accessibility for relativization (Keenan and Comrie 1977). While not all languages have an asymmetry, if there is one, then it is absolutes that are more readily extractable than ergatives (in ergative languages), while elsewhere, subjects are more extractable than objects. It is not clear to me how the Keenan and Comrie hierarchy and the Moravcsik hierarchy might be related.

<sup>13</sup> See Murasugi (1994: 147), Croft (1990), Woolford (1999). The absence of type (h) is inferred from these sources, though not explicitly stated there. A complicating factor is that there are also “split” systems. One split type has an ergative–absolutive case system alongside a nominative–accusative (=subject–object) agreement system; the reverse is unattested. This split follows from the proposals advanced here, see Section 10.4.3.

non-ergative languages and is directly encoded in (11), the implication in (18a) is equally valid, yet is not encoded in the Moravcsik Hierarchy.

- (18) a. ERG agreement  $\rightarrow$  ABS agreement  
 b. OBJ agreement  $\rightarrow$  SUBJ agreement

Thus, (11) appears to miss a significant generalization. Though the typological gap is known, presentations such as Croft (1990) simply state two hierarchies, the special hierarchy in (19a) holding for Ergative languages, that in (19b) holding for nominative–accusative ones.

- (19) a. Absolutive > Ergative > Dative  
 b. Subject > Object > Indirect Object

Note that the two hierarchies are stated in non-like terms, the one in terms of m-case, the other in terms of GF. Particularly suspicious is that the formulation in terms of case is necessary precisely for that class of languages in which case and GF do not coincide. This leaves the range of the GF hierarchy as only those languages where case and GF (largely) coincide. This state of affairs invites a reformulation of (19b) in terms of case categories so that the hierarchies are now more directly comparable, as in (20).

- (20) a. Absolutive > Ergative > Dative  
 b. Nominative > Accusative > Dative

At this point, the relevance of the case groupings suggested by Marantz (1991) should be apparent. For Marantz, ergative and accusative are the *dependent cases*, assigned only in the presence of a local case competitor (cf. Bittner and Hale 1996, McFadden 2004), while nominative and absolutive are names for the unmarked case. Thus, in terms of Marantz's categories in (9), the two hierarchies in (20) are in fact one and the same hierarchy, namely that given in (13), repeated here.

- (13) Unmarked Case > Dependent Case > Lexical/Oblique Case

A clear advantage of this reformulation is that the two implications in (18) now both follow automatically from (13). Indeed, both are exactly the same statement, namely that if a language has agreement with dependent case NPs, then that language will also have agreement with default case NPs.

Of course, the unification of the two hierarchies in (20) was predicated on the assumption that there is a rigid equivalence, for nominative–accusative languages, such that nominative:subject :: accusative:object. While this is

*largely* correct, it isn't *entirely* correct. As we have seen in the preceding section, the correspondence between case and GF breaks down in Icelandic. Yet as we have also seen, exactly where the correspondence breaks down, it is case and not GF that determines accessibility for agreement.

#### 10.4 First among equals: multiple accessible NPs

In the languages considered to this point, the calculation of accessibility (unmarked m-case) normally returns a unique NP in any given clause (i.e., agreement domain).<sup>14</sup> This is not always the case; in some languages, situations arise in which there is more than one accessible NP in a given domain. In such cases, it is the highest accessible NP that controls agreement. Multiple accessible NPs in a single domain may arise in one of two ways. On the one hand, there are situations in which more than one NP may receive unmarked m-case. This arises in languages like Hindi, which has stricter conditions on the distribution of dependent cases than are given in (9), see below. On the other hand, there are single agreement languages in which more than one m-case is accessible. I argue below that the second case is instantiated by Nepali, as described by Bickel & Yādava (2000). In Section 10.4.3, I demonstrate that this second possibility yields a straightforward account of a known typological gap in split ergative systems.

The discussion throughout this section also highlights two ways in which the predictions of (3) differ from other conceivable approaches. First, the metric "highest" is subsidiary to accessibility, defined as above. NPs that are not accessible are simply invisible for the computation of agreement controller (contrast "defective intervention" of Chomsky 2000: 123 and related work; see Section 10.6 below). Second, although accessibility in a given language is defined in terms of a markedness hierarchy (13), the hierarchy itself plays no further role in the synchronic grammar of any languages. This contrasts with approaches such as OT in which the hierarchies are fundamental parts of synchronic grammar. I return to this point briefly at the end of Section 10.4.2.

<sup>14</sup> In the normal case, but see van Koppen (2005), who argues that in cases of coordinated NPs (and certain other contexts) the coordinated NP as a whole as well as the individual conjuncts may share m-case and thus all be accessible. Van Koppen argues that the calculation of highest/closest sometimes fails to return a unique controller, for example, allowing the conjoined NP and its first conjunct to be equally accessible and local. She presents evidence from an impressive array of Dutch dialects that in these cases, considerations of featural markedness in morphology resolve the choice of controller. Koopman (2005) also uses instances of locality failing to return a unique controller to develop an alternative account of the Tsez facts discussed in Section 10.5, below.

10.4.1 *Hindi-Urdu: Highest unmarked*

Indo-Aryan languages provide another range of examples that echo the refrain in (14), namely that it is m-case and not GF that provides the accurate predictor of accessibility. The Indo-Aryan languages add some interesting ingredients to the mixture, not seen in the preceding sections. For one, these languages are described as having a (type of) split-ergative system, in which ergative and accusative may occur in the same clause. This fact alone questions an approach that would maintain separate hierarchies for ergative and nominative languages: which one would a clause having an ergative and an accusative be expected to adhere to? More to the point, although accessibility does not pick out a unique controller in some contexts, in actual fact only a single NP in any given environment can be the controller of agreement. The deciding factor that resolves the competition among accessible NPs, as has been noted before, is structural prominence: the highest accessible NP “wins”.

Hindi-Urdu displays this pattern straightforwardly. The facts are widely discussed, so I provide only a cursory discussion here. As noted by Kachru et al. (1976) and in more detail in Mohanan (1994), agreement in Hindi-Urdu is readily described as being with the highest caseless (i.e., nominative) NP argument in the domain of the finite verb.<sup>15</sup> The basic case system of this language involves two overt affixes (“dative” *-ko*, and “ergative” *-ne*). The ergative is used to mark external arguments of transitive (and some unergative) predicates, but only in the perfective tense/aspect. The dative is used to mark experiencers and goals (including experiencer subjects), and is also used to mark specific or animate direct objects. Remaining core arguments are unmarked. Laying aside ditransitives, this yields five basic patterns, as shown below. The boldfacing indicates the argument that triggers agreement on the verb.

(21) Perfective:	a.	SUBJ- <i>ne</i>	OBJ- $\emptyset$	V	
	b.	SUBJ- <i>ne</i>	OBJ- <i>ko</i>	V	<b>default</b>
Imperfective:	c.	SUBJ- $\emptyset$	OBJ- $\emptyset$	V	
	d.	SUBJ- $\emptyset$	OBJ- <i>ko</i>	V	
Psych:	e.	SUBJ- <i>ko</i>	OBJ- $\emptyset$	V	

<sup>15</sup> Some interesting questions arise in the determination of domains. Under certain conditions, the matrix verb may agree with the nominative object of an embedded infinitival complement. See Bhatt (2005) for a comprehensive discussion, and Polinsky (2003) and Bobaljik and Wurmbrand (2005) for evidence that restructuring (i.e., “clause union”) infinitival complements form part of the matrix agreement domain quite generally. Note also that only surface argument NPs are relevant to the determination of agreement, thus as a reviewer notes, incorporated NPs are formally caseless, but do not agree. As is true in many languages, clauses with an incorporated direct object are formally intransitive (Mohanan 1995) and thus presumably lie outside the case system. Recall that the framework adopted here allows a distinction between caseless NPs and NPs bearing unmarked case.

