# Agreement and its failures

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*to Safta Yaffa*

# Contents

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# Abbreviations

| | |
|---|---|
| ABS | absolutive |
| ACC | accusative |
| ACT | active voice |
| ADV | adverbial |
| AF | Agent-Focus |
| AOR | aorist |
| AP | antipassive |
| ART | article |
| AUG | augment |
| AUX | auxiliary |
| BEN | benefactive |
| CAUS | causative |
| CL | clitic |
| CLF | classifier |
| COM | completive |
| CONJ | conjoint |
| DAT | dative |
| DEM | demonstrative |
| DET | determiner |
| DISJ | disjoint |
| ERG | ergative |
| EVID | evidential |
| EXCL | exclusive |
| EXPL | expletive |
| FEM | feminine |
| FUT | future |
| GEN | genitive |
| HAB | habitual |

| | |
|---|---|
| IMPF | imperfective |
| INC | incompletive |
| INCL | inclusive |
| LOC | locative |
| MASC | masculine |
| NOM | nominative |
| NMZ | nominalization |
| OBL | oblique |
| PASV | passive |
| PCL | particle |
| PERF | perfect |
| pl/PL | plural |
| POSS | possessive |
| PREP | preposition |
| PRES | present |
| PRFV | perfective |
| PRT | participle |
| RN | relational noun |
| SC | small-clause |
| sg/SG | singular |

# Chapter 1

# Introduction

The central question investigated in this book is how the obligatory nature of predicate-argument agreement (henceforth, $\varphi$-agreement) is enforced by the grammar.[1] The central claim is that an empirically adequate theory of $\varphi$-agreement requires recourse to an operation whose obligatory triggering is a grammatical primitive, not reducible to representational properties, but whose successful culmination is not enforced by the grammar.

In many contemporary treatments of $\varphi$-agreement, its obligatoriness is enforced through representational means. Perhaps most prominent is Chomsky's (2000, 2001) 'interpretability'-based proposal, in which the obligatoriness of $\varphi$-agreement is enforced through *derivational time-bombs*: elements of the initial representation that cannot be part of a well-formed end-of-the-derivation structure (Chomsky's 'uninterpretable features'). These derivational time-bombs are diffused, so to speak, by the application of $\varphi$-agreement itself; thus, derivations in which $\varphi$-agreement has not applied cannot be well-formed, which in turn, renders $\varphi$-agreement obligatory.

This book presents an empirical argument against approaches that seek to derive the obligatory nature of $\varphi$-agreement exclusively from derivational time-bombs, and offers an alternative account of $\varphi$-agreement based on the notion of *obligatory operations*, which is better suited to handle the

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[1]Portions of this work have appeared previously as Preminger 2011a.

facts at hand. The crucial data involves utterances that inescapably involve attempted-but-failed agreement, and are nonetheless fully grammatical.

I begin, in chapter 2, by presenting three competing models that could in principle be used to capture the obligatoriness of $\varphi$-agreement: the *derivational time-bombs* approach, the *violable constraints* approach, and the *obligatory operations* approach (which is the one I will ultimately argue in favor of). I then discuss how each of these models would fare in handling tolerated failed agreement in grammatical utterances.

In chapter 3, I present the patterns of $\varphi$-agreement found in the Agent-Focus construction in the Mayan languages of the Kichean branch. The agreement patterns observed in Kichean Agent-Focus have been claimed to instantiate a grammaticalization of a 'salience' hierarchy (Dayley 1978, 1985, Mondloch 1981, Norman & Campbell 1978, Smith-Stark 1978, *a.o.*). In chapter 4, I demonstrate that the same facts actually adhere to more familiar syntactic principles—primarily, the *probe-goal* mechanisms that emerged in the wake of Rizzi's (1990) Relativized Minimality (as articulated by Chomsky 2000).

Crucially, while compatible with a probe-goal analysis, these facts prove quite problematic for approaches that seek to capture the obligatoriness of $\varphi$-agreement using only derivational time-bombs (e.g. Chomsky's 2000, 2001 'interpretability'-based proposal), because they necessarily involve attempted agreement which has not culminated successfully. This is discussed in detail in chapter 5. I also discuss several ways in which one might try to salvage the derivational time-bombs approach in light of these facts, and demonstrate the shortcomings of each.

In chapter 6, I discuss two other empirical domains that provide converging evidence for the same conclusion, that tolerated failed agreement exists: the *conjoint/disjoint* alternation in Zulu and its interaction with nominal *augment* morphology (building on Halpert 2012); and the morphosyntax of unergative constructions in Basque (building on Preminger 2012).

In chapter 7, I reexamine the status of 'salience' hierarchies or scales as grammatical primitives in possible accounts of the phenomena discussed so far. I present several arguments against the

use of such primitives in the account of $\varphi$-agreement in Kichean Agent-Focus in particular. I then discuss a typological argument against the use of such hierarchies/scales, from the juxtaposition of Kichean Agent-Focus with the Zulu facts discussed earlier.

I then turn, in chapter 8, to a discussion of so-called 'defective intervention' by dative nominals. The existence of tolerated failed agreement, as established in the preceding chapters, gives rise to an analytical possibility that was unavailable under the derivational time-bombs approach: that intervention by dative nominals results in the outright failure of $\varphi$-agreement, as opposed to some form of 'defective' or 'partial' agreement. Taking as a starting point Bobaljik's (2008) observation that $\varphi$-agreement is *case-discriminating* (i.e., that agreement probes filter possible targets based on their case marking), I show that viewing intervention as failed agreement per se provides us with a previously unavailable account for when intervention will cause outright ungrammaticality, and when it simply results in 'default' morphology. The same facts, involving outright ungrammaticality caused by certain instances of dative intervention, also furnish an argument against a violable constraints approach to $\varphi$-agreement, and in favor of $\varphi$-agreement as an obligatory operation.

In chapter 9, I turn to the question of where this obligatory $\varphi$-agreement operation is located in terms of the modular organization of the grammar. As Bobaljik (2008) has shown, in the course of arguing for the case-discrimination property of $\varphi$-agreement, the notion of case relevant to this computation is so-called 'morphological case' (Marantz 1991). Coupled with the results of chapter 8, I show that this entails that both 'morphological case' and $\varphi$-agreement necessarily operate within syntax itself—contrary to Bobaljik's own claims concerning the relevant modular loci—and that the term 'morphological case' is therefore something of a misnomer (though still accurate insofar as it refers to a notion of case that is faithful to the observable morphology). Converging evidence for the conclusion that Marantz's (1991) case calculus actually belongs within syntax is presented from Baker & Vinokurova's (2010) and Levin & Preminger's (to appear) analysis of case in Sakha (Turkic). Finally, I revisit the original analysis of $\varphi$-agreement in the Kichean Agent-Focus construction, put forth in chapter 4, and discuss it in light of the issues explored in these last two chapters.

From a broader perspective, the obligatory operations logic that $\varphi$-agreement is shown to adhere to might appear to cast $\varphi$-agreement as an "outlier" among syntactic phenomena; and crucially, given the results of chapter 9, relegating $\varphi$-agreement to some other module of the grammar (e.g. the post-syntactic/morphological component) is impossible. However, it turns out that the logic of obligatory operations is not all that rare in the syntactic landscape, after all. In chapter 10, I briefly discuss three other syntactic phenomena that all prove extremely amenable to treatment as operations, which must be triggered, but whose failure is systematically tolerated by the grammar. These are: long-distance *wh*-movement; the interaction of specificity and *Object Shift*; and the interaction of the *Definiteness Effect* and movement to canonical subject position. I then discuss the prospects of a completely operations-based syntax, and the outlook for doing away entirely with any residual recourse to derivational time-bombs (e.g. 'uninterpretable features') in the grammatical apparatus.

# Chapter 2

# Modeling the obligatoriness of $\varphi$-agreement

## 2.1.  A working definition of "agreement"

This book deals with how to derive the obligatory nature of agreement. To have a meaningful discussion on this topic, we must demarcate what set of empirical phenomena fall under the heading of 'agreement' in the first place. Traditionally, this term was used to refer to a relatively well-defined pattern: morpho-phonologically overt co-variance between verbs, or verb-like elements (such as tense/aspect/mood markers), and one or more core arguments in the clause (usually nominals).

In the linguistic literature of the last couple of decades, however, the use of this term has expanded: agreement, and/or the theoretical machinery used to derive it (in particular, Chomsky's 2000, 2001 *Agree*), has been applied to a much wider array of phenomena. Examples include: noun-modifier concord (e.g. Baker 2008, Carstens 2000, Mallen 1997); negative concord (e.g. Zeijlstra 2004, 2008b); modal concord (e.g. Zeijlstra 2008a); fake indexicals (e.g. Kratzer 2009); and even deriving Binding Theory itself (e.g. Reuland 2011, Rooryck & Vanden Wyngaerd 2011). It is an open question, in my view, whether these phenomena are best captured in terms of agreement proper (on the similarities and differences between agreement in the traditional sense, and some of the other empirical domains listed here, see Norris 2011, 2012, Preminger to appear).

The goal of the current work is to argue in favor of a particular model for enforcing the obligatory nature of agreement, by demonstrating the inadequacies of other, existing models (see §2.2, below). It is therefore crucial to demonstrate that such inadequacies arise even when agreement is narrowly defined. I will therefore adopt the following, rather traditional definition of agreement:

(1)    **agreement** (or $\varphi$-**agreement**): morpho-phonologically overt co-variance in $\varphi$-features between a verb-like element and one or more nominal arguments

      WHERE:

      a.  "verb-like element" = a lexical verb, auxiliary verb, or tense/aspect/mood marker

      b.  "$\varphi$-features" = some non-empty subset of {PERSON, NUMBER, GENDER/NOUN-CLASS}

## 2.2. Three models for the obligatoriness of agreement

Agreement has consequences for grammaticality. This is a relatively trivial claim, and indeed one need not look too far to find evidence for it. Consider the following simple example:

(2)  a.  ha-necig-im          dibr-u                                          (Hebrew)

the-representative-PL spoke-3pl

'The representatives spoke.'

b. * ha-necig-im          diber

the-representative-PL spoke(3sg.M)

The central question I wish to pose is a deceptively simple-looking one: **What is it in the grammar that assigns *grammatical* status to a sentence like (2a), but *ungrammatical* status to a sentence like (2b)?** In the remainder of this section, I outline three different ways of answering this question.

### 2.2.1. The derivational time-bombs model

Perhaps the most influential approach in contemporary linguistic theory to deriving the obligatoriness of agreement is the 'interpretability'-based proposal, by Chomsky (2000, 2001). Before elaborating the specifics of that proposal, let me first outline the general architecture it employs. I will refer to this architecture as the *derivational time-bombs* model, for reasons that will become clear shortly.

Suppose that the initial representation of a sentence like (2) contained an element (a 'feature') that could not be part of a well formed, end-of-the-representation structure; and that among the effects of establishing a successful agreement relation was the removal of this offending element from the representation (or at the least, altering this element's state, so that it would no longer be an obstacle to well-formedness). Assuming that agreement is the only process capable of affecting the offending element in this way, one can derive the necessity of agreement obtaining in any utterance that would ultimately be well-formed.

It is worth noting that this model entails a grammatical theory in which the generative engine is not "crash-proof" (cf. Frampton & Gutmann 2002, 2006). A crash-proof theory is one where the grammar specifies, given a well-formed derivational state, the set of operations that could be applied to it to yield another well-formed derivational state. Instead, the derivational time-bombs model, which Chomsky's (2000, 2001) 'interpretability'-based proposal is an instance of, relies on the logic of (over-)generation-followed-by-filtration: the derivational engine allows free application of the operations at its disposal, but does not guarantee that the end result of these applications will be well-formed. At the end of the derivation, a filter (or set of filters) applies, eliminating derivations that did not culminate in well-formed representations. This approach came into prominence in generative syntax with the publication of Chomsky & Lasnik's 1977 *Filters & Control*, though its origins within generative grammar go back at least to Perlmutter (1971).

I refer to this as the "derivational time-bombs" model—the metaphor being that the offending element is a "time-bomb" and had better be defused by the end of the derivation (if well-formedness is to be achieved).[1]

Let us now consider the specifics of Chomsky's (2000, 2001) 'interpretability'-based account of agreement. The element that enters into an agreement relation with a nominal argument (e.g. an Infl[0] node realizing finite verbal agreement) is referred to as the *probe*, and the nominal with which the probe enters into an agreement relation is referred to as the *goal*.[2]

Agreement probes enter the derivation bearing a set of $\varphi$-features (see the definition in (1b), above) that are *uninterpretable*—meaning, literally, that they cannot be interpreted at the syntax-semantics interface. While it is conceivable that features that could not be interpreted by the

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[1]The reader may wonder why the coinage of a new term, *derivational time-bombs*, is necessary, given that there is already a widely accepted term in Chomsky's (2000, 2001) *uninterpretable features*, whose use is so widespread in contemporary syntactic literature. The purpose of this new term is to make a clear abstraction away from whether $\varphi$-features on verbs or verb-like elements are interpretable, or interpreted, at the semantic interface, and instead to focus attention purely on whether or not they are triggers for ungrammaticality (this separation is made more explicit in the Appendix to chapter 5). I will have very little to say about the former question, whereas the latter is the focus of most of this book.

[2]While these terms are used for a broad range of syntactic relations—not just for $\varphi$-agreement—they will be used in the current discussion only in the agreement-related sense.

semantic component would simply be ignored by the interpretive procedure, Chomsky takes the opposite stance, positing that uninterpretable features cause ill-formedness unless altered or removed by the time the structure is subjected to semantic interpretation.

On this view, φ-agreement can be seen as a response to this impending ill-formedness: when a set of uninterpretable φ-features on a probe enters into an agreement relation with the set of interpretable φ-features found on a noun phrase, they are rendered interpretable themselves (or alternatively, deleted altogether). This is schematized below:

(3)
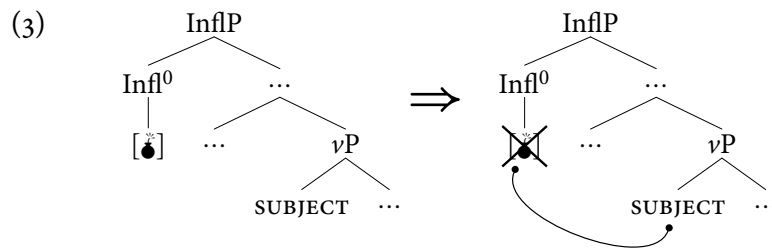


If we assume that the finite verb in a sentence like (2) actually includes an Infl$^0$ node of this sort, then the ill-formedness of the non-agreeing variant (2b) is derived as follows: the absence of agreement morphology on the verb indicates that the Infl$^0$ node in question has not entered into an agreement relation with the subject; this, in turn, means that the φ-features on Infl$^0$ have remained uninterpretable through the end of the derivation. As a result, when semantic interpretation applies to this structure, ungrammaticality arises.

What is crucial about this account, for our purposes, is that the obligatoriness of the agreement relation is not specified directly; it is derivative, a result of what would otherwise be the ill-formedness of the elements ("features") upon which it operates. This is not to say that agreement is not conceived of derivationally in Chomsky's proposal: there is an operation, *Agree*, responsible for ameliorating the uninterpretable state of features on the probe using their counterparts on the goal. But in this system, *Agree* itself is not obligatory in any meaningful sense; it is applied freely by the grammar, constrained only by the requirement that the ultimate representations fed to semantic interpretation and phonological spellout conform to the assumed well-formedness conditions. Thus,

it would be imprecise to say that the ungrammaticality of (2b) is a (direct) reflex of the failure of *Agree* to apply; its direct cause is the uninterpretable features on Infl$^0$ not having been tended to, and reaching the semantic interface in their original state.

One could view the derivational time-bombs model in its entirety as a sub-case of a wider family of models that relate $\varphi$-agreement to the grammatical status of an utterance bi-conditionally (perhaps with some provision for constructions, or entire languages, where no observable $\varphi$-agreement is found; e.g. English infinitives). Thus, unification-based theories of grammar, such as HPSG or LFG[3]—insofar as they posit $\varphi$-features as part of the set of features subject to unification between a predicate and its argument(s)—fall under the same category.

### 2.2.2. The violable constraints model

Another way to capture the obligatory nature of $\varphi$-agreement is in terms of a constraint. Perhaps the best studied constraint-based formalism in the context of linguistics is *Optimality Theory* (McCarthy & Prince 1995, Prince & Smolensky 1993). The obligatoriness of agreement could be derived from a constraint along the lines of (4):

(4)     HAVEAGR: Assign one violation mark for every failure to represent the $\varphi$-features of the designated argument on a finite verb.

Abstracting away, for the time being, from interactions with other constraints and inputs, we would arrive at the following trivial schema for enforcing that agreement take place:

(5)

| the-representative-PL spoke-␣ | HAVEAGR |
|---|---|
| a. ☞ the-representative-PL spoke-3pl | |
| b.    the-representative-PL spoke(3sg.M) | *! |

---

[3] *Head-Driven Phrase Structure Grammar* (Pollard & Sag 1994, *a.o.*) and *Lexical Functional Grammar* (Bresnan 2001, *a.o.*), respectively.

In this model, the ungrammaticality of a sentence like (2b), above, is the result of selecting a sub-optimal candidate such as (5b).

The reader may notice that evaluating HaveAgr, as it stands, amounts in terms of the analysis presented in §2.2.1 to counting the heads that bear unchecked uninterpretable features.[4] This equivalence, while perhaps computationally useful, does not render the two models identical: the need to comply with HaveAgr (or the need to minimize the number of unchecked uninterpretable features) could be suspended in favor of a more highly-ranked constraint (see Schütze's 1997 Accord Maximization Principle, for a proposal along these lines); whereas no mitigation of this sort is possible in the derivational time-bombs model.

### 2.2.3. The obligatory operations model

The third model I will discuss, and the one I will ultimately argue for, affords obligatory status directly to the derivational <u>operation</u> (or by other names, 'transformation' or 'rule') responsible for transferring $\varphi$-feature values from the nominal to the verb or verb-like element.

On this view, a sentence like (2b) (where no agreement is found) is ungrammatical because the agreement operation has not taken place, meaning not all operations that are obligatory have in fact been initiated in the course of its derivation. More generally, this sort of ungrammaticality results when there is no derivation sanctioned by the grammar that leads to the relevant output string.

It is worth noting that it is essentially unavoidable, within any derivational approach to syntactic computation, that some outputs are ruled out on such grounds. Thus, even within Chomsky's (2000, 2001) system—where the obligatoriness of $\varphi$-agreement is enforced using derivational time-bombs (§2.2.1)—there exist other ungrammatical outcomes that are ruled out not due to localized ill-formedness (e.g. the presence of unchecked uninterpretable features), but rather because the grammar does not sanction the derivations that would produce them. One canonical example

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[4] Alternatively, it amounts to counting the uninterpretable features themselves, if one adopts a system where different $\varphi$-features can be checked independently of one another; see §4.1 for discussion.

concerns *minimality* effects (see Richards 2001, among many others). The relevant configurations are schematized in (6a–b):

(6)     If $\underline{\alpha \gg \beta, \gamma}$, $\beta \gg \gamma$, and $\gamma \not\gg \beta$ (where '$\gg$' denotes *c-command*) —

    a.     $\alpha \ldots \beta \ldots \gamma$

    b. $^\star$ $\alpha \ldots \beta \ldots \gamma$

In these scenarios, two potential targets $\beta$ and $\gamma$ are both c-commanded by a single node $\alpha$, which can in principle establish a relation with either of them. If $\beta$ is closer to $\alpha$ than $\gamma$ is (where 'closer' is itself a structural relation, defined through asymmetric c-command; see Richards 2001, and references therein, for details), then the derivation (6b) in which $\alpha$ establishes a relation with the farther away $\gamma$ is ruled out. What is important for our current purposes is that (6b) is not ruled out due to the representational content of $\beta$ or $\gamma$; the featural outcomes of (6a) and (6b) would be mirror images of one another: features left unchecked on $\beta$ in (6b) would be left unchecked on $\gamma$ in (6a), and vice versa. Instead, because of the structural relations that hold among $\alpha$, $\beta$, and $\gamma$, the grammar simply *does not produce* outcomes that would have required a step like (6b).

The obligatory operations model employs a similar logic. Certain operations are obligatorily initiated in any well-formed derivation (at least, in those cases where the structure contains the trigger for the operation in question; see below). As a result, derivations in which the relevant operation has not applied yield ungrammaticality—not because this leaves verb-like element (or the nominal target) in any representationally problematic state (cf. §2.2.1), but simply because such derivational sequences are not sanctioned by the grammar. Regarding $\varphi$-agreement in particular, we could assume that the operation that transmits $\varphi$-feature values from the closest accessible nominal is obligatorily triggered by the relevant set of verb-like elements—the same set that in Chomsky's 2000, 2001 system, for example, are conjectured to bear uninterpretable features. Thus, a finite verb (or the finite Infl$^0$ node that the verb merges with) would necessarily trigger the agreement

operation, deriving the grammaticality pattern in (2a–b) (for a similar proposal, see López's 2007 'reactive' reformulation of `Agree`).

It is important to note that in this type of model, the fact that an operation is obligatory does not mean it successfully applies *in every well-formed derivation*. Operations have structural conditions on their application. As an example, consider the phenomenon of *final devoicing*, whereby word-final obstruents in certain languages are obligatorily devoiced. Suppose this is enforced by the grammar by way of an obligatory operation (or "rule"), along the following lines:[5]

(7)    FINAL DEVOICING

$$\underset{[\text{-son}]}{C} \rightarrow [\text{-voice}] \;/\; \_\_\#$$

Now consider an obstruent in word-medial position, or a word that ends in a sonorant; the fact that (7) fails to effect any change in these cases is considered immaterial in evaluating the status of (7) as *obligatory* or *optional*. The obligatoriness of (7) can only be evaluated with respect to configurations that meet the relevant structural conditions (in this case, structures involving an obstruent in word-final position).

This is true for the obligatory operations model more generally: the obligatoriness of an operation is evaluated only with respect to configurations that meet the structural conditions necessary for the operation to be triggered, in the first place.

Just as in §2.2.2, the discussion so far may have created the impression that the obligatory operations model is a notational variant of a system like Chomsky's (2000, 2001), recasting any node previously assumed to carry uninterpretable features as a node that triggers the agreement operation, and that moving from one variant to the other might not have testable consequences. But as with the violable constraints approach, such an equivalence would be illusory. If circumstances caused

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[5]It is the case that many contemporary phonologists no longer think of phenomena like final devoicing in terms of a rule or operation. However, the FINAL DEVOICING example is used here only for the purpose of illustrating the logic of the obligatory operations model; therefore, whether or not it ends up being the right account of a particular phonological phenomenon is not directly relevant.

the agreement operation—once initiated—to fail to culminate successfully, the requirements of the obligatory operations model would still have been met. On the other hand, since uninterpretable features are only removed/checked by a successfully established agreement relation, the prediction in that case would be ungrammaticality.

This raises the question of what would lead an agreement operation, once initiated, to fail; that is, in a nutshell, the topic of the remaining chapters in this book. But before moving on, I will present a formal definition of *failed agreement*, the empirical domain that will provide the testing ground for these different models for the obligatoriness of agreement.

## 2.3. Failed agreement, and why we should be interested in it

As alluded to throughout §2.2.1–§2.2.3, the predictions of the different models for capturing the obligatoriness of agreement are similar, but not identical. The following type of data will prove instrumental in distinguishing among these models:

(8)    FAILED AGREEMENT: A DESCRIPTIVE CHARACTERIZATION

An utterance which is grammatical despite failing to adhere to what is an otherwise obligatory pattern of agreement in the language in question, **and for which there is no grammatical variant where agreement surfaces normally**.

Importantly, this definition excludes "slips of the tongue" or other production errors, as well as situations where a lack of agreement is tolerated by the hearer due to a processing difficulty—since for all of these, an alternative utterance exists in which the canonical agreement pattern surfaces.

Let us consider how each of the three models surveyed above would deal with failed agreement as defined in (8). On the obligatory operations model (§2.2.3), failed agreement is predicted to arise when the agreement operation is triggered but the structural conditions for its successful culmination have not been met (cf. the example given earlier, concerning the obligatoriness of FINAL DEVOICING vis-à-vis word-medial obstruents or word-final sonorants). Thus, on this model, what

is needed for a predictive theory of failed agreement is an explicit formulation of the structural conditions that are relevant to the agreement operation.

On the violable constraints model (§2.2.2), failed agreement is predicted to arise when there is some constraint, call it ConstX, whose violation would be more costly than violating the agreement-enforcing constraint, HaveAgr, and for a given input, there is no output candidate that can simultaneously satisfy ConstX and HaveAgr:

(9)

|  | ConstX | HaveAgr |
|---|---|---|
| a. ☞ *non-agreeing candidate* |  | * |
| b. *agreeing candidate* | *! |  |

Thus, on this model, two things are required for a predictive theory of failed agreement: first, an explicit theory of the set of possible constraints that could be ranked higher than HaveAgr; and second, for each such constraint, a formulation of the kind of input data for which no output candidate is possible that could satisfy both HaveAgr and the constraint in question.

The situation is quite different, however, on the derivational time-bombs model (§2.2.1). In a derivation that contains a canonical bearer of agreement, but where φ-agreement has not successfully obtained, the derivational time-bomb will have remained in its "non-defused" state. This, in turn, should give rise to ungrammaticality. What the derivational time-bombs model categorically excludes, then, is a grammatical utterance that was generated with the standard agreement-enforcing derivational time-bomb in place, but where φ-agreement has not applied successfully.

Failed agreement, as defined in (8), can therefore serve to distinguish at least the derivational time-bombs model from the other two. Insofar as we are able to establish the existence of failed agreement in grammatical utterances, the derivational time-bombs model can be ruled out on empirical grounds.

The chapters that follow (§3–§5) present a case study involving failed agreement being tolerated in utterances that are nevertheless grammatical, based on data from the Kichean Agent-Focus construction.

# Chapter 3

# Agreement in the Kichean Agent-Focus construction: The facts

In this chapter, we examine the behavior of verbal agreement in the Agent-Focus construction in the Kichean languages of the Mayan family. This construction will prove to be a very useful testing ground for the different models of agreement outlined in chapter 2. A comparison between these different models in light of agreement in the Kichean Agent-Focus construction will be taken up in chapter 5; but before such a comparison can be carried out, we must acquaint ourselves with the facts themselves.

In §3.1, I outline the basics of agreement in Kichean, and proceed to introduce the Agent-Focus construction itself. In §3.2, I discuss the behavior of verbal agreement in this construction (building on work by Dayley 1978, Mondloch 1981, Norman & Campbell 1978, Smith-Stark 1978, *a.o.*). In §3.3, I present a particular restriction regarding possible argument combinations in this construction (*idem*). Finally, in §3.4, I discuss the morpho-phonological properties of agreement Kichean, which will have some bearing on the analysis developed in subsequent chapters.

## 3.1. Some basic facts about Kichean and Agent-Focus

This chapter examines data from Kaqchikel, K'ichee' and Tz'utujil, three Mayan languages of the Kichean branch, spoken in Guatemala. The Kichean branch, narrowly defined, also includes the language Achi', not discussed here; the superordinate branch, known as Greater Kichean, also includes the languages Q'eqchi', Uspantek, Poqomchi', Poqomam, Sakapultek, and Sipakapense (Campbell & Kaufman 1985). According to recent estimates, Kaqchikel has approximately 450,000 speakers; K'ichee' has approximately 2,300,000 speakers; and Tz'utujil has approximately 84,000 speakers.[1]

Like other languages in the Mayan family, the Kichean languages are head-marking (i.e., they lack overt case morphology on nominal phrases), and exhibit an ergative-absolutive agreement

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[1]<http://www.ethnologue.com/show_family.asp?subid=1227-16> (retrieved May 30th, 2011).

alignment. The examples below are in Kaqchikel ('Ø' indicates a phonologically empty cell in the agreement paradigm):[2,3]

(10) TRANSITIVE

    a. rat      x-**Ø**-**aw**-ax-aj               ri  achin                (Kaqchikel)

       you(sg.) COM-**3sg.ABS**-**2sg.ERG**-hear-ACT the man

       'You(sg.) heard the man.'

    b. ri  achin x-**a**-**r**-ax-aj             rat

       the man   COM-**2sg.ABS**-**3sg.ERG**-hear-ACT you(sg.)

       'The man heard you(sg.).'

(11) INTRANSITIVE

    a. ri  achin x-**Ø**-uk'lun

       the man   COM-**3sg.ABS**-arrive

       'The man arrived.'

    b. rat      x-**at**-uk'lun

       you(sg.) COM-**2sg.ABS**-arrive

       'You(sg.) arrived.'

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[2]Data in this chapter that are not otherwise attributed come from my meetings with Ana López de Mateo, a speaker of the Patzún variety of Kaqchikel; similar patterns have been noted in the literature concerning other Kichean languages (Aissen 2011, Davies & Sam-Colop 1990, Dayley 1978, 1985, Mondloch 1981, Norman & Campbell 1978, Pye 1989, Smith-Stark 1978, Stiebels 2006). Unless otherwise stated, everything presented in this section holds of Kaqchikel, K'ichee' and Tz'utujil equally.

    One difference I did find between Ms. López de Mateo's dialect of Kaqchikel and what has been documented for other Kichean languages was a strong preference for SV(O) word-order in declaratives, a departure from the verb-initial word order that is pervasive across the Mayan family (including in K'ichee' and Tz'utujil, for example; see Dayley 1978, Mondloch 1978, Norman & Campbell 1978). Another difference is a general dispreference for realizing the Patient argument in the absolutive antipassive (cf. the K'ichee' (13), below), even as an oblique.

    Whether these properties extend to all speakers of the Patzún variety of Kaqchikel remains to be seen.

[3]The morphological structure of the verbal forms in (10–11) is actually more complex than presented here, in particular with regard to the suffixes on the verbal stem, known as *status suffixes*. See Aissen (2011) and Henderson (2012), and references therein, for details.

As can be seen in these examples, the single argument of the (unaccusative) intransitive *uk'lun* ("arrive") triggers the same marking on the verb as the object of the transitive *ax* ("hear") does: Ø (empty) for 3rd person singular arguments, *a(t)-* for 2nd person singular ones. In contrast, the subject of the transitive triggers different marking on the verb: *-r(u)/u-* for 3rd person singular arguments, *a(w)-* for 2nd person singular ones. Note that the absolutive agreement marker in Kichean *precedes* the ergative marker; thus, in the transitive verb, one finds the following morpheme order:

(12)  MORPHEME ORDER IN THE KICHEAN TRANSITIVE VERB

$$\left\langle\begin{matrix}\text{aspect}\\\text{prefix}\end{matrix}\right\rangle-\left\langle\begin{matrix}\textbf{ABS}\\\textbf{marker}\end{matrix}\right\rangle-\left\langle\begin{matrix}\textbf{ERG}\\\textbf{marker}\end{matrix}\right\rangle-\left\langle\begin{matrix}\text{verb}\\\text{stem}\end{matrix}\right\rangle-\cdots$$

As noted earlier, the central empirical domain that will be investigated here is a construction known as *Agent-Focus* (AF). The Kichean languages are not alone within the rest of Mayan in having this construction, or something close to it; but the agreement pattern in Kichean AF is unique among its other Mayan counterparts, and its particular properties will prove crucial to the arguments in the following chapter.[4] The construction is in some sense a response to a restriction preventing A-bar dependencies from being established that target the transitive subject; but the nature of this restriction, or even how AF serves to circumvent it, are not our current topic.[5] For the remainder of this book, we will treat the existence of the AF construction as a given, and concentrate not on why or when it is used, but on the agreement patterns that arise when it *is* used.

Before turning to the AF construction itself, it is worth noting that the Kichean languages have other means of circumventing this A-bar restriction, as well; all that is needed is for the notional Agent to surface as something other than a transitive subject. One way of achieving this is by using

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[4]Agent-Focus has also been called "Agent Voice" (Smith-Stark 1978) and "Focus Antipassive" (Dayley 1981). The latter term, however, is somewhat misleading, as there are some crucial differences between Agent-Focus and true antipassive constructions; these differences are discussed below. On the distribution of Agent-Focus within the Mayan family, see Tada 1993, Stiebels 2006, and references therein.

[5]This restriction on A-bar dependencies is not unique to the Kichean languages, either, and is found in many (though not all) ergative languages, in and outside of the Mayan family. See Weisser et al. (2012), Coon, Mateo Pedro & Preminger (2011), and Polinsky (2011), for some competing approaches to this phenomenon (the first two of which directly address the phenomenon of Agent-Focus, as well).

the *absolute antipassive* construction (see, e.g., Mondloch 1981), in which the Patient surfaces as an oblique (if it surfaces at all), and as a result, the Agent no longer behaves as a transitive subject. This can be seen by the fact that the head-marking that the Agent controls in the absolute antipassive is the same marking controlled by the object in a regular transitive (cf. (10a–b)):

(13)  xači:n š-Ø-čap-an          [ č-e:h        le: ts'unun      ]ₒBLIQUE          (K'ichee')
      who  com-3sg.abs-capture-ap  3sg.poss-rn the hummingbird

      'Who caught the hummingbird?'                          [*Sam-Colop 1988:88;* annotations added]

The most common way, however, of circumventing the restriction on A-bar dependencies that target the transitive subject is by using the AF construction. The AF construction is characterized by a particular suffix on the verbal stem, a suffix which takes one of two forms depending on whether the verb stem is a *root transitive* (a CVC-shaped root; abbreviated RTV) or a *derived transitive* (a prosodically more complex stem; abbreviated DTV). In Kaqchikel, the two suffix forms are *-ö* and *-(V)n* (for RTVs and DTVs, respectively); in K'ichee', *-ow* and *-(V)n*; and in Tz'utujil, *-o(w)* and *-(V)n* (the symbol '*V*' represents a stem-harmonic vowel). This alternation between the two forms of the AF suffix is an important tool in distinguishing the AF construction from the absolute antipassive (e.g. (13)). The latter uses a suffix that is homophonous with the DTV variant of AF *on RTVs and DTVs alike*. In fact, the verb in (13) is a RTV; thus, the fact that it shows up with the *-(V)n* suffix rather than *-ow* (which is the RTV variant of K'ichee' AF) is a reliable indicator that this sentence is indeed an instance of the absolute antipassive, rather than the AF construction.

Despite this morphological relatedness between AF and the absolute antipassive, AF is not an antipassive at all (as argued in detail by Aissen 2011, Craig 1979, Smith-Stark 1978). Antipassives affect the way the notional Patient is syntactically realized: it can be *demoted* (meaning it surfaces as an oblique, rather than a regular nominal); it can be incorporated (see, e.g., Aissen 2011, Mondloch

1981); or it can be omitted altogether. Not so in the AF construction; here, both core arguments can and do surface as full-fledged, non-demoted and non-incorporated nominals:[6]

(14)   BASIC EXAMPLES OF AGENT-FOCUS

     a. ja   **ri   tz'i'** x-Ø-etzel-<u>an</u>        **ri   sian**                          (Kaqchikel)

       FOC **the dog** COM-3sg.ABS-hate-<u>AF</u> **the cat**

       'It was the dog that hated the cat.'

     b. ja   **ri   xoq**    x-Ø-tz'et-<u>ö</u>        **ri   achin**

       FOC **the woman** COM-3sg.ABS-see-<u>AF</u> **the man**

       'It was the woman who saw the man.'

Let us now turn to the issue that is at the center of this chapter: the behavior of verbal agreement in this construction. The observations in the remainder of this section go back to work by Dayley (1978), Mondloch (1981), Norman & Campbell (1978), and Smith-Stark (1978) (while a large part of this work was done on other Kichean languages, its results also carry over to Kaqchikel, the primary language discussed here).

## 3.2.  Agreement in Kichean Agent-Focus

The behavior of agreement in the AF construction is strikingly different from that of regular transitive clauses (as exemplified by (10a–b), above). Consider first the pair in (15a–b):[7]

(15)   a. ja    rat        x-**at/\*Ø**-ax-<u>an</u>            ri   achin

       FOC you(sg.) COM-**2sg/\*3sg.ABS**-hear-<u>AF</u> the man

       'It was you(sg.) that heard the man.'

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[6]A related fact, which constitutes an argument in its own right against viewing Agent-Focus as an antipassive, is that either the Agent or Patient may control agreement on the finite verb, given the right argument/person combination (Aissen 2011); see below for a detailed discussion of agreement in the Agent-Focus construction.

[7]While cleft constructions are used in the English translations of these and subsequent AF examples, the agreement facts surveyed in this section demonstrate quite clearly that the Kichean constructions in question are not, in fact, clefts; see below.

    b. ja   ri   achin x-**at/\*Ø**-ax-<u>an</u>           rat

      FOC the man  COM-**2sg/\*3sg.ABS**-hear-<u>AF</u> you(sg.)

      'It was the man that heard you(sg.).'

In (15a), the Agent is 2nd person and the Patient is 3rd person; in (15b), the reverse is true: the Agent is 3rd person and the Patient is 2nd person. Crucially, the agreement morphology borne by the verb is the same in both sentences. The agreement slot between the aspectual prefix *x-* ("COM-") and the verbal stem *-ax-* ("hear") contains the affix *at-* in both cases.[8] This affix is glossed "2sg.ABS" because it is the same affix found in normal Kichean transitives, for example, when the Patient (i.e., the absolutive argument) is 2nd person singular.

One immediate hypothesis we might entertain regarding data like (15a–b) is that the agreement slot actually contains two morphemes, one for the 2nd person argument, and one for the 3rd person one. This hypothesis has some initial plausibility based on the fact that in Kichean (as in other languages across the Mayan family) the 3rd person singular absolutive marker is phonologically null (cf. (10a), above). A first problem with this hypothesis is that the 3rd person argument is only expected to trigger absolutive marking in (15a), where it is the Patient, not in (15b) where it is the Agent (and note that the 3rd person singular ergative marker is non-null: *-r(u)/u-*). Relatedly, the 2nd person singular ergative marker in Kaqchikel (expected to appear in (15a)) is *a(w)-*, rather than *a(t)-*.

We might then amend this hypothesis as follows: in the AF construction, for whatever reason, the agreement markers triggered by both core arguments are taken from the absolutive agreement paradigm. Thus, the 3rd person singular argument will invariably trigger a Ø (empty) marker, and the 2nd person singular argument will invariably trigger the marker *a(t)-*. Yet even this amended hypothesis does not pan out; we can see this by combining two arguments in the AF construction for which both expected absolutive agreement markers are non-null. Consider first the regular

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[8] I am deeply indebted to Lauren Eby Clemens, who brought the existence of these patterns to my attention in the first place, and to Robert Henderson, for teaching me more about them and about Kichean in general.

transitive in (16), which shows the absolute agreement marker *e-* corresponding to the 3rd person plural Patient:

(16)    rat        x-**e'**-aw-ax-aj               rje'

        you(sg.) COM-**3pl.ABS**-2sg.ERG-hear-ACT the man

        'You(sg.) heard them.'

Now, consider the AF counterpart of (16):

(17)    ja    rat       x-**at**-ax-<u>an</u>        rje'

        FOC you(sg.) COM-**2sg.ABS**-hear-<u>AF</u> them

        'It was you(sg.) who heard them.'

If the amended hypothesis were correct, we would expect the AF verb in (17) to surface with absolutive agreement markers for both a 2nd person singular argument and a 3rd person plural argument (i.e., \**x-e'-**at**-ax-an* or \**x-**at**-e'-ax-an*), contrary to the attested state of affairs.

We can therefore conclude with some certainty that the AF verb has only one agreement slot, and that this agreement slot is occupied by a marker taken from the absolutive agreement paradigm. This immediately raises the question of how the language chooses which of the two core arguments (the subject and the object, both of which are non-oblique) will control the choice of this single agreement marker. As we have already seen in (15a–b), the answer is not as simple as "the subject" or "the object"; the full paradigm of agreement in the Kichean AF construction will be summarized below. Before turning to that summary, however, let us examine a few more representative examples.

The pair shown in (15a–b), above, demonstrates that a 2nd person singular argument takes precedence over a 3rd person singular one (regardless of thematic roles or grammatical functions). The pair in (18a–b) shows the same thing with respect to a 1st person singular argument and a 3rd person singular one:

(18)  a.  ja   yïn x-**in/\*Ø**-ax-<u>an</u>              ri   achin

 FOC me COM-**1sg/\*3sg.ABS**-hear-<u>AF</u> the man

 'It was me that heard the man.'

 b.  ja   ri   achin x-**in/\*Ø**-ax-<u>an</u>               yïn

 FOC the man   COM-**1sg/\*3sg.ABS**-hear-<u>AF</u> me

 'It was the man that heard me.'

Moving beyond singular arguments, we see that a 3rd person plural argument takes precedence over a 3rd person singular one:[9]

(19)  a.  ja   rje'   x-**e/\*Ø**-tz'et-<u>ö</u>              rja'

 FOC them COM-**3pl/\*3sg.ABS**-see-<u>AF</u> him

 'It was them who saw him.'

 b.  ja   rja'   x-**e/\*Ø**-tz'et-<u>ö</u>              rje'

 FOC him COM-**3pl/\*3sg.ABS**-see-<u>AF</u> them

 'It was him who saw them.'

Finally, a 1st/2nd person argument will take precedence over a 3rd person argument *regardless of number features*. In other words, a 1st/2nd person argument will be agreed with both in person and in number, irrespective of the number features of the 3rd person argument. This is demonstrated in (20–21), below, for combinations of 3rd person and 1st person arguments; but the same is true for combinations of 3rd person arguments with 2nd person ones.

(20)  a.  ja   rje'   x-**i/\*oj**-tz'et-<u>ö</u>              yïn

 FOC them COM-**1sg/\*1pl.ABS**-see-<u>AF</u> me

 'It was them who saw me.'

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[9]The behavior of plural agreement with inanimates in Kaqchikel follows a more complicated pattern, and appears at least in some cases to be optional. I therefore concentrate on animate arguments, here. Thanks to Robert Henderson and Daeyoung Sohn for their help with these data.

b.  ja   yïn x-**i/\*oj**-tz'et-**ö**                    rje'

   FOC me COM-**1sg/\*1pl.ABS**-see-<u>AF</u> them

   'It was me who saw them.'

(21)  a.  ja   rja' x-**oj/\*i**-tz'et-**ö**                 röj

   FOC him COM-**1pl/\*1sg.ABS**-see-<u>AF</u> us

   'It was him who saw us.'

b.  ja   röj x-**oj/\*i**-tz'et-**ö**                 rja'

   FOC us  COM-**1pl/\*1sg.ABS**-see-<u>AF</u> him

   'It was us who saw him.'

At this juncture, the reader may wonder what happens when 1st person arguments are combined with 2nd person ones as subject and object of the same AF clause. As it turns out, such combinations are simply illicit in this construction; this phenomenon, which I term the *AF person restriction*, will be discussed in greater detail in §3.3.

The full paradigm of agreement in the AF construction, as a function of the $\varphi$-features of the subject and object, is summarized in (22):

(22)  FULL AGREEMENT PARADIGM FOR KICHEAN AF

| {SUBJ, OBJ} $\varphi$-features | $\Rightarrow$ | agreement morphology on the AF verb |
|---|---|---|
| {3sg, 3sg} | $\Rightarrow$ | 3sg |
| {3pl, 3sg} | $\Rightarrow$ | 3pl |
| {3pl, 3pl} | $\Rightarrow$ | 3pl |
| {1sg, 3sg} | $\Rightarrow$ | 1sg |
| {2sg, 3sg} | $\Rightarrow$ | 2sg |
| {1pl, 3sg} | $\Rightarrow$ | 1pl |
| {2pl, 3sg} | $\Rightarrow$ | 2pl |
| {1sg, 3pl} | $\Rightarrow$ | 1sg |
| {2sg, 3pl} | $\Rightarrow$ | 2sg |

| $\{1\text{pl}, 3\text{pl}\}$ | $\Rightarrow$ | 1pl |
|---|---|---|
| $\{2\text{pl}, 3\text{pl}\}$ | $\Rightarrow$ | 2pl |

Notes:

a. In the notation $\{\varphi_1, \varphi_2\}$, above, which of the $\varphi$-feature specifications belongs to the subject and which to the object is fully commutative.

b. Combinations not listed here are ruled out either on binding-theoretic grounds (e.g. $\{1\text{sg}, 1\text{pl}\}$), or due to the *AF person restriction* (see §3.3, below).

These facts have led some scholars to claim that agreement in the Kichean AF construction obeys a 'salience' hierarchy or scale (Dayley 1978, Mondloch 1981, Norman & Campbell 1978, Smith-Stark 1978; see also Stiebels 2006):

(23)    1st/2nd person $\gg$ 3rd person plural $\gg$ 3rd person singular

The theoretical status of hierarchies or scales of this sort as an *explanation* of an agreement pattern will be discussed in detail in chapter 7. But (23) is, if nothing else, a useful shorthand for summarizing the facts shown in (22): if the AF clause contains a 1st/2nd person argument, the verb will agree with that argument in both person and number; if not, and the clause contains a 3rd person plural argument, the verb will agree with that argument in number (and person); otherwise, the verb will bear 3rd person singular absolutive agreement (which as mentioned earlier, is null).

This sort of agreement pattern, in which an agreement marker can be triggered by a given feature whether it is found on the subject or on object (or possibly, on both), has been referred to by Nevins (2011) as 'omnivorous agreement'.[10]

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[10] As Gillian Gallagher and David Pesetsky have independently pointed out to me, the term 'omnivorous agreement' might not actually be so well-suited to describe this phenomenon. The agreement bearer (i.e., the verb) is not behaving here like an omnivore at all; rather, it is being extremely picky, willing to go to the end of the buffet line, so to speak (i.e., to the end of the verb's argument structure) to find what it is looking for. It might therefore make more sense to call this *vegetarian/vegan agreement*, or something along those lines. I will, however, continue to use Nevins' (2011) term, in the interest of not introducing gratuitous terminological innovations.

## 3.3. The AF person restriction

### 3.3.1. The phenomenon

In enumerating the possible combinations of subject and object $\varphi$-features in the AF construction in (22), above, certain binding-theoretically admissible combinations were omitted. These are combinations in which the subject is 1st person and the object is 2nd person, or vice versa. It turns out that such combinations, where both the subject and the object are "local" (i.e., 1st/2nd person) pronouns, simply cannot be realized using the AF construction (Davies & Sam-Colop 1990, Dayley 1978, Norman & Campbell 1978, Smith-Stark 1978):

(24)  a. &ast; ja   rat    x-**in/at/Ø**-ax-<u>an</u>     yin

     FOC you(sg.) COM-**1sg/2sg/3sg.ABS**-hear-<u>AF</u> me

     *Intended*: 'It was you(sg.) that heard me.'

   b. &ast; ja   yin x-**in/at/Ø**-ax-<u>an</u>     rat

     FOC me COM-**1sg/2sg/3sg.ABS**-hear-<u>AF</u> you(sg.)

     *Intended*: 'It was me that heard you(sg.).'

I will refer to this property of the AF construction as the *AF person restriction*:

(25)  THE AF PERSON RESTRICTION

   In the Kichean AF construction, at most one of the two core arguments can be
   1st/2nd person.

   Different languages in the Kichean branch use different strategies to realize intended meanings like the ones in (24a–b). Tz'utujil makes use of the absolutive antipassive, where the Patient is realized as an oblique phrase, and is therefore ineligible for agreement (cf. the K'ichee' (13), above):

(26)  atet    x-**at**-ch'ey-o    [ **w**-xiin    ]<sub>OBL</sub>          (Tz'utujil)

   you(sg.) COM-**2SG.ABS**-hit-AP   **1sg**.GEN-of

   'It was you(sg.) who hit me'              [*Dayley 1978:38*]

In Kaqchikel, on the other hand, the prohibition against A-bar operations targeting the transitive subject is apparently simply lifted when such argument combinations arise—i.e., when both the subject and the object are local pronouns:[11]

(27)  ja    rïx   x-**ix-qa**-tz'et

      FOC y'all COM-**2pl.ABS-1pl.ERG**-see

      'It was y'all who we saw.'                         [*class-notes from MIT "Field Methods" class; Spring, 2011*][14]

Since our central concern here is agreement in the AF construction, I leave aside the question of which alternative means each Kichean language makes use of, and why, to express those meanings that cannot be expressed using AF because of the AF person restriction.

### 3.3.2. Against a purely morphological analysis of agreement in AF

The AF person restriction militates against several possible analyses of the agreement patterns that arise in AF. Most of these will be addressed in detail in chapter 4, but let us address the first (and perhaps most obvious) of these here: an analysis of agreement in AF in purely morphological terms.[15]

As noted in §3.2, the AF construction makes use of agreement markers from the absolutive paradigm, and only one of them ever surfaces on a given AF verb—even when the combination of arguments is such that each one, were it the object of a regular transitive, would give rise to a non-null absolutive agreement marker. It is therefore worth entertaining an analysis of agreement in AF based only on *morphological competition*. On this view, the subject and object are both agreed with in the syntax by nodes that bear the kind of features that will result in spellout using the absolutive series of agreement morphemes.[16] Then, as part of the post-syntactic,

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[11]Notice that it is crucially the A-bar restriction that is lifted, *not* the AF person restriction. The latter is irrelevant to an example like (27), and therefore, not violated by it.

[14]<http://fieldwork.mit.edu/wiki/Kaqchikel#Contexts_of_AF> (retrieved April 28th, 2011); thanks to Jessica Coon for sharing these notes with me.

[15]Thanks to Judith Aissen and Sandy Chung for illuminating discussions of the issues addressed here.

[16]Regarding a *Multiple Agree* (Anagnostopoulou 2005, Hiraiwa 2001, 2004, *a.o.*) approach to these facts, and its shortcomings, see §4.5.1.

morpho-phonological computation, these two nodes compete for spellout in what is a single morphological slot. The outcome of this morphological competition is determined according to the hierarchy/scale in (28), repeated from earlier:

(28)    1st/2nd person ≫ 3rd person plural ≫ 3rd person singular                              *[=(23)]*

Whichever set of features ranks higher on this scale is the one that will be spelled out overtly.

One drawback of this approach is that it requires (28) or its logical equivalent to be stipulated. As we will see in chapter 4, there is a way to derive the effects of this hierarchy or scale from independently motivated results, which come from the study of the Person Case Constraint (also known as the *me-lui* constraint). Other drawbacks of appealing directly to a device like (28) are discussed in chapter 7.

More important, however, is that this approach cannot explain the AF person restriction. In fact, one might say that it leads to the exact opposite expectation. That is because on this proposal, syntax indiscriminately establishes agreement with both arguments, leaving the sorting out of morphological exponence to the post-syntactic computation; and following Marantz (1991), I assume that argument licensing is not within the purview of morpho-phonology.

But even if one takes a different view on the modular locus of licensing, it is clear that the morphological competition approach provides no particular insight into why the AF person restriction would arise. Therefore, if an account is available that simultaneously derives the facts of AF agreement *and* the AF person restriction, it should be preferred. I will present such an account in chapter 4.

## 3.4. The morpho-phonology of Kichean agreement markers

An important facet of verbal agreement in Kichean that we have not discussed so far concerns the shape of the agreement markers themselves. In (29), I list the absolute and ergative agreement markers in Kaqchikel for each of the six person-number combinations (parenthesized segments are dropped in certain phonological contexts; the grapheme '*j*' represents a voiceless velar fricative):

(29)

|  | ABS agreement marker | ERG agreement marker |
|---|---|---|
| 1sg | *i(n)-* | *n/w-* |
| 1pl | *oj-* | *q(a)-* |
| 2sg | *a(t)-* | *a(w)-* |
| 2pl | *ix-* | *i(w)-* |
| 3sg | Ø-[17] | *r(u)/u-* |
| 3pl | *e-* | *k(i)-* |

What I would like to call attention to here is the profound morpho-phonological similarity between the 1st/2nd person singular/plural absolutive agreement markers and the corresponding strong pronouns:

(30)

|  | ABS agreement marker | strong pronoun |
|---|---|---|
| 1sg | *i(n)-* | *yïn* |
| 1pl | *oj-* | *röj* |
| 2sg | *a(t)-* | *rat* |
| 2pl | *ix-* | *rïx* |
| 3sg | Ø- | *rja'* |
| 3pl | *e-* | *rje'* |

In the 1st and 2nd person, the strong pronouns are identical to the absolutive agreement markers but for the addition of an initial approximant[18] (the liquid *r-* or the glide *y-*; recall also that the grapheme *'j'* does not represent an approximant, but a voiceless velar fricative). Notice that with the exception of the 1st person singular *yïn*, all Kaqchikel pronouns—even those in the 3rd person—begin with *r-*, which can be seen as a truncated version of the determiner *ri*. Assuming that this

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[18]I suspect that this has been noticed by virtually every scholar who has ever worked on Kichean; the first mention of it that I was able to locate, with the help of Robert Henderson, is by Kaufman (1977). A similar observation is reported by Woolford (2000:fn. 14), in support of her claim that the absolutive agreement markers in Kichean are clitics. As I will argue in chapter 4, this claim is imprecise: only the 1st/2nd person markers are clitics, to the exclusion of the 3rd person plural marker (recall that the 3rd person singular absolutive marker is null).

is indeed the source of this initial approximant, we could then say that 1st/2nd person absolutive agreement markers in Kichean are determiner-less versions of the corresponding strong pronouns.

This is, admittedly, a small sample to begin with. The comparison of 1st/2nd person absolutive agreement markers and their strong pronoun counterparts involves four pair-wise comparisons; and one of these, the 1st person singular pronoun *yïn*, shows a slight deviation from the general pattern. It is therefore instructive to consider what a paradigm in which such similarity did not exist would look like, to convince ourselves that there is indeed something significant about the first four rows of (30). Fortunately, Kichean itself affords us an adequate control, in the form of the ergative series of agreement markers:

(31)

| | ERG agreement marker | strong pronoun |
|---|---|---|
| 1sg | *n/w-* | *yïn* |
| 1pl | *q(a)-* | *röj* |
| 2sg | *a(w)-* | *rat* |
| 2pl | *i(w)-* | *rïx* |
| 3sg | *r(u)/u-* | *rja'* |
| 3pl | *k(i)-* | *rje'* |

When juxtaposed with (31), it becomes quite clear that the similarities in the first four rows of (30) are more than a coincidence.

I will assume here that the change in the quality of the approximant in the 1st person singular pronoun *yïn* (from *r-* to *y-*) has a phonological source, at least diachronically; in any event, even with this minor complication, the 1st singular cell conforms to the more general pattern whereby the absolutive agreement marker is identical to the strong pronoun with its initial approximant deleted.

On the other hand, the 3rd person singular/plural cells, repeated below, do not adhere to this generalization:

(32)

|  | ABS agreement marker | strong pronoun |
|---|---|---|
| 3sg | Ø- | *rja'* |
| 3pl | *e-* | *rje'* |

There is no trace of the [*a*] vowel of the 3rd person singular pronoun *rja'* in the 3rd singular absolutive agreement marker; and we can be fairly certain that the issue is not phonological, since as shown by its plural counterpart, a lone vowel can survive in the phonological environment occupied by the absolutive agreement marker. More importantly, the velar fricative [*j*], found in both 3rd person strong pronouns, is not found in either of the 3rd person absolutive agreement markers.

It is clear, then, that the 3rd person absolutive agreement markers do not stand in the same relation to their pronominal counterparts as the 1st/2nd person ones do.

Another relevant difference between the 1st/2nd person absolutive agreement markers and the 3rd person ones concerns the encoding of plurality. The 1st/2nd person markers encode number suppletively, a property they inherit from the corresponding pronouns. Thus, the pairs *<i(n)-, oj->* (<1sg.ABS, 1pl.ABS>) and *<a(t)-, ix->* (<2sg.ABS, 2pl.ABS>) contain no identifiable subpart that encodes the singular/plural distinction alone. In (32), on the other hand, we may be able to identify a plural morpheme *-e-*: in absolutive agreement markers, it turns the (empty) 3rd person singular marker to a 3rd person plural one (*e-*); in the pronominal system, it might be what turns *rja'* ("him/her") into *rje'* ("them"), perhaps via an intermediate step of [*a*]-deletion.

There is also evidence from other (non-Kichean) Mayan languages that the so-called '3rd person plural' absolutive agreement marker is really just a generic plural marker: in Tzotzil (a Mayan language of the Tseltalan family), the 3rd person plural absolutive marker *-ik* can also represent the plurality of a 2nd person plural argument, in the event that person agreement with that argument has been spelled out elsewhere (Aissen 1987, Woolford 2011; see §4.A for details).

To summarize, 1st/2nd person absolutive agreement markers in Kichean are simply reduced forms of the corresponding pronouns, while the 3rd person ones are not. Moreover, the difference

between the 3rd person plural absolutive agreement marker and its singular counterpart might be analyzable as an independent plural morpheme in the language (-*e*-), whereas the 1st/2nd person ones, like their pronominal counterparts, encode number in an entirely suppletive fashion, with no identifiable subpart corresponding to the singular/plural distinction.

The absolutive agreement markers that arise when the agreement target is a 1st/2nd person argument thus differ, in their morpho-phonological properties, from those that arise when the target is a 3rd person argument.

Let us return once more to a characterization of agreement in the Kichean AF construction in terms of a scale or hierarchy like (33), repeated from earlier:

(33)     1st/2nd person ≫ 3rd person plural ≫ 3rd person singular                    *[=(23)]*

The morpho-phonological properties surveyed here cast further doubt on taking (33) as an *account* of agreement in Kichean AF. That is because the whole point of a hierarchy or scale like (33) is to factor out the choice of agreement target (i.e., which of the core arguments will control agreement morphology on the AF verb) from the mechanics of the agreement process/relation itself. This, in turn, implies that $\varphi$-agreement in AF clauses with different $\varphi$-feature combinations should essentially be a uniform phenomenon *but for the choice of agreement target*; and as we have seen in this section, that is simply not the case. One could argue that (33) should not be expected to account for these morpho-phonological distinctions, since the same agreement markers used in the Kichean AF construction are also used in regular transitives (to mark the object) and in regular intransitives. But that would mean that these distinctions must have a different source; if this same source turns out to also account for the effects that (33) was designed to capture, it removes the need for (33) altogether.

In the next chapter, we will see an account that derives the effects of (33) while also deriving these morpho-phonological differences between 1st/2nd person absolutive agreement markers and their 3rd person counterparts.

# Chapter 4

# A derivational account of absolutive agreement in Kichean

In this chapter, I present a derivational account of (absolute) $\varphi$-agreement in Kichean. As I will show, this account derives the behavior of agreement in the Kichean Agent-Focus (AF) construction, discussed in chapter 3, as well as the distribution of the same agreement markers in regular transitive and intransitive clauses in Kichean.

The proposal will be based on Béjar & Rezac's (2003) account of the *Person Case Constraint* (PCC; also known as the *\*me-lui* constraint), a particular restriction on the distribution of person features among multiple internal arguments of the same predicate. The PCC differs from the Kichean facts considered here in certain important ways: the PCC applies to pairs of internal arguments, whereas the relevant interactions in Kichean AF concern subjects and objects; and while the effects in Kichean are fully symmetric with respect to the subject and object, the PCC is asymmetric with respect to the restrictions it places on the relevant argument pairs. Nevertheless, as will be shown, the core mechanisms put forth by Béjar & Rezac in their account prove equally successful when applied to the current empirical domain.

One of the core insights adopted from Béjar & Rezac's account will be the separation of syntactic probing for person features and for number features (see also Anagnostopoulou 2003, Béjar 2003, Laka 1993a, Shlonsky 1989, Sigurðsson 1996, Sigurðsson & Holmberg 2008, Taraldsen 1995). In the APPENDIX (§4.A), I discuss empirical support from Tzotzil—within the Mayan language family—for this separation, based on work by Aissen (1987) and Woolford (2011).

In contrast to the state of affairs in the languages examined by Béjar & Rezac, we will see that the person and number probes in Kichean are relativized to look only for the marked members of their respective feature geometries ([participant] and [plural], respectively). This yields a pattern that while unusual for $\varphi$-agreement, is quite familiar from other empirical domains: just as a *wh*-probe, for example, is able to skip phrases that do not bear a [*wh*] feature, so do the Kichean person and number probes skip arguments that lack the aforementioned marked features ([participant]/[plural]). As will be shown in this chapter, this yields precisely the empirical pattern that was described in §3.2 in terms of 'omnivorous agreement' (Nevins 2011). I will

demonstrate, furthermore, that this particular dataset cannot be successfully reanalyzed in terms of simultaneous agreement with both arguments (i.e., *Multiple Agree*; Anagnostopoulou 2005, Hiraiwa 2001, 2004, *a.o.*).

Finally, I will argue that the actual agreement markers that surface in the presence of 1st/2nd person arguments (i.e., bearers of [participant]) in the Kichean AF construction, as well as in other instances of absolutive agreement in Kichean, are actually the product of clitic doubling (rather than the exponence of the $\varphi$-probe itself). As in Béjar & Rezac's account of so-called 'indirect object agreement', this instance of clitic doubling is triggered when an argument is probed by the person probe (see also Harizanov to appear, Kramer to appear). I will show that the same is not true of 3rd person agreement markers in Kichean, which reflect the exponence of the number probe itself (in particular, the 3rd person plural marker does; recall that the singular 3rd person marker is null). This, I will demonstrate, explains the distinction in the morpho-phonological forms of the markers in question, noted in §3.4: while the 1st/2nd person markers are essentially truncated versions of the corresponding strong pronouns (as expected, on their analysis as clitics), the 3rd person markers do not stand in this relation to their strong pronoun counterparts.

Thus, the featural properties of the person and number probes in Kichean, coupled with existing proposals concerning the nature and distribution of clitic doubling (e.g. Béjar & Rezac 2003), yield an accurate account of both the distribution and morpho-phonological properties of the agreement markers in question.

I begin in §4.1 with a brief introduction to the PCC, and a synopsis of Béjar & Rezac's (2003) analysis of it. Next, in §4.2, I introduce the notion of *relativized probing* (cf. Rizzi 1990, Nevins 2007), assimilating the so-called 'omnivorous agreement' patterns of Kichean AF to the more familiar behavior of probes such as interrogative (i.e., [*wh*]-seeking) complementizers. I proceed to motivate the idea that feature-relativization of this sort is specified along a *feature geometry*—and in the case of $\varphi$-probes specifically, along a $\varphi$-feature geometry of the kind proposed by Harley & Ritter (2002)

and McGinnis (2005). I conclude this section with a brief discussion of how the process of valuation can be conceived of within this feature-geometric approach.

In §4.3, I highlight an important property of clitic doubling that becomes relevant once we allow different subparts of the $\varphi$-set (e.g. person, number) to probe independently of one another: like any other type of pronominalization, clitic doubling copies $\varphi$-feature sets in their entirety, a property I refer to as *featural coarseness*. This property may serve to distinguish clitic doubling from at least those instances of "pure" agreement where the $\varphi$-probe is searching for a particular (marked) feature value—rather than just any node bearing $\varphi$-features—and is employed in the account given in the following section.

The full account of $\varphi$-agreement in the Kichean AF construction is presented in §4.4. This account is shown to predict the distribution of different agreement markers in this construction, as well as the finer morpho-phonological properties of these markers (see above). I proceed to discuss how the account derives the AF person restriction (presented in §3.3), as well as the absence of a corresponding restriction on the co-occurrence of plurals in a single AF clause. Several possible alternatives to this account (in particular, *Multiple Agree*, feature percolation, and a position-based account) are discussed in §4.5, and each is compared with the account put forth in §4.4.

Finally, in §4.6, I show how the analysis can be extended to account for absolute agreement in regular transitive and intransitive clauses in Kichean. The APPENDIX (§4.A) presents the aforementioned evidence from Tzotzil, another Mayan language, in favor of the separability of person and number.

## 4.1. Background: The PCC, and Béjar & Rezac's (2003) account of it

The *Person Case Constraint* (PCC)—also known as the *\*me-lui* constraint—is the name for a family of restrictions concerning the person features of different arguments in relation to one another, usually affecting combinations of multiple internal arguments of a single predicate (Bonet 1991, 1994,

Perlmutter 1971). In this chapter, I present a brief description of the PCC, followed by Béjar & Rezac's (2003) account of it. There are, of course, many other accounts of the PCC in the literature, each with its own advantages and disadvantages and its own particular set of stipulations (a non-exhaustive list includes Adger & Harbour 2007, Anagnostopoulou 2003, 2005, Bonet 1991, 1994, Nevins 2007, 2011, Richards 2005, Walkow to appear). But Béjar & Rezac's account is of particular interest, here, because as we will see in the remainder of this chapter, it derives the behavior of $\varphi$-agreement in the Kichean AF construction with hardly any modifications that are not motivated by independently observable properties of the Kichean languages.

I illustrate the PCC based on data from Basque, which exhibits the so-called 'strong' version of the constraint (Bonet 1991:182):

(34)    In Basque clauses in which a dative argument is higher than the absolutive argument (which includes all Basque ditransitives), the absolutive must be 3rd person.

[*see Rezac 2008b*]

The effects of (34) are most strikingly illustrated using what Rezac (2008b) refers to as *applicative unaccusatives*: verbs that take two internal arguments, but no external argument. These verbs come in two types in Basque: one in which the dative argument is structurally higher than the absolutive argument, and one in which these structural relations are reversed. The latter option, where the absolutive is structurally higher than the dative, arises *only* with applicative unaccusatives, never with true (triadic) ditransitives (Rezac 2008b:72; see also Elordieta 2001).

Rezac discusses several tests for determining which of the two hierarchical configurations a given applicative unaccusative verb realizes. One, which I reproduce here, involves the ability to bind *bere buru* (lit., "his/her head"), a reflexive anaphor:[1]

---

[1] The form of the auxiliary in (35a–c) (*zako*) is from the Hazparne dialect, and is equivalent to the standard form *Ø-zai-Ø-o* ("3.ABS-$\sqrt{}$-sg.ABS-3sg.DAT"), found in (35d) (Rezac 2008b:75). The symbol '$\sqrt{}$' stands for the auxiliary root, derived from *\*edun(/ukan)* ("have") or from *izan* ("be").

(35)  a.   Kepa-ri     bere buru-a          gusta-tzen zako.

           Kepa-DAT his   head-ART$_{sg}$(ABS) like-HAB   AUX

           'Kepa likes himself.'

      b. * Kepa        bere buru-a-ri        gustatzen zako.

           Kepa(ABS) his   head-ART$_{sg}$-DAT liking      AUX

      c. * Kepa-ri     bere buru-a          ji-ten       zako ispilu-a-n.

           Kepa-DAT his   head-ART$_{sg}$(ABS) come-PROG AUX  mirror-ART$_{sg}$(ABS)-LOC

           *Intended*: 'Kