Aspects of he Syntax of Agreement

Cedric Boeckx

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Syntax of Agreement

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For Youngmi,
With fondest love

Contents

Preface

The essays collected in this volume represent work of the past 10 years on issues that I started investigating when I entered graduate school. Chapters 2 and 9 appear here for the first time. The other essays are reprinted in their original form, with the following exceptions: Typographical errors have been corrected; occasionally, a clearer example has been substituted for the original; minor changes have been made to bring the chapters more in line with each other in terms of style and exposition. Also all bibliographical references have been updated, cross-references to chapters have been added, and a unified bibliography provided. Finally, I have attached a brief introductory note to each chapter putting the material in context. Some basic themes and examples appear in several chapters. I've let this stand, so as to provide the readers with more or less self-contained essays.

I would like to take this opportunity to thank, first and foremost, my syntax teachers at the University of Connecticut, Željko Bošković and Howard Lasnik, for their excellent teaching, admirable mentoring, constant interest, and never-failing encouragement. The atmosphere they managed to create was ideally suited to the pursuit of theoretical linguistics, and remains a model that I seek to emulate. Looking back, it is hard for me to imagine an environment that would be more conducive of research and free exploration of the Chomskyan program for the study of the mind/brain. In addition to my teachers, I owe a special debt to my fellow graduate students, especially Koji Sugisaki, Nobu Miyoshi, Adolfo Ausín, and Debbie Chen Pichler, for help in countless ways.

From the very beginning I have benefited from the support and insights of Noam Chomsky, Norbert Hornstein, and Juan Uriagereka. I am most grateful to them. Noam deserves special thanks for reading a poorly written first draft of what is here Chapter 1 and convincing me to do something with it.

Kleanthes K. Grohmann has read everything I have written, and made the pieces here, and many others, much better than they would otherwise have been. I feel very fortunate indeed to have a friend like him.

I would also like to thank my coauthor Fumi Niinuma for working with me on Japanese honorification, Jean-Roger Vergnaud for pointing to the relevance of case in linguistic theory and for much-cherished discussions

Acknowledgments

Introduction

This collection of essays deals with various aspects of the syntax of agreement. Taken together, the chapters that follow this introduction seek to identify properties of agreement systems in natural language that once properly analyzed would illuminate our understanding of the language faculty, and ultimately the human mind.

I do not think that I have identified enough such properties of agreement systems for me to be able to present a full-fledged theory of agreement in this volume, but I hope that the analyses provided here point to a fruitful direction of research, one that will eventually lead to a characterization of agreement and its role in grammar that is adequate at both the descriptive and explanatory levels.

This introduction attempts to situate the chapters that follow in a broader context of linguistic inquiry, and highlights the theoretical relevance of the aspects of agreement that I have chosen to include in this volume.

1. THE EMERGENCE OF AGREEMENT AS A THEORETICALLY SIGNIFICANT VARIABLE

Although the agreement relation between a Noun Phrase (typically, the 'subject') and a Verb was already captured in Chomsky's (1957) *Syntactic Structures* (see Transformation 15 on p. 112), it was not until the Principles-and-Parameters era that the outlines of a generative theory of agreement emerged. There are several reasons why the significance of agreement only became clear at a relatively late stage in the development of linguistic theory. First, until the Principles-and-Parameters era there was no formally coherent notion of Inflection; hence there couldn't be any formally coherent notion of that part of the inflectional paradigm of a language we call agreement. Pollock's (1989) justly influential 'split-Infl' hypothesis filled this important lacuna. Second, it was only after Jean-Roger Vergnaud insightfully pointed out in a famous letter to Noam Chomsky and Howard Lasnik in 1977 that purely formal features well known to traditional grammarians like case (and agreement) may lead to considerable simplification of formal statements

(such as filters) in the theory that linguists came to realize that a detailed investigation of the properties of such formal features may shed light on the nature of the language faculty. Third, the very recent formulation of a minimalist program for linguistic theory (Chomsky 1993), which seeks to go beyond explanatory adequacy and answer why the language faculty has the properties that previous research uncovered, forces linguists to provide a rationale for apparent 'aberrations' ("imperfections") such as case and agreement (properties that at first sight fall short of 'virtual conceptual necessity'). Consider case. Vergnaud gave us (to my mind, compelling) reasons to believe that case is more than mere morphological clothing. He was indeed the first to note that licensing of case features on noun phrases may to a very large extent explain the syntactic behavior and distribution of these noun phrases. But if case is at the heart of the syntax of noun phrases, why is it that it fails to receive an interpretation? The same could be said about agreement proper: Agreement is clearly present on verbal forms in the syntax, but it is never interpreted there. It is as if formal features like case and agreement appear in the syntax only to be wiped out before syntactic elements are interpreted. Perhaps uninterpreted features like case and agreement are like the irritants that give rise to pearls. Pearls, one must remember, begin as irritants; sand, a pebble, or pesky parasitic organisms get inside the oyster's shell. To reduce irritation, the oyster coats the intruder with layers of a solid, slick material called nacre, ultimately giving rise to the thing of beauty we are all familiar with. Irritants, then, are the engine, the driving force of pearl formation. It may not be too far-fetched to think of case and agreement as parasitic, 'misplaced' features that drive syntactic computations. This was in fact the intuition behind Chomsky's (1986a: 137, 201) introduction of the principle of Last Resort into syntactic theory—a principle from which linguistic minimalism was born. Syntactic processes switch into higher gear to make sure that formal features are licensed. Once all the formal features of an element have been appropriately licensed, the element becomes syntactically inert. Syntax, for that element, ends, and the interfaces take over.

The picture just sketched reflects the results achieved after decades of intensive investigation into the nature of formal features. The investigation focused on three core issues—the three major parts of this volume: (I) the range of formal features that count as 'irritants' (all instances of case? all instances of agreement?); (II) the syntactic mechanisms needed to license formal features; and (III) the conditions imposed on such mechanisms to limit their power and range, in accordance with the search for a restrictive theory of syntax. (The fourth part of this volume focuses on the interpretive consequences of formal feature licensing.)

Following Vergnaud's insight, the study of formal features began with case, more specifically, those instances of case that are devoid of any clear interpretive correlate, dubbed *structural* cases in Chomsky (1986a: 202–3). However, it was soon recognized that case and agreement are intimately related—perhaps not always, perhaps not in all languages, but the relation was felt to

be sufficiently strong as to extend the mechanisms that had been used for case licensing to the domain of agreement proper (licensing of "phi-features" such as person, number, and gender/class). As a matter of fact, in recent years, inquiry into the nature of formal features begins with phi-features, perhaps because, unlike case features, which never seem to be interpreted on any syntactic elements, phi-features are interpreted on nominals, and as such do not consistently beg questions about why such features emerged in the first place.

Be that as it may, when I retrace the history of how formal features have been accommodated in modern generative grammar in the pages that follow, I will not always indicate whether a particular mechanism or configuration was first introduced to handle case or agreement. For much of what follows in this introduction, case and agreement can be treated as two sides of the same coin.

2. THE ROAD TO AGREE

The development of case/agreement theory nicely illustrates the interplay between conceptual arguments and empirical considerations. All else equal, one would favor theories that provide a unique licensing mechanism for all instances of case/agreement. This drive toward symmetry was present from the very beginning of investigations into case and agreement. It was at the heart of the development of the theory of government. Unfortunately, as we will see, the unification achieved by government was not particularly satisfactory.

From the very beginning of the Principles-and-Parameters era, four manifestations of structural case played a major role in the formulation of case/agreement theory: nominative case assignment to subjects, accusative assignment to objects, accusative case assignment to derived objects in Exceptional-Case Marking (ECM) contexts, and nominative case assignment to associate nominals in existential constructions. Although linguists pushed the idea that all these instances of case were assigned uniformly under government, it was clear to everyone that government was a cover term for a variety of configurations that didn't have much in common.

Thus, nominative Case to subjects was assigned under *m-command* by IP, as in (1).

(1)
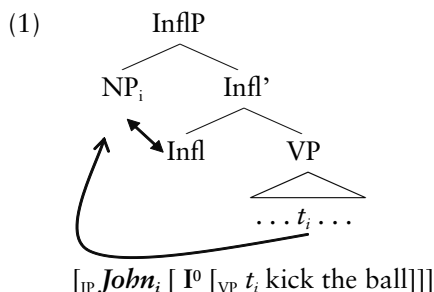
$[_{IP}$ **John**$_i$ [$\mathbf{I^0}$ [$_{VP}$ t_i kick the ball]]]

Accusative Case, by contrast, was assigned under *c-command* by V (2).

(2)

```
              VP
              |
              V′
           ╱     ╲
        V  ⟷  NP
```
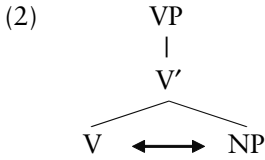
[IP John$_i$ [I^0 [VP t_i [V′ **kick** [NP ***the ball***]]]]]

So both specifiers and complements were relevant 'slots' for case assignment.

In addition, the definition of government had to be modified to encompass two more configurations, one for accusative case assignment in ECM contexts (targeting the specifier of the complement) (3), and a mechanism of case-transmission from specifier to the complement domain for nominative case assignment (in the so-called existential construction) (4).

(3)

```
              VP
              |
              V′
           ╱      ╲
        V        InflP
         ╲      ╱     ╲
         NP$_i$       Infl′
                    ╱     ╲
                 Infl      VP
                           ╱╲
                        . . . t$_i$ . . .
```
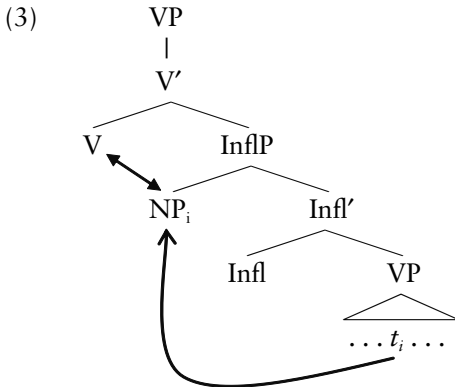
[IP John [I^0 [VP [V′ **believe** [IP [NP ***the ball***]$_i$ [I′ to [VP t_i be blue]]]]]]]

(4)

```
              InflP
            ╱       ╲
       There$_i$      Infl′
               ╱       ╲
            Infl        VP
                        |
                        V′
                      ╱     ╲
                   V        NP$_i$
```
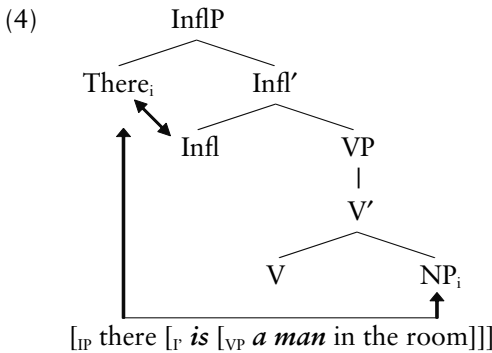
[IP there [I′ ***is*** [VP ***a man*** in the room]]]

The prospects for a truly uniform theory of case configurations changed when the clausal skeleton was enriched, under the impetus of Pollock's

(1989) seminal study. By dissociating the Tense component and the Agreement component of IP, and treating each as a distinct projection (TP and AGRP), Pollock made it possible to begin asking precise questions about agreement (many of which are still with us today). In particular, it led Chomsky to make a key observation.

Chomsky (1991: 146) noted that although Pollock originally split up Infl into Tense and AGR with TP dominating AGRP, one may have expected AGRP to dominate TP to capture subject–verb agreement in finite clauses, the logic here being that if T is [+finite], then AGR is available for subject–verb agreement. The only way to express this dependency of AGR on T[finite] in a framework that assumes that syntactic structures are built bottom up and in a cyclic fashion is to have AGR project once T has projected. Chomsky furthermore observed, following Belletti (1990), that in languages where T and AGR are distinct morphemes, agreement is expressed further away from the stem than tense is, as in the following French example:

(5) tu parle-**ra-s**
     you talk-FUTURE-2SG

By the logic of Baker's (1985) Mirror Principle (a generalization that expresses that the order of morphemes mirrors the order of functional projection), (5) should correspond to the structure in (6).

(6) [$_{AGRP}$ [$_{TP}$ [$_{VP}$ V] T] AGR]

However, as Chomsky (1991: 147) noted, Pollock's treatment of the well-known verb-positioning contrast between French and English (7)–(8), as well as Chomsky's own treatment in (1991), demand that TP dominate AGRP.

(7) a. J'**embrasse** souvent Marie.
     b. *Je souvent embrasse Marie.

(8) a. *I **kiss** often Mary.
     b. I often **kiss** Mary.

Chomsky's solution to this paradoxical situation was to assume the existence of two AGR projections, one dominating TP (and responsible for subject–verb agreement) and the other dominated by TP. Chomsky suggested that the lower AGR be the locus of object agreement. From this point on, the higher instance of AGRP came to known as AGRsP and the lower instance of AGRP as AGRoP. The structure in (9) became the basic clause structure for many researchers.

(9) [$_{AGRsP}$ AGRs [$_{TP}$ T [$_{AGRoP}$ AGRo [$_{VP}$ V]]]]

Chomsky noted that the identification of the lower AGRP as AGRoP fitted nicely with Kayne's (1989a) study of agreement between (displaced) objects and active past participles in French, illustrated in (10).

(10) Quelle fille Jean a(-t-il) vu-**e**?
      which girl   Jean has-he seen-AGR.FEM
      'Which girl did Jean see?'

Sentences like (10) clearly show the existence of an agreement relation established lower than the position of the finite auxiliary and distinct from subject–verb agreement, precisely what the structure in (9) leads us to expect.

Chomsky furthermore suggested that structural case is correlated with agreement (see already Chomsky 1981: 52), and reflects a structural relation between the relevant NP and the appropriate AGR element. Accordingly, AGRsP became associated with nominative case assignment, and AGRoP with accusative case assignment. Here the phenomenon of Object Shift in Scandinavian languages provided yet another rather strong piece of evidence for the structure in (9). As originally discussed in Holmberg (1986), objects in Icelandic may shift (move outside the VP, whose edge can be identified with negation), but only if they are Case-marked NPs, not PPs.

(11) Nemandinn las bókinna ekki.
      student.the read book.the not
      'The student didn't read the book.'

(12) *Jón talaði [við Maríu] ekki.
       Jon spoke with Maria not
      'John didn't speak with Maria.'

This shifting process was plausibly reinterpreted as movement driven by structural-case reasons, and AGRoP appeared to provide just the position needed to host such shifted objects.

Pretty soon many phenomena were reinterpreted as evidence for the need to establish a spec-head relation for the licensing of case/agreement. This theoretical shift is best illustrated by means of French data about past participle agreement like (13), and analyzed in a seminal paper by Kayne (1989a).

(13) a. Jean a   vu-*e   la fille.
          Jean has seen-AGR.FEM the girl
          'Jean saw the girl'
      b. Jean l'a   vu-e.
          Jean her-has seen-AGR.FEM
          'Jean saw her.'
      c. Quelle fille Jean a(-t-il) vu-e?
          which girl Jean has-he seen-AGR.FEM

'Which girl did Jean see?'

    d. Cette fille a   été vu-e.
        this   girl has been seen-AGR.FEM
        'This girl was seen.'

As can be seen in the examples just given, past participle agreement is only possible with displaced objects (cliticized, wh-moved, and passivized in the examples at hand). Quite naturally, linguists took agreement in this case, *and, by hypothesis, in all cases*, to require raising to some specifier position—the spec-head relation. This line of thought has been very productive (see Chung 1998, Koopman 1992, 1995, 2001, and Sportiche 1998, to cite but a few examples that make abundant use of Spec-Head agreement relations), and was at the core of the early minimalist conception of Case/agreement (Chomsky 1993). Finally, a primitive relation like spec-head emerged as the likely candidate to cover all instances of case/agreement licensing.

    Rather strong evidence for this came from a reexamination of ECM. Lasnik and Saito (1991) revived original observations by Postal (1974) that strongly indicate that accusative case-marked nominals in ECM have raised into the matrix clause.

(14) The DA proved [two men$_i$ to have been at the scene of the crime] during each other$_i$'s trials.
      (*?The DA proved [that two men$_i$ had been at the scene of the crime] during each other$_i$'s trials)
      (*The DA proved [there to have been two men$_i$ at the scene of the crime] during each other$_i$'s trials)

(15) The DA proved [no suspect$_i$ to have been at the scene of the crime] during his$_i$ trial.
      (*?The DA proved [that no suspect$_i$ had been at the scene of the crime] during his$_i$ trial)
      (*The DA proved [there to have been no suspect$_i$ at the scene of the crime] during his$_i$ trial)

(16) The DA proved [no one$_i$ to have been at the scene of the crime] during any$_i$ of the trials.
      (*?The DA proved [that no one$_i$ had been at the scene of the crime] during any$_i$ of the trials)
      (*The DA proved [there to have been no one$_i$ at the scene of the crime] during any$_i$ of the trials)

(17) *Joan believes him$_i$ to be a genius even more fervently than Bob$_i$ does.
      (Joan believes that he$_i$ is a genius even more fervently than Bob$_i$ does)

(18) John believes Bob incorrectly to be a genius.

(19) John made Bill out to be a fool.

The movement was plausibly interpreted as movement to SpecAGRoP (with subsequent movement of the main verb to some high projection to yield the observed VO word order). The drive toward a generalized Spec-head AGR-based case/agreement theory was such that even when raising didn't seem to take place overtly, it was hypothesized to happen in covert syntax (extending a logic familiar from work on wh-in-situ).

Such covert raising fits like a glove with the most popular analysis of existential constructions at the time (Chomsky 1986a, 1991), according to which the associate nominal in sentences like *there were two men in the room* either adjoins or literally replaces the expletive in covert syntax, thereby establishing the now-required spec-head configuration for nominative case assignment. Assuming literal expletive replacement, at LF, a sentence like *there is a man in the garden* looks like (20).

(20) [A man]$_i$ is [t_i in the garden]: LF-expletive replacement

The Expletive Replacement Hypothesis straightforwardly accounts for the somewhat unusual agreement configuration that obtains in existential constructions. Descriptively, the finite verb in existential constructions agrees with the associate NP to its right, not with the element in SpecTP, which appears to be the more common agreement configuration in English (and many other languages; so-called 'Spec-Head agreement'). Contrast (21a) and (21b).

(21) a.   There are/*is three men in the car.
      b.   They are/*is one and the same element.

The common agreement configuration obtains in existential constructions, albeit at LF. This adds a certain twist to case/agreement. Because we observe the agreement despite the fact that it is established covertly, agreement (and, by symmetry, case) was taken to be something that requires licensing/checking, not some 'empty' featural slot that requires filling (assignment).

There were rather strong arguments in favor of the expletive-replacement hypothesis. Aside from the agreement issue, the analysis was also able to explain why expletives must have associate NPs (if there is no associate, the expletive can't be replaced, and the sentence will be LF-deviant (cf. *there is in the garden*), if we assume, plausibly enough, that meaningless elements like expletive *there* cause a sentence to crash at the interfaces). More generally, this approach provides an explanation for why expletive–associate pairings pattern with chains of A-movement, as in the contrast in (22):

(22) a. *A man seems [t has been arrested].
(cf. 'A man seems to have been arrested.')
b. *There seems [a man has been arrested].
(cf. 'There seems to have been a man arrested.')

Any version of the Last Resort Condition can account for the ungrammaticality of (22a), as *a man* has its Case/agreement requirements met in the lower clause; by essentially the same reasoning, this type of explanation should also account for the parallel (22b) involving an expletive–associate pair, entailing the, this time inappropriate, displacement of the associate.

But, despite its obvious virtues, the expletive replacement analysis was criticized as soon as it was proposed. As Lori Davis first observed in Chomsky's 1985 class at MIT, with many researchers following her (see Lasnik 1999a for references), the expletive-replacement/covert spec-head analysis gets the scope facts wrong. Typically, indefinites in subject positions are scopally ambiguous (see (23a)). The covert rasing analysis predicts that such ambiguity should exist in existential constructions as well, contrary to fact. The associate in (23b) only has the narrow scope reading.

(23) a. Someone from New York is likely to be at the party.
(someone >> likely / likely >> someone)
b. There is likely to be someone from New York at the party.
(likely >> someone / * someone >> likely)

Likewise, contrary to what the covert raising analysis would lead us to expect, associates in existential constructions are unable to establish a binding relation with elements that they would c-command after covert raising, as shown in (24b).

(24) a. A man_i seems to himself_i to be doing something wrong.
b. *There seems to himself_i to be a man_i doing something wrong.

Data like (23b–24b) revealed the first crack in the generalized spec-head edifice being erected—a crack that Chomsky (1995) took to be a fatal flaw. First, Chomsky questioned the legitimacy of functional heads like AGR, which consist exclusively of features that are never interpreted. By eliminating AGRPs, Chomsky removed the hosts of the movement that made the generalized spec-head agreement theory tenable. Second, Chomsky questioned the motivation of actual displacement for purposes of feature checking. He did so in two steps.

The first step was taken in Chomsky (1995). There Chomsky noted that if movement is driven to check features that would otherwise be illegitimate at the interfaces, it is natural to expect that 'the operation Move [. . .] seeks to raise just F[eature]' (Chomsky 1995: 262). We therefore expect under

minimalist assumptions that, if possible, the computational component can raise just what is needed (features to carry out the checking operation), leaving behind any extra lexical material. Relying on the feature-movement hypothesis, Chomsky proposes that in existential constructions only formal (φ) features of the associate NP move (head-adjoin) to Infl, leaving all phonological and semantic features behind. Raising of φ-features immediately accounts for the fact that finite agreement in existential constructions is controlled by the feature specification of the associate.

As Lasnik (1999a) showed, the feature-movement account provides a straightforward explanation for the narrow scope of the associate NP in (6b), assuming that the establishment of scopal relations requires a full phrasal category, and not just a raised feature.

Although the feature-movement analysis captured the core properties of existential constructions, it was silent regarding those instances of feature-movement accompanied by displacement of the full category containing the relevant features (those cases that lent strong empirical support for the spec-head theory). Chomsky (1995) hypothesized that phrasal displacement was forced by morpho-phonological considerations that were independent of case and agreement.

Chomsky took his second step toward the complete divorce of movement and case/agreement-licensing in Chomsky (2000). There Chomsky questioned the legitimacy of feature-movement (specifically, the fact that feature-movement took the form of head-adjunction, an operation that posed problems for the definition of cyclicity), and proposed the operation *Agree*. Agree was defined as a process of long-distance feature checking (or valuation) with no displacement. The configuration in which it obtains is very reminiscent of the notion of long-distance government under c-command (see Raposo and Uriagereka 1990). In an Agree analysis, a Probe (a functional head) searches inside its c-command domain for a Goal (the agreeing element) with a matching feature. Once the Goal is found, it checks the features of the Probe, triggering agreement. Any displacement of the agreeing category was assumed to be motivated by an independent Fill-Spec/EPP-requirement. Like the generalized spec-head analysis, the Agree-based theory takes all instances of case-agreement to be established in the same manner, but this time movement does not figure as part of the theoretical symmetry established.

The Agree-analysis expresses Chomsky's intuition that existential constructions display the mechanism of case/agreement-licensing in all its purity. It would be unfair of me to fail to mention that there are many alternative analyses of existential constructions, many of them dispensing with the idea that the associate NP is directly responsible for agreement on the finite verb, and/or the idea that the associate NP receives case from finite Infl (see Moro 1997, Belletti 1988, Lasnik 1992, Hornstein and Witkos 2003, among many others). If correct, these analyses may enable us to maintain a generalized spec-head analysis for case/agreement-licensing. The data discussed in many

chapters of this volume suggest that this would be the wrong move, and that Agree is a better way to unify all instances of case/agreement (for converging evidence, based on data not discussed here, see Soltan 2007).

Before turning to a brief discussion of the kind of data required to make an argument in favor of Agree, let me sum up the preceding discussion by highlighting the desire for symmetry in the formulation of grammatical principles. Empirical evidence suggests two ways to proceed: Either all instances of case/agreement pattern like nominative case for canonical subjects, i.e., licensing under Spec-head, or else, all instances of case/agreement pattern like accusative case for canonical objects, i.e., licensing under Head-complement (/Agree). The situation exemplifies the spirit of minimalist research: At the heart on our inquiry is a conceptual desire for good design (symmetry). This is what defines the research program. Empirically (/technically), the program can be articulated in two distinct ways: Spec-head or Head-complement (Agree). The challenge was (and still is) to determine which way will lead most naturally to a comprehensive treatment of case/agreement, one meeting the minimalist desideratum of symmetry.

3. AGREEMENT IN THE PRESENT VOLUME AND BEYOND

To establish the superiority of Agree (i.e., separate case/agreement from the possibility of movement), it was necessary to go past the many factors that are involved in existential constructions and look at a variety of cross-linguistic phenomena that reveal (i) instances of movement unaccompanied by case-agreement licensing (quirky subjects; Chapters 1 and 2), (ii) instances of case-agreement for which there is no plausible movement source (Hindi long-distance agreement; Chapter 3), and (iii) instances of restrictions on case/agreement that follow straightforwardly if case/agreement can be established in the absence of displacement, but that would be expected to be voided if movement could reorder elements before case/agreement is licensed (bleeding effects) (Japanese honorification; Chapters 4 and 5; Multiple Agree relations; Chapter 6). Agree can also be pressed into service to account for various asymmetries in locality effects that would be difficult to explain if case/agreement relations always required movement. Chapters 7–10 examine such asymmetries.

It is hardly necessary to point out that all of the analyses developed in the following chapters remain controversial, and subject to reinterpretation (something I indulge in myself, as I reinterpret parts of Chapter 1 in Chapter 2, for example). But I suspect that the chapters that constitute the bulk of this collection will remain theoretically relevant even if they turn out to be wrong on matters of detail, because they show how an Agree-based analysis of case and agreement may be empirically substantiated. Specifically, they show that in addition to existential constructions, other kinds of data,

such as long-distance agreement or agreement asymmetries, may provide evidence for a theory that divorce case/agreement from movement. They also show the kind of data that will have to be looked at if one attempts to refute an Agree-based theory (for valuable attempts, see Chandra 2007, and Hornstein 2007; but see Boeckx 2007a,b).

Having said this, let me stress that even if the arguments in favor of Agree provided here turn out to hold, some rather pressing questions will have to be addressed in future work. First, if case and agreement are truly divorced from movement, what accounts for EPP-effects pertaining to A-chains (raising, passive, etc.)? Ever since it was proposed in the early days of the Principles-and-Parameters approach (see Chomsky 1981, 1982), the so-called Extended Projection Principle (EPP) has stood out as an important generalization in need of a deep explanation. Implicating case and agreement in the formation of A-chains, as in the generalized spec-head theory, gave us the hope of a substantive hook on which to hang our understanding of that formal requirement. Put differently, the generalized spec-head approach gave us the hope that the EPP would become a problem. But once case and agreement are divorced from movement, as in an Agree analysis, it becomes harder to even begin to unravel the EPP-issue, keeping the latter firmly in the category of mysteries. Chomsky (2004: 114) is right to point out that "(. . .) raising of α (. . .) is always restricted to some category of constituents (. . .), hence some feature of α (or complex of features)." What the range of possible features identifying elements satisfying the EPP is still remains an open question. Chapter 6 of the present work suggests that a decomposition of phi-features and a careful examination of their (distinct) interface properties may shed light in this important issue, but much more remains to be done before even considering this avenue of research worth pursuing (for an attempt, see Boeckx 2007a).

Another issue that the present volume fails to resolve is the nature of the relation between case and agreement. That a relation exists between the two can hardly be doubted, but which form this relation takes is unclear. What exactly does it mean to say that case and agreement are two sides of the same coin? Is case always the reflex of an agreement relation, as Chomsky has suggested in recent work (see Chomsky 2000; see also Chapter 3)? Or should case be regarded as the nominal counterpart of uninterpreted formal features (agreement) found on verbal functional heads, as suggested by Pesetsky and Torrego 2001 (see also Chapter 6)? Regrettably, the data discussed in the following pages are not conclusive enough to enable me to take a confident stance on this issue, and I must leave this question for future work (for relevant considerations, see Boeckx 2007a).

The two big issues just raised do not exhaust the range of questions that the present work is silent on. Take, for example, the range of variation in the morphological expression of agreement, which is quite extensive: Apart from well-known cases of suffixation and prefixation, one also finds cases of fusion, circumfixation, infixation, portmanteau morphemes, fission, etc.

Interestingly, Cinque (1999: 127) notes on the basis of an extensive survey of the world's languages that [by the logic of the mirror principle], "the order [of functional heads] appears crosslinguistically invariant. The limited cases of apparent variation all seem to involve agreement and negation." But such cases are not limited at all. Concluding her survey of over 500 genetically unrelated languages, Julien (2000: 359) observes that "there is one inflectional category which does not so easily fit into the . . . rigid framework that syntactic analyses [assuming a rigid mirror principle] provide. This category is agreement." Why this is the case is far from clear.

Likewise, several hypotheses were formulated in the GB era that tied (morphological) richness of agreement to phenomena such as *pro*-drop (see Rizzi 1982, Jaeggli and Safir 1989) or polysynthesis (Jelinek 1984, Baker 1996). But to this day no satisfactory characterization of "rich agreement" has been formulated, despite repeated attempts.

And yet few would deny that agreement is deeply implicated in these phenomena. Another area that merits attention is the extent to which AGRP, if it exists, should be split in smaller projection reflection Person, Number, and Gender agreement, respectively. One of the phenomena discussed in this context is the nature of nominative NPs in Icelandic, discussed in Chapters 1 and 2. Although the language does not impose any φ-feature restriction on nominative subjects, it prohibits non-3rd person nominative objects. Sigurðsson (1996) and Taraldsen (1995) (see also Sigurðsson and Holmberg in press for additional evidence) took the contrast to indicate that agreement with nominative objects in Icelandic was restricted to 3rd person, which, following Benvéniste's well-known suggestion, they took to mean absence of Person. Hence agreement is restricted to Number. This led them to claim that AGRoP licensing nominative objects is a NumberP, whereas nominative subjects can relate to a PersonP.

Similarly, the fact that past participle agreement is often restricted to Number and Gender (no Person) suggests that finer-grained distinctions are needed in the characterization of AGRP.

A comprehensive theory of agreement should also touch on the relation between agreement and clitics, the general weakening/impoverishment of agreement with post-verbal subjects, the phenomenon of anti-agreement in the context of wh-extraction, the nature of wh-agreement (agreement established by moving wh-phrases), the near-total absence of overt agreement in some languages, the general lack of agreement relations with covertly moved NPs (such as covertly raised quantifiers), differences between agreement and concord, agreement within nominals, adjectival agreement, and so on. All of this will have to await future research.

In concluding this introduction, I would like to stress my belief that Vergnaud's insight that purely formal features like case and agreement play a key role in linguistic theory is likely to have many more lasting repercussions than what we have been able to gather from the syntax of agreement and the mechanisms underlying it. Chapter 11 of the present collection argues

that a detailed investigation of case-licensing may not only account for the distribution of nominals, but may also determine their interpretive properties. Specifically, case-licensing may help us characterize the range of reconstruction effects found in the domain of A-chains. (Boeckx and Hornstein in press suggest that case/agreement-licensing considerations may even bear on reconstruction effects in A-bar dependencies.)

In independent work (see Boeckx 2003b, to appear; see also Boeckx and Hornstein 2006, and Rodrigues 2004), I have argued that 'strong' agreement (taken to mean agreement in all phi-features) has a major effect on island-formation. In the course of arguing for a specific (movement) analysis of structures involving resumptive pronouns, I was struck by the fact that in many cases, the resumptive pronoun and the wh-phrase antecedent were not in an agreement relation. The examples in (25)–(28) illustrate the lack of agreement (i.e., lack of phi-feature identity) one finds in language after language in the context of resumption.

Anti-Person Agreement

(25) A   Alec, tusa a bhfuil an Béarla   aige.   (Irish)
      Hey Alec you aN is   the English at-him
      'Hey Alec you that know(s) English.'

Anti-Number Agreement

(26) Na daoine a chuirfeadh   isteach ar an phost sin.   (Irish)
      the men   C put-COND-3SG in   for the job   that
      'The men that would apply for that job.'

Anti-Gender Agreement

(27) Dè   a'mhàileid   a chuir thu am peann ann?   (Sc. Gaelic)
      Which the.bag.FEM C put   you the pen   in.3.MASC
      'Which bag did you put the pen in?'

Anti-Case Agreement

(28) a. Bha thu a'geàrradh na craoibhe.   (Sc. Gaelic)
         be.PST you cutting the three.GEN
         'You were cutting the tree.'
     b. Dè   a'chraobh a bha   thu a'geàrradh?
         which tree.NOM C be.PST you cutting
         'Which tree were you cutting?'

Based on such facts, Boeckx (2003b) hypothesized that lack of agreement is a pre-condition on successful extraction (lack of opacity/islandhood).

There is independent evidence that movement is closely related to what is known in the literature as 'anti-agreement' effects.

Consider the following examples from Northern Italian dialects.

(29) a. La Maria l' è venuta.   (Italian)
   the Maria she is come
   'Maria came.'

  b. Gli è venuto la Maria.
   It is come the Maria
   'Maria came.'

  c. Quante   ragazze gli è venuto con te?
   how.many girls   it is come with you
   'How many girls came with you?'

  d. *Quante   ragazze le   sono venute con te?
   how.many girls   they are   come   with you

  e. Chi hai detto che __ e partito?
   who has said that   is left
   'Who did he say that left?'

(29a) shows that preverbal subjects relate to a φ-feature matching clitic (3rd fem. sg). By contrast, post-verbal subjects don't (29b), the clitic bearing default morphology. (29c) and (29d) show that subject extraction requires the use of a non-agreeing clitic. Based on (29c), we can conclude (as did Rizzi 1982) that in standard Italian examples like (29e), subject extraction takes place from a post-verbal position related to a silent non-agreeing clitic (*pro*), which obviates the [*that*-trace] effect.

In a similar vein, the fact that objects are islands for standard wh-extraction in languages with object agreement, like Basque (30), suggests that agreement tends to turn an otherwise transparent element (object) into an island.

(30) *Nori buruzko sortu zitusten aurreko asteko istiluek
    who about-of create scandals last   week   scandals
   zurrumurruak?
   rumors
   'Who have last week's scandals caused [rumors about]?'
                                                              (Basque)

Why should agreement have this effect?

Boeckx (2003b) argues that chains can contain at most one 'strong' positions, where 'strong position' can be equated with [+wh]-checking position or with 'strong agreement' (see Boeckx 2003b for a more precise characterization; for a similar intuition, see Richards 1997, 2001, Rizzi 2006, Rizzi and Shlonsky 2007). As a result of this ban on "chains that are too strong," elements that normally agree ("A"-type agreement, or what Chomsky 2001