The following examples illustrate the above schema.<sup>16</sup>

- (22) a. raam-ne                      roṭii                      khaayii      thii  
 Ram-ERG (MASC) bread-Ø (FEM) eat.PF.FEM be.PST.FEM  
 “Ram had eaten bread.”
- b. siitaa-ne                      larḱii-ko                      dekhaa  
 Sita-ERG (FEM) girl-ACC (FEM) see.PF.MASC  
 “Sita saw the girl.”
- c. siitaa                      kelaa                      khaatii      thii  
 Sita-Ø (FEM) banana-Ø (MASC) eat.IMPF.FEM be.PST.FEM  
 “Sita (habitually) ate bananas.”
- d. niina                      bacce-ko      ut<sup>h</sup>aayegii  
 Nina-Ø (FEM) child-ACC lift.FUT.FEM  
 “Nina will pick the child up.”
- e. siita-ko                      larḱe      pasand the  
 Sita-DAT (FEM) boys-Ø like      be.PST.MASC.PL  
 “Sita likes the boys.” (Woolford 1999)

The examples just given show how agreement reliably tracks unmarked case. NPs bearing an overt case marker never control agreement, and the argument controlling agreement may be either subject or object. Once again, we find a mismatch between case and GF, and it is morphological case, not GF that determines which NP will control agreement. Further, as the (b) examples show, if both subject and object are overtly marked for case, then no argument controls agreement and a default form (3SG.MASC) is used, as in Icelandic. The interesting case is (c). In this configuration, there are two argument NPs with unmarked case, and it is the higher one that controls agreement. Such a situation does not arise in canonical ergative systems or in Icelandic. These configurations thus motivate the restriction to “highest” in the formulation of the hypothesis in (3). Crucially, “highest” is subordinate to accessibility. The formulation “highest NP, if accessible” would fail for (21a,e), just as it would for nominative object agreement in Icelandic.

#### 10.4.2 Nepali: Markedness

Next consider the related language Nepali, for which I rely exclusively on the discussion in Bickel and Yādava (2000), henceforth B & Y. B & Y claim that while Hindi-Urdu shows the need to refer to m-case in determining the

<sup>16</sup> The gender of a noun is not morphologically expressed on that noun, but is indicated in parentheses in the gloss. Masculine agreement is default, so only feminine marking on the predicate is a clear indication of a morphological agreement relation.

controller of agreement, Nepali shows the need to appeal to GF. Specifically, B & Y claim (p. 347):

- (23) “Where there are two nominative NPs in a Nepali clause, agreement is with the higher argument, just as in Hindi. Unlike in Hindi, however, there is no agreement with nominative objects. Instead, the verb agrees with the ergative A-argument.”

To support this B & Y give (24), where agreement is with the first person subject regardless of case.

- (24) a. ma        yas        pasal-mā patrikā        kin-ch-u  
 1SG.NOM DEM.OBL store-LOC newspaper.NOM buy-NPST-1SG  
 “I buy the newspaper in this store.”
- b. maile yas        pasal-mā patrikā        kin-ē  
 1SG.ERG DEM.OBL store-LOC newspaper.NOM buy-PST 1SG  
 (\*kin-yo)  
 buy.PST3SG.MASC  
 “I bought the newspaper in this store.” (B & Y: 348)

Note, though, that this pair alone does not suffice to argue for a (uniquely) GF-based definition of accessibility, even in Nepali. Consider the consequences of positing a parametric difference in m-case accessibility between the two languages, as in (25).

- (25) Unmarked Case > Dependent Case > Lexical/Oblique Case  
Type 1 (Hindi)  
Type 2 (Nepali)

By hypothesis, Nepali would differ from Hindi-Urdu in including dependent case (ergative) among the accessible cases. Under (13), this entails (correctly) that the unmarked case must also be accessible. Moreover (3) yields exactly the pattern described in (23) and (24)—the highest accessible argument in (24a) is the subject, as in Hindi-Urdu, but unlike Hindi-Urdu, the highest accessible NP in (24b) is also the subject, even though it bears ergative case. This proposal captures the data in (24), yet contrary to the quote in (23), the proposal here predicts that nominative objects in Nepali should in fact control agreement, but only when the subject bears an inaccessible case. According to the data presented in B & Y, this is in fact the case. Although they claim that nominative objects do not agree, they give the example in (26) to illustrate the fact that, like in Hindi, dative subjects do not agree. In exactly this environment, as

predicted, the highest accessible NP is the nominative object, and, indeed, it agrees, just as in Hindi (21e).

- (26) malāi timī man par-ch-au  
 1SG.DAT 2MASC.HON.NOM liking OCCUR-NPST-2MASC.HON  
 (\*par-ch-u)  
 OCCUR-NPST-1SG  
 "I like you." (B & Y: 348)

On the (not uncontroversial) assumption that the dative subjects are subjects, the Nepali facts are thus consistent with the proposals advanced above, and in particular with the claim that all languages respect the m-case hierarchy in determining accessibility of NPs for agreement. GF is never directly referenced, and apparent subject-orientation cutting across case distinctions arises only to the extent that highest accessible in (3) converges with subjecthood. Note importantly that the calculation of "highest" is always subsidiary to accessibility, and thus apparent subject-orientation is still limited by accessibility: in Nepali, unmarked and dependent case subjects are accessible, but oblique subjects are not.<sup>17</sup>

The Nepali data brings out another way in which the proposal here differs from conceivable alternatives. Specifically, the proposal here is that the markedness hierarchy in (13) defines legitimate groupings of m-cases into accessible and inaccessible (in no language can dependent cases be accessible and unmarked case inaccessible). The hierarchy plays no further role, and, in particular, no role in the competition among accessible NPs in a given sentence. Thus in Nepali (24b) it is the highest of the accessible NPs (the ergative) that controls agreement, even though there is a sense in which the object is less marked. The view here thus contrasts with proposals in OT frameworks, where the markedness hierarchy would be directly encoded in the constraints that determine agreement controller in any given sentence. While the right ranking could be found for Nepali, the OT-like system would lead one to expect languages in which it is the "least marked" NP that controls agreement. This would play out as a language in which dependent cases only control agreement when there is no available unmarked NP in the clause. I am aware of no agreement system that conforms to this expectation, and thus retain the view advocated in this chapter.<sup>18</sup>

<sup>17</sup> Other languages have been analyzed as requiring reference to GF as well as case, especially within the RG literature. Most of these are from languages showing complex agreement—agreement with more than one argument on a single verb. I have declared such systems to be beyond the scope of the current discussion, but the hypothesis here will fail if an account in terms of m-case plus hierarchical structure is not forthcoming. I believe this to be feasible, but cannot address the matter here.

<sup>18</sup> My thanks to Paul Smolensky for raising this question.

### 10.4.3 *Ergative splits: A typological gap*

The discussion of Hindi-Urdu in Section 10.4.1 examined the case and agreement facts in one language that shows a split-ergative system. As mentioned in note 13, there is another type of split that is crosslinguistically well-documented and is directly relevant to the present proposals. In some languages, the case and agreement systems within a single language follow different alignments. Intriguingly, this happens in only one direction. There are languages in which the case system is ergative, but the agreement system can be called nominative–accusative (Warlpiri and Chukchi are examples of this type). The converse (ergative agreement with nominative–accusative case) is generally held to be unattested (Dixon 1994, though see Patel 2006 for an apparent counterexample). This typological gap receives a principled explanation within the framework advanced here, although considerations of space permit only the briefest sketch.

In the preceding section, the difference between Hindi-Urdu and Nepali was explained by ranking the languages at different points on the m-case accessibility hierarchy, as in (25). As it happens, in the normal case this distinction will only manifest itself empirically in languages with an ergative case system. Here's why.

The main hypothesis of this chapter is that agreement is always dependent upon accessibility, defined in terms of m-case. When only one case type is accessible, agreement will visibly track the morphological case system (in as far as zero exponents do not obscure this). Nominative–accusative systems will have a nominative-based agreement system, while ergative systems will have an absolutive-based agreement system. These are simply two names for the same thing, namely, unmarked case. However, consider now Type 2 languages in (25), those in which dependent case is also accessible. In a nominative–accusative case array, nothing changes. The nominative subject will always be the highest accessible NP, whether or not the accusative is (in principle) accessible. So a nominative–accusative case array will always yield a nominative–accusative (=subject–object) agreement alignment. But in ergative–absolutive case arrays, the difference between Type 1 and Type 2 means a difference precisely in whether the transitive subject is accessible for agreement. In a Type 2 language like Nepali, the highest accessible NP will be the subject of transitive and intransitive clauses alike, despite the fact that this cross-cuts the ergative–absolutive case system. This characterizes exactly the attested split: an ergative–absolutive case array but a nominative–accusative (really, subject–object) agreement alignment. Given the proposals in this chapter, there is simply no way to derive the unattested split. This is summarized in (27).<sup>19</sup>

<sup>19</sup> Legate (2005a), responding to an earlier draft of this chapter, is thus in error when she claims that the system presented here cannot cover the attested case-agreement splits. In fact, as just demonstrated,

## (27) PREDICTED AGREEMENT ALIGNMENTS

Case Alignment	Accessible case(s)	
	Unmarked	Unmarked and Dependent
Ergative–absolutive	absolutive (vs. ergative)	subject (vs. object)
Nominative–accusative	subject (vs. object)	subject (vs. object)

10.4.4 *Summary*

In this section, I have presented evidence that accessibility alone does not always yield a unique NP for the controller of agreement. In such cases, as recognized in the prior literature, structural prominence (a form of relativized locality) determines the controller of agreement. On the perspective advanced here, this is the only role for relativized locality (intervention). This view correctly accounts for the phenomena discussed above including the exclusion of a known typological gap.

## 10.5 Close enough: agreement without checking

At this point, I turn to a discussion of Long-Distance Agreement (LDA) constructions, in which the matrix verb agrees with an NP in an embedded clause. LDA constructions have been identified in a variety of languages; I illustrate here with data from Tsez (Daghestanian), one of the most carefully documented of such configurations.<sup>20</sup> Specifically, these constructions show that the choice of agreement controller is determined by morphological accessibility and locality but not by any other designated syntactic relationship. An NP that bears no syntactic relation to a verb nevertheless may control agreement on that verb, by dint of simply being the highest accessible NP

the attested patterns, and only the attested patterns, are stable within the system. However, Legate does note a language type which the proposals here do not account for, namely, a language in which the only NPs that trigger agreement are subjects bearing unmarked case, i.e., a language in which marked subjects and unmarked objects (in the presence of a marked subject) fail to agree. Such a pattern could be exemplified by a language with an ergative–absolutive case alignment but in which only intransitive subjects govern agreement, while object absolutes do not. Legate suggests that Nieuwean is such a language. I suspect that this is more properly analyzed as a case of verbal number (see note 10), which is independently attested in Austronesian languages, thus I maintain (pending further investigation) that such languages are indeed unattested.

<sup>20</sup> The Tsez data and analysis reported here are taken from Polinsky and Potsdam (2001), henceforth P & P. Other languages with constructions similar to Tsez in relevant respects include Passamaquoddy (Bruening 2001) and Innu-aimûn (Branigan and MacKenzie 2002). See Polinsky (2003) for a survey of LDA.

in the verb's domain (as in (3)). Such configurations challenge theories in which agreement is more closely wedded to the narrow syntax, whether tied to feature-checking relations (e.g., "abstract case", as in GB/MP) or to argument structure/subcategorization (as in GPSG, LFG, and HPSG, see Bresnan and Mchombo 1987, Pollard and Sag 1994, Kathol 1999). While the main point of the discussion of LDA here is this "close enough" effect, the discussion of Tsez will also illustrate the role of domains, that is, the absolute locality condition in (3) (see also Bobaljik and Wurmbrand 2005).

### 10.5.1 *LDA in Tsez*

Tsez is a single-agreement language with an ergative case system. Hence, only absolutive (i.e., unmarked) NPs are accessible for agreement—in simple clauses the intransitive subject or the object of a transitive verb, as expected. However, under a certain constellation of conditions, an absolutive NP in a finite embedded clause may control agreement on the matrix verb. Example (28) illustrates. The object of the matrix transitive predicate "know" is the entire embedded clause. The matrix verb may agree with this clausal object, signalled by the class IV agreement prefix, *r-*. Alternatively, the verb may show the class III agreement prefix, displaying LDA with the class III absolutive NP in the embedded clause.

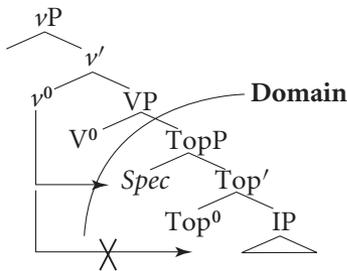
- (28) enir [ uʒā magalu b-āc'ruʒi ] r-/b-iyxo  
 mother boy bread.ABS (III) III-ate IV-/III-know  
 "The mother knows [(that) the boy ate the bread]." (P & P, 584)

Whatever matrix agreement is chosen, the embedded clause is finite, and the embedded absolutive governs agreement in its own clause. There is thus no reason to suspect that LDA is driven by the needs of the embedded absolutive. Indeed, P & P argue extensively that the agreeing element in the embedded clause remains in the embedded clause at every level of representation, including LF. Although Tsez does provide evidence for covert movement (QR), P & P show that both overt and covert movement are strictly clause-bounded in Tsez. P & P are also careful to establish that the LDA version of (28) does indeed exhibit agreement across a clause boundary. That is, they give arguments against a prolepsis or "proxy agreement" analysis, under which the actual trigger of matrix agreement is a (phonetically null) NP (the proxy) in the matrix clause, coreferent with the relevant NP in the embedded clause. A rough paraphrase of what a proxy analysis might look like is given in (29).

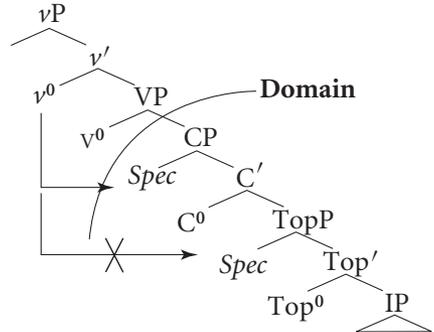
- (29) I know about/of it/the bread<sub>i</sub> [(only) that the boy ate it<sub>i</sub>].

P & P's analysis of LDA in Tsez is sketched in (30a).

(30) a. Agreement with SpecTopP



b. Agreement with SpecCP/\*SpecTopP



This analysis has two key components. First, P & P suggest that topics in Tsez may undergo (possibly covert) fronting to a functional projection, TopP, above IP (but below CP, if present).<sup>21</sup> Second, P & P propose that agreement is constrained by a locality condition that leaves room for the highest specifier of one domain to be accessible to the next higher domain (compare *Proper Government* in ECM constructions, or analogously, the special exception to the *Phase Impenetrability Condition* for phase *Edges* in Chomsky 2000). Together, these assumptions account for the key properties of the LDA configuration in Tsez, in particular, those in (31).

- (31) a. no absolutive NP in matrix clause  
 b. embedded NP must be the (primary) topic of its clause  
 c. no CP projection (*wh*-words, complementizer)

Condition (31a) is the result of the familiar relativized locality condition (as discussed in Section 10.4). An absolutive NP in the higher clause will be closer to the matrix verb than an embedded NP, blocking LDA. Condition (31c) reflects the domain effect. When there is overt evidence for a CP projection in the embedded clause (either a complementizer or a *wh*-phrase), then the specifier of TopP is no longer the highest projection, and an absolutive topic is inaccessible to LDA, as shown in (30b). At the same time, the domain effect predicts that a *wh*-word in the embedded clause (the specifier of CP) will be itself a potential controller for matrix agreement, if that word satisfies

<sup>21</sup> Note that this requires a model in which agreement in the higher clause sees the LF representation of the lower clause. This is true of the model of grammar in (2b), see footnote 1, and of other strongly cyclic models, such as that of Nissenbaum (2000), where covert movement follows overt movement within any one phase (e.g., clause), but all movement (overt and covert) in the lower phase occurs before operations in the higher phase begin.

other conditions on agreement, including m-case accessibility. The available evidence, though tenuous, bears this out (P & P, 638, n. 20).

Finally, the P & P analysis captures the condition in (31b), reducing the topic restriction to a familiar type of structural locality. Only (primary) topics undergo movement to the specifier of TopP in the embedded clause, hence only topics are ever accessible to LDA (and then, only when morphological accessibility and minimality are respected).<sup>22</sup> Note in particular that topichood is a condition on absolutive NPs that undergo LDA, but is not a general condition on agreement in Tsez. Clausemate agreement is triggered by topic and non-topic NPs alike. This contrast emerges especially clearly with NPs that cannot be interpreted as topics (such as focused/marked NPs, non-referential NPs, and the subjects of thetic sentences). These NPs trigger local (clausal) agreement but cannot participate in LDA (P & P, 611ff).<sup>23</sup>

In sum, Tsez quite neatly illustrates the “close enough” effect that is expected once it is recognized that agreement is not the expression of any particular syntactic dependency. There is no argument for any relation between the matrix verb and the NP it agrees with in LDA configurations other than that the NP is accessible (absolutive m-case) and that it is *close enough* to (highest accessible NP in the domain of) the matrix verb.

### 10.5.2 Domains for LDA: An aside

In this chapter, I have assumed two facets of locality, one relativized (highest), the other absolute (domains). This is a familiar distinction from GB,

<sup>22</sup> The restriction to primary topics (P & P, 610) covers cases in which there is more than one topic in the embedded clause. Even if the absolutive NP is topical, it will fail to govern LDA if there is another NP in the clause, such as an overtly fronted or topic-marked expression, that is the primary topic. That primary topic will “use up” the unique specifier of TopP that is accessible to the next higher domain, preventing an absolutive NP, even if topical, from occupying that position (regardless of whether secondary topics remain in situ or move to some lower position—Polinsky 2005). P & P leave as an apparently open problem (p. 639) the fact that an overtly marked nonabsolutive topic will block LDA, even if that topic is lower than the absolutive NP, but leaving this open appears to have been an oversight, as the issue does not arise if an element bearing topic marking is obligatorily the primary topic.

<sup>23</sup> This last fact is relevant for theories that invoke percolation or cyclic agreement to treat the Tsez facts (see Frank 2005 and Legate 2005b). On these approaches, the embedded predicate agrees with the absolutive NP, the features percolate to the maximal projection of the predicate (i.e., the clause), and the matrix predicate then agrees with the embedded clause. LDA does not cross a clause boundary, but involves two local steps of agreement. There is no morphological evidence to support this in Tsez: recall that LDA is restricted to topics, but the embedded predicate agrees with the absolutive NP whether it is a topic or not. Some additional mechanism must be postulated to block the morphologically manifest features from being percolated up when they are from a non-topic. Space limitations prohibit a careful engagement with these alternatives.

carried over into MP (via Phases). Just as in earlier discussions of this disjunctive approach to locality (Chomsky 1986), it is certainly worth asking whether domains might be reduced to a special case of relativized locality (intervention). For example, given that a CP may in fact be an agreement controller, that CP might count as closer/higher (to the matrix verb) than anything contained in it (see van Koppen 2005, Bošković 2006 for proposals along these lines). If all domains (and no other maximal projections) count as interveners, then the domain condition could be reduced to a special case of minimality/intervention, and (3) could be simplified accordingly. However, at the current state of understanding, there are several empirical hurdles that such a direction faces, especially as concerns LDA.

In the first place, the best evidence to date is that (30a) (clausemate, plus the specifier of TopP) represents the maximal distance that agreement between a verb and an NP may span, crosslinguistically. There are no clear cases in the literature of agreement reaching deeper into a finite clause than to the primary topic of that clause, regardless of the overt position of that topic.<sup>24</sup> Various putative examples have been cited to the contrary, in particular from Algonquian languages (including Blackfoot, Cree, and Fox, related to Passamaquoddy and Innu-aimûn mentioned in n. 20) and from the Chukotkan languages Alutor and Chukchi. However, for each of these languages, there is evidence in favor of a proxy agreement analysis (cf. (29)) and for none of the languages has any evidence been presented that the agreement controller is actually in a finite clause.<sup>25</sup>

<sup>24</sup> LDA into non-finite clauses appears to be a case of restructuring or clause-union (Polinsky 2003, Bhatt 2005, Bobaljik and Wurmbrand 2005), in which the infinitival complement and its selecting verb are known to form a single domain for the purposes of many otherwise clause-bounded phenomena. The authors just cited follow Wurmbrand (2001) and prior work in assuming that the infinitival complements of restructuring verbs (i.e., those that allow LDA) are VP complements and not full clauses. This may be relevant to putative “defective intervention” cases in Icelandic, see Section 10.6 below.

<sup>25</sup> See Polinsky (2003) for discussion of Blackfoot, Cree, and Fox. For Alutor, Mel'čuk (1988), the original source of the only example presented, provides a proxy agreement alternative along with an argument for that alternative as against LDA. The Chukchi example that is cited in this regard (most recently in Chomsky 2004, n. 25, and Bošković 2006, originally from Inèlikej and Nedjalkov 1972: 182) is given in (i) (the gloss has been added partly on the basis of Skorik 1977 and Dunn 1999; “-E-” represents an epenthetic vowel, “3 > 3” is a portmanteau agreement morpheme for third person subject and object; the paraphrase translates the Russian original).

- (1) ənan qəʎiʎju ʎəŋ-ə-rkən-in-et, iŋqun rətəmnev-nen-at qora-t  
 he.ERG sorry/pity/regret AUX-E-PST-3 > 3-PL because lose-3 > 3-PL reindeer-PL  
 “He feels sorry (for them) that he lost (them) the reindeer.”

Although Inèlikej and Nedjalkov (1972) mention this as a case of LDA, in which the matrix light verb (used transitively to create predicates of emotion) agrees directly with the embedded plural object, there are at least four reasons to doubt this interpretation and to consider a proxy agreement analysis as suggested by their paraphrase. In addition to the absence of an intervention effect from

In addition, a straightforward minimality/intervention account makes strikingly incorrect predictions for each of the languages mentioned. In all of these languages, subjects are accessible for agreement (and do trigger agreement in their own clauses), yet in each case, putative LDA may “skip over” the subject and agree with some lower expression, such as the direct object.<sup>26</sup> As Polinsky (2003) notes, the absence of intervention effects in apparent LDA configurations is precisely what is expected under a proxy agreement account, but appears to lead to a contradiction on the hypothesis that all locality should be reduced to intervention effects. Thus, although the main conclusion of this chapter would be unaffected if domains reduce to intervention, and (3) arguably simplified, the facts as currently available do not seem to bear out such a reduction (see also Section 10.6).

## 10.6 Icelandic yet again

Before closing, I turn to one final point on which the conclusions reached above differ from some current theoretical proposals, specifically, the role of inaccessible NPs in the computation of agreement. While I hold that such NPs are irrelevant to the computation of locality, an alternative view takes these NPs to induce a “defective intervention” effect, apparently as a parametric option. Such an effect is supposed to arise in Icelandic as follows. The dative NP cannot control agreement on the verb, but seems to *intervene* to block agreement with a lower potential controller. This arises in the configuration in (32a) (where left-to-right order reflects c-command). That it is the dative that is blocking agreement is indicated by the curious fact that for some, but not all, types of movement, the trace of the dative no longer intervenes (32b).<sup>27</sup>

the embedded subject (see main text below), these include: the choice of complementizer (normally glossed as “because” or “in order to,” rather than declarative “that”; see Skorik 1977); the properties of the transitive light verb construction of emotion (which normally takes a DP object, to judge by the definition in Moll and Inènlikej 1957, see also Dunn 1999); and the word order of the putative embedded clause, which should normally be SOV for a clausal complement (M. Polinsky, p.c.). At the very least, since *qoʻʻiyijju ʻəŋ-ə k* does take DP objects, and since adjuncts with *iqqun* “because” are possible, under the available descriptions of Chukchi the proxy configuration is expected to be a legitimate parse of this sentence. Additional evidence would have to be brought to bear to motivate an analysis that treats (i) as ambiguous, with LDA as a second reading. My thanks to Masha Polinsky for sharing her expertise on Chukchi.

<sup>26</sup> In fact, the putative controller of matrix agreement on a domain-free LDA account can, paradoxically, be an NP that is not eligible to control normal agreement, such as an NP in adjunct position. Polinsky (2003) identifies such examples from Blackfoot and Fox. Of course, on a proxy agreement account, these NPs are related to the (null) controller of agreement via an anaphoric relation, and thus these examples pose no problem.

<sup>27</sup> The situation is more complex in a variety of ways. Among other restrictions (see Holmberg and Hróarsdóttir 2003), nominative objects cannot be first or second person. Following Taraldsen (1995), this is sometimes also described as an intervention effect, incompatible with the theory developed here

- (32) a. V/AUX ... DAT ... NOM  $\Rightarrow$  constrains agreement with NOM  
 b. DAT V/AUX ...  $t_{\text{DAT}}$  ... NOM  $\Rightarrow$  Agreement OK

The data originally discovered to show such an effect (Watanabe 1993: 417ff., extended in Schütze 1997: 107ff.) involve embedded quirky dative subjects, as in (33).

- (33) a. Mér ?\*virðast / virðist [ Jóni vera taldir t líka  
 Me.DAT seemed.PL/SG Jon.DAT be believed.PL like  
 hestarnir. ]  
 horses.NOM  
 “I perceive Jon to be believed to like horses.”
- b. Jóni virðast / ?\*virðist [ t vera taldir t líka hestarnir ]  
 Jon.DAT seemed.PL/SG be believed.PL like horses.NOM  
 “Jon seems to be believed to like horses.” (Schütze 1997: 108–9)<sup>28</sup>

In (33a), the matrix predicate has a dative experiencer subject. The lower predicate also has a dative experiencer subject; the configuration in (32a) obtains and agreement between the matrix verb and the embedded nominative is blocked. In (33b), the matrix predicate does not take an experiencer. In this configuration, the embedded subject (quirky or not) may move to the matrix clause. (It can be shown that the embedded subject undergoes raising, although this particular example does not exclude the possibility of long-distance V2 topicalization, a recurring confound in the available data.) In contrast to (33a), agreement in (33b) between the matrix verb and the embedded nominative is permitted, across the trace of the dative, arguably instantiating the configuration in (32b).

This effect provides two related challenges for the view of agreement I am espousing here. First, the nominative NP in (33b) must be in the domain of the

(see Anagnostopoulou 2003, Béjar 2003, and Boeckx 2000). On this approach, the verb first attempts to agree with the dative NP but agreement fails. There is then a second attempt to agree which is by hypothesis restricted only to third person NPs, which lack a person feature. To account for the facts, this requires the additional stipulation that first and second person nominatives must agree: despite confusing wording in some accounts, “partial agreement” (i.e., agreement in number, but not person) is not an option. Note, though, that the restriction on nominative objects to third person holds also in infinitives (as in (i), see also Boeckx 2003) where there is no agreement, suggesting that the restriction is not tied to morphological agreement.

- (i) Við vonumst til [ að leiðast hún /\*þið ekki ]  
 we.NOM hope.PL for to bore.INF she.NOM / you.PL.NOM not  
 “We hope not to be bored with her/\*you.” (H. Thráinsson, p.c.)

<sup>28</sup> Schütze attributes these judgments to H. Thráinsson, but notes that some speakers allow a singular matrix verb in the (b) example.

matrix T/V, since agreement is acceptable. Second, taking the pair together, it appears that the failure of agreement in (33a) should thus be attributed to the position of the dative. Yet such a characterization of the effect is not readily compatible with (3). By (3), a given NP should be accessible or inaccessible, depending on its m-case, and, if inaccessible, should be invisible. There are at least two alternatives that one might entertain within the general framework I have suggested, neither of which needs to resort to defective intervention as a constraint on agreement.

The more promising alternative, it seems to me, is to assume that it is not the embedded quirky dative, itself, that is the intervener in (33a), but rather that the position of the dative is indicative of the presence of a domain boundary in that example that is not present in (33b). Nomura (2005) presents an analysis of the facts in (33) in part along these lines, extending proposals from Wurmbrand (2001) for restructuring (see also Koopman 2005). Wurmbrand provides substantial evidence that infinitive complements in German and other languages may contain more or less hidden (functional) structure, in a manner that captures the restructuring/non-restructuring (coherent/incoherent) divide. Importantly, one and the same verb may take either a restructuring (less structure) or non-restructuring (more structure) complement, in the absence of any particular morphological signal of that distinction. However, as shown in Bobaljik and Wurmbrand (2005) and Polinsky (2003), only restructuring infinitives are transparent for domain-based processes such as agreement. If it can be maintained that *seem* without an experiencer is a restructuring predicate, while *seem* with an experiencer is a non-restructuring predicate, then a domain-based account of (33) would be relatively straightforward, with no appeal to argument intervention.

Support for a domain-based characterization of the facts comes from the observation that there is a strict division between monoclausal and biclausal constructions as regards the distribution of putative intervention effects. Contrary to the view that has gained currency in narrowly Minimalist proposals (such as Boeckx 2003),<sup>29</sup> there is no evidence that defective intervention effects are a general reflection of the configuration in (32). Rather, such effects arise only in biclausal constructions. Agreement with the nominative object in monoclausal environments that reflect (32a) is always possible, and generally obligatory (as noted independently by Koopman 2005). Relevant examples from the standard literature were given in (4b,d); additional examples are given in (34).

<sup>29</sup> “[F]inite verb agreement with the nominative object is excluded if a Quirky element is within the c-command domain of the verb at Spell-Out (‘surface structure’).” (Boeckx 2003: 1).

- (34) a. Það voru konungi gefnar ambáttir í vettur  
 EXPL were.PL king.DAT given slaves.NOM in winter  
 “There was a king given maidservants this winter.” (ZMT, 112–113)
- b. Það voru einhverjum gefnir þessir sokkar  
 EXPL were.PL someone.DAT given.PL these socks.NOM  
 “Someone was given these socks.” (JGJ, 153)

The effects in (33) arise only when the verb and the nominative are in different clauses. Even recognizing variation reported in the literature, apparent defective intervention does not arise in monoclausal configurations. This alone should suggest a domain-based, rather than an intervention-based, account of the facts.<sup>30</sup>

While I now suspect that the domain-based (restructuring) alternative is the most promising account of the apparent intervention effect, there is one tantalizing piece of evidence suggestive of a (covert) movement-based alternative, relating the effect in (33) to a known constraint on overt A-movement in Icelandic, and, again, with no appeal to defective intervention as a constraint on agreement. Such an account begins with the observation that overt A-movement is order preserving (see Sells 1998, Williams 2000, Anagnostopoulou 2003, Fox and Pesetsky 2005). This can be illustrated with

<sup>30</sup> Holmberg and Hróarsdóttir (2003) and, following them, Hiraiwa (2005) and Nomura (2005), present a more nuanced view than does Boeckx, as just cited. For Holmberg and Hróarsdóttir, the key relation is between  $T^0$  and the nominative (see also Chomsky 2004). For (4) and (34), they might assume that the dative occupies the specifier of TP, with the surface word order the result of V2 movement of the verb to  $C^0$ . Under this view,  $T^0$  (or its trace) follows the dative in examples like (4) and (34) and thus, despite the surface word order, the dative does not intervene between  $T^0$  and the nominative. This perspective fails to discriminate between the acceptable (4) and (34) on the one hand, and the key examples of intervention that Holmberg and Hróarsdóttir give, in (i)–(ii), on the other. To the extent that raising of the dative to the specifier of TP is allowed for the dative subjects in (4) and (34), the same raising to the specifier of TP must be recognized for the dative subject in (i). Hence, on their account, the contrast between monoclausal and biclausal constructions is simply not expected.

- (i) Það \*virðast / virðist einhverjum manni [ hestarnir vera seinir ]  
 EXPL seem.PL/SG some man.DAT the horses.NOM be slow  
 “A man finds the horses slow.”

- (ii) Manninum virðast/virðist *t* [ hestarnir vera seinir ]  
 the man.DAT seem.PL/SG the horses.NOM be slow  
 “The man finds the horses slow.” (Holmberg and Hróarsdóttir 2003: 1000)

It should be noted that while no variation has been reported (so far as I am aware) concerning (4) and (34), the judgment of an intervention effect in (i) is controversial (H. Thráinsson, M. Nomura, p.c.). For speakers for whom there is no intervention effect in (i), an analysis of (4) and (34) in terms of raising of the dative to the specifier of TP is possible; see Hiraiwa (2005) and Nomura (2005) for concrete proposals.

raising constructions. The verb *virðast* “to seem” is obligatorily a raising verb when it occurs without an experiencer. Example (35a) shows raising of the embedded nominative subject to matrix subject position. There is no possibility of confusing this with V2 topicalization (as there is whenever an NP is in initial position), since the landing site follows the main verb. Such raising is impossible when there is a matrix experiencer ((35b–d), see Sigurðsson 1996, 25–6; on (c). see also Jonas 1998, 2001).

- (35) a. Hafði Ólafur virst [ *t* vera gáfaður ]?  
 Has Olaf.NOM seemed to be intelligent  
 “Did Olaf seem intelligent?”
- b. \*Hafði Ólafur þeim virst [ *t* vera gáfaður ]?  
 Has Olaf.NOM them.DAT seemed to be intelligent  
 “Did it seem to them that Olaf was intelligent?”
- c. \*Hafði Ólafur virst þeim [ *t* vera gáfaður ]?  
 Has Olaf.NOM seemed them.DAT to be intelligent
- d. Hafði þeim virst [ Ólafur vera gáfaður ]?  
 Has them.DAT seemed Olaf.NOM to be intelligent

Curiously, while raising of the embedded nominative across a dative experiencer is impossible, it appears to be (at least marginally) possible for the nominative to undergo such raising across the trace of a moved dative. Relevant examples (originally noted by H. Sigurðsson) are given in (36). As (36b) shows, once the embedded nominative raises, it controls agreement in the matrix clause.

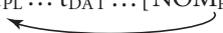
- (36) a. Hverjum hefur Ólafur virst  $t_{wh}$  [  $t_O$  vera gáfaður ]?  
 who.DAT has Olaf.NOM seemed to be intelligent  
 “Who has found Olaf intelligent?”  
 (Holmberg and Hróarsdóttir 2003: 1004)
- b. Hverjum hafa strákarirnir virst  $t_{wh}$  [  $t_{boys}$  vera gáfaðir ]?  
 who.DAT have.PL the boys.NOM seemed to be intelligent  
 “Who has found the boys intelligent?”  
 (Holmberg and Hróarsdóttir 2003: 1010)

If these examples are correctly interpreted, then they involve exactly the kind of movement that is prohibited in (35).<sup>31</sup> The landing site of the moved nominative in (36) is at or above the position of the trace of the matrix dative

<sup>31</sup> Current descriptions (see references above) predict that the pattern in (36) should also be possible when the embedded subject is also quirky. That is, if quirky subjects undergo raising to the specifier

subject. Schematically, what (35) and (36) together appear to illustrate is the following:

- (37) a. \* V/AUX<sub>PL</sub> ... DAT ... [NOM<sub>PL</sub>]  

- b. DAT V/AUX<sub>PL</sub> ... t<sub>DAT</sub> ... [NOM<sub>PL</sub>]  


In sum, what the overt movement paradigm in (35)–(36) shows is that a nominative NP from an embedded clause may undergo A-movement into the domain of a matrix verb, where it will control agreement on that verb. Such movement may not cross the overt position of a dative NP, but it is allowed to cross the trace of a dative NP (under poorly understood conditions). Whatever the account of (37), if exactly the same pattern holds for covert movement of the nominative, it may yield precisely the apparent defective intervention effect in (33) on a domain-based view of locality, but without appeal to either restructuring or defective intervention, on the assumption that the unmoved dative blocks covert movement of the nominative into the matrix agreement domain in exactly the same way that the dative blocks overt movement.

At this point, pressing hard against the page limit, I leave the issue of Icelandic, having noted that the intriguing interactions of word order and agreement possibilities that have been previously analyzed as instances of defective intervention (which would be incompatible with the main thesis advanced here), are open to alternative analyses, analyses for which there is perhaps at least suggestive independent evidence.

## 10.7 Conclusion

In the preceding pages I have offered two arguments in support of the proposition that agreement is a late operation, part of the postsyntactic morphological

of TP (which they do), and if raising to the specifier of TP across the trace of a *wh*-moved experiencer is possible (as (36) shows), then it should be possible to combine these. My preliminary efforts to construct relevant examples have met with judgments of sharp unacceptability, such as (i); the example is fine with an unmoved accusative:

- (i) \*Hverjum hefur Ólaf virst [ *t*<sub>O</sub> langa að fara til Íslands ]?  
 who.DAT has Ólaf.ACC seemed to long to go to Iceland  
 “To whom has Olaf seemed to long to go to Iceland?” (H. Thráinsson, p.c.)

component. The primary argument comes from the observation that crosslinguistically it is m-case, and not any syntactic relation (such as abstract case or GF), that determines the accessibility of a given NP for controlling agreement on the predicate. If we accept that m-case is a postsyntactic operation, then the feeding relationship that holds between m-case assignment and agreement controller choice forces the conclusion that agreement is a postsyntactic operation. Converging evidence for this view comes from two observations. On the one hand, we are correctly led to the expectation that it should be possible for an NP to control agreement on a predicate, even if it bears no syntactic relationship to that predicate other than being “close enough”. Such effects are amply documented in LDA constructions (and elsewhere, see Comrie 2003). On the other hand, the proposal advanced here leads us to expect that agreement features on the target of agreement do not contribute to interpretation. Heim’s contribution to this volume demonstrates the correctness of this prediction, albeit in a slightly different domain. It remains to be shown that this effect is completely general.<sup>32</sup> Just as the Icelandic evidence demonstrated conclusively that m-case must be dissociated from the syntactic relationship that underlies “Case Theory” effects, I have argued above that morphological agreement should also be severed from the basic operations of “narrow syntax”, whatever those turn out to be.

## References

- ANAGNOSTOPOULOU, E. (2003). *The Syntax of Ditransitives: Evidence from Clitics*. Berlin: Mouton de Gruyter.
- ANDREWS, A. (1976). ‘The VP complement analysis in Modern Icelandic,’ *Proceedings of NELS* 6: 1–21.
- BÉJAR, S. (2003). ‘Phi-syntax: A theory of agreement,’ Ph.D. Dissertation, University of Toronto.
- BHATT, R. (2005). ‘Long-Distance Agreement in Hindi-Urdu,’ *Natural Language and Linguistic Theory* 23.4: 757–807.
- BICKEL, B., and Y. P. YĀDAVA (2000). ‘A fresh look at grammatical relations in Indo-Aryan,’ *Lingua* 110: 343–73.
- BITTNER, M., and K. HALE (1996). ‘Ergativity: Toward a theory of a heterogeneous class,’ *Linguistic Inquiry* 27: 531–604.
- BLAKE, B. J. (2001). *Case* (Second edition). Cambridge: Cambridge University Press.

<sup>32</sup> It is important not to confuse correlation and causation on this point. In cases like Tsez LDA there is indeed a correlation between topicality and agreement, but under the account presented above, it is (primary) topichood that makes an NP accessible for agreement (via movement), hence interpretation (a reflection of syntax) causes agreement or non-agreement, and not the other way around. Other examples that show a correlation between agreement and interpretation would need to be reanalyzed in this way.

- BOBALJIK, J. D. (2002). 'A-chains at the PF-interface: Copies and "Covert" Movement,' *Natural Language and Linguistic Theory* 20.2: 197–267.
- and S. WURMBRAND (2005). 'The domain of agreement,' *Natural Language and Linguistic Theory* 23: 809–65.
- BOECKX, C. (2000). 'Quirky agreement,' *Studia Linguistica* 54.3: 354–80.
- (2003). 'Intricacies of Icelandic agreement.' Unpublished ms., Harvard and University of Maryland.
- BOŠKOVIĆ, Ž. (2006). 'Agree, phases and intervention effects.' Unpublished ms., University of Connecticut, Storrs.
- BRANIGAN, P., and M. MACKENZIE (2002). 'Altruism, A-bar movement and object agreement in Innu-aimûn,' *Linguistic Inquiry* 33.3: 385–407.
- BRESNAN, J., and S. A. MCHOMBO (1987). 'Topic, pronoun, and agreement in Chichewa,' *Language* 63.4: 741–82.
- BRUENING, B. (2001). 'Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy.' Ph.D. Dissertation, MIT, Cambridge, MA.
- CHOMSKY, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- (1986). *Barriers*. Cambridge, MA: MIT Press.
- (2000). 'Minimalist inquiries: The framework,' in R. Martin, D. Michaels, and J. Uriagereka (eds.), *Step by Step. Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, MA: MIT Press, 89–155.
- (2001). 'Derivation by phase,' in M. Kenstowicz (ed.), *Ken Hale: A life in language*. Cambridge, MA: MIT Press, 1–52.
- (2004). 'On phases.' Unpublished ms., MIT.
- COMRIE, B. (1979). 'The animacy hierarchy in Chukchee,' in P. R. Clyne, W. F. Hanks, and C. L. Hofbauer (eds.), *The Elements: A Parasession on Linguistic Units and Levels*. Chicago: Chicago Linguistic Society, 322–9.
- (2000). "'Give" and person suppletion.' <http://linguistlist.org/issues/11/11-1166.htm>
- (2003). 'When agreement gets trigger-happy,' *Transactions of the Philological Society* 101.2: 313–37.
- CORBETT, G. (2000). *Number*. Cambridge: Cambridge University Press.
- (2006). *Agreement*. Cambridge: Cambridge University Press.
- COWPER, E. (1988). 'What is a subject? Non-nominative subjects in Icelandic,' in J. Blevins and J. Carter (eds.), *Proceedings of NELS*. Amherst, MA: GLSA.
- CROFT, W. (1990). *Typology and Universals*. Cambridge: Cambridge University Press.
- DIXON, R. M. W. (1994). *Ergativity*. Cambridge: Cambridge University Press.
- DUNN, M. (1999). 'A grammar of Chukchi.' Ph.D. Dissertation, Australian National University.
- FALK, Y. N. (1997). 'Case typology and Case Theory.' Unpublished ms., Hebrew University, Jerusalem.
- FOX, D. and D. PESETSKY (2005). 'Cyclic linearization of syntactic structure,' *Theoretical Linguistics* 31.1–2: 1–45.

- FRANK, R. (2005). 'Phase theory and Tree Adjoining Grammar.' Unpublished ms., Johns Hopkins University, Baltimore.
- FREIDIN, R., and R. A. SPROUSE (1991). 'Lexical case phenomena,' in R. Freidin (ed.), *Principles and Parameters in Comparative Grammar*. Cambridge, MA: MIT Press, 392–416.
- FREY, W. (1993). *Syntaktische Bedingungen für die semantische Repräsentation: Über Bindung, implizite Argumente und Skopus*. Berlin: Akademie Verlag.
- GILLIGAN, G. (1987). 'A cross-linguistic approach to the pro-drop parameter.' Ph.D. Dissertation, University of Southern California, Los Angeles, CA.
- HAIDER, H., and I. ROSENGREN (2003). 'Scrambling: Nontriggered chain formation in OV languages,' *Journal of Comparative Germanic Linguistics* 15.3: 203–67.
- HALLE, M., and A. MARANTZ (1993). 'Distributed Morphology and the pieces of inflection,' in K. Hale and S. J. Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honour of Sylvain Bromberger*. Cambridge, MA: MIT Press, 111–76.
- HARLEY, H. (1995). 'Abstracting away from abstract case,' in J. Beckman (ed.), *Proceedings of the North Eastern Linguistics Society Annual Meeting (NELS 25)*. Amherst: GLSA, 207–21.
- HASPELMATH, M., M. DRYER, D. GIL, and B. COMRIE (2005). *The World Atlas of Language Structures*. Oxford: Oxford University Press.
- HIRAIWA, K. (2005). 'Dimensions of symmetry in syntax: Agreement and clausal architecture.' Ph.D. Dissertation, MIT.
- HOLMBERG, A., and T. HRÓARSDÓTTIR (2003). 'Agreement and movement in Icelandic raising constructions,' *Lingua* 113: 997–1019.
- INĚNLIKEJ, P. I., and V. P. NEDJALKOV (1972). 'Глаголы чувства в ЧУКОТСКОМ ЯЗЫКЕ [Glagoly chuvstva v chukotskom yazyke: Verbs of feeling in the Chukchi language] *Лингвистические исследования [Lingvističeskie issledovaniya: Linguistic Research]* 1: 175–203.
- JONAS, D. (1996). 'Clause structure, expletives and verb movement,' in W. Abraham, S. D. Epstein, H. Thráinsson, and C. J.-W. Zwart (eds.), *Minimal Ideas: Syntactic Studies in the Minimalist Framework*. Amsterdam/Philadelphia: John Benjamins, 167–88.
- (1998). 'Formal features, licensing and clause structure.' Handout of a colloquium given at MIT.
- (2001). 'Icelandic raising constructions.' Unpublished ms., Yale.
- JÓNSSON, J. G. (1996). 'Clausal architecture and case in Icelandic.' Ph.D. Dissertation, University of Massachusetts, Amherst, MA.
- KACHRU, Y., B. KACHRU, and T. BHATIA (1976). 'The notion "subject": A note on Hindi-Urdu, Kashmiri and Panjabi,' in M. Verma (ed.), *The Notion of Subject in South Asian Languages*. Madison: University of Wisconsin, 79–108.
- KATHOL, A. (1999). 'Agreement and the syntax–morphology interface in HPSG,' in R. Levine and G. Green (eds.), *Studies in Contemporary Phrase Structure Grammar*. New York: Cambridge University Press, 223–74.

- KEENAN, E., and B. COMRIE (1977). 'Noun phrase accessibility and Universal Grammar,' *Linguistic Inquiry* 8: 63–99.
- KOOPMAN, H. (2005). 'Agreement configurations: in defense of "Spec head".' Unpublished ms., UCLA.
- KOPPEN, M. VAN (2005). 'One probe—two goals: Aspects of agreement in Dutch dialects.' Ph.D. Dissertation [LOT 105], University of Leiden.
- LEGATE, J. A. (2005a). 'Morphological and abstract case.' Unpublished ms., University of Delaware.
- (2005b). 'Phases and cyclic agreement,' in M. McGinnis and N. Richards (eds.), *Perspectives on Phases: MIT Working Papers in Linguistics*, 49, 147–56.
- MARANTZ, A. (1991). 'Case and Licensing,' in G. Westphal, B. Ao, and H.-R. Chae (eds.), *Proceedings of ESCOL '91*. Ohio State University: Cornell Linguistics Club, 234–53.
- McFADDEN, T. (2004). 'The position of morphological case in the derivation: A study on the syntax–morphology interface.' Ph.D. dissertation, University of Pennsylvania, Philadelphia.
- MEL'ČUK, I. A. (1988). *Dependency Syntax: Theory and Practice*. New York: State University of New York Press.
- MOHANAN, T. (1994). *Argument Structure in Hindi*. Stanford: CSLI.
- (1995). 'Wordhood and lexicality: Noun incorporation in Hindi,' *Natural Language and Linguistic Theory* 13.1: 75–134.
- MOLL, T. A., and P. I. INĚNLIKEJ (1957). *Чукотско-русский словарь. [Chukotsko-russki slovar': Chukchi–Russian Dictionary]*. Leningrad: Uchpedgiz.
- MORAVCSIK, E. A. (1974). 'Object–verb agreement,' *Working Papers on Language Universals* 15, 25–140.
- (1978). 'Agreement,' in J. H. Greenberg (ed.), *Universals of Human Language*. IV: *Syntax*. Stanford: Stanford University Press, 331–74.
- MURASUGI, K. (1994). 'A constraint on the feature specification of Agr,' in H. Harley and C. Phillips (eds.), *MIT Working Papers in Linguistics 22: The Morphology–Syntax Connection*. Cambridge MA: MITWPL, 131–52.
- NISSENBAUM, J. (2000). 'Investigations of covert phrase movement.' Ph.D. Dissertation, MIT, Cambridge, MA.
- NOMURA, M. (2005). 'Nominative Case and AGREE(ment).' Ph.D. Dissertation, University of Connecticut, Storrs.
- PATEL, P. (2006). 'Split agreement and ergativity in Kutchi.' Unpublished ms., University College London.
- POLINSKY, M. (2003). 'Non-canonical agreement is canonical,' *Transactions of the Philological Society* 101.2: 279–312.
- (2005). 'D-Linking at the crossroads: syntax, semantics, processing.' Handout of a talk at University of Minnesota.
- and E. POTSDAMS (2001). 'Long distance agreement and topic in Tsez,' *Natural Language and Linguistic Theory* 19.3: 583–646.

- POLLARD, C., and I. SAG (1994). *Head-Driven Phrase Structure Grammar*. Chicago: CSLI / University of Chicago Press.
- SCHÜTZE, C. (1997). 'Infl in child and adult language: Agreement, case and licensing.' Ph.D. Dissertation, MIT, Cambridge, MA.
- SELLS, P. (1998). 'Scandinavian clause structure and Object Shift,' in M. Butt and T. Holloway King (eds.), *Proceedings of the LFG98 Conference, University of Queensland*. Stanford, CA: CSLI. <http://csli-publications.stanford.edu/LFG/3/lfg98.html>.
- SIGURÐSSON, H. Á. (1989). 'Verbal syntax and case in Icelandic in a comparative GB approach.' Ph.D. Dissertation, University of Lund, Sweden.
- (1993). 'Agreement as head visible feature government,' *Studia Linguistica* 47: 32–56.
- (1996). 'Icelandic Finite Verb Agreement,' *Working Papers in Scandinavian Syntax*, 57: 1–46.
- SKORIK, P. J. (1977). *Грамматика чукотского языка, часть II: глагол, наречие, служебные слова* [*Grammatika chukotskogo yazyka, chast' II: glagol, narechie, sluzhebnye slova; Grammar of the Chukchi language, vol II: Verb, Adverb and Auxiliary Words*]. Leningrad: Nauka.
- TARALDSEN, K. T. (1995). 'On agreement and nominative objects in Icelandic,' in H. Haider, S. Olson, and S. Vikner (eds.), *Studies in Comparative Germanic Syntax*. Dordrecht: Kluwer, 307–27.
- THRÁINSSON, H. (1979). *On Complementation in Icelandic*. New York: Garland.
- WATANABE, A. (1993). 'AGR-based Case Theory and its interaction with the A-Bar system.' Ph.D. Dissertation, MIT, Cambridge, MA.
- WILLIAMS, E. (2000). 'Representation Theory.' Unpublished ms.
- WOOLFORD, E. (1999). 'Ergative Agreement Systems.' Workshop University of Maryland, College Park (May 1999).
- WURMBRAND, S. (2001). *Infinitives: Restructuring and Clause Structure*. Berlin: Mouton de Gruyter.
- (2006). 'Licensing Case.' *Journal of Germanic Linguistics*.
- YIP, M., J. MALING, and R. JACKENDOFF (1987). 'Case in Tiers,' *Language* 63.2: 217–50.
- ZAENEN, A., J. MALING, and H. THRÁINSSON (1985). 'Case and grammatical functions: The Icelandic passive,' *Natural Language and Linguistic Theory* 3: 441–83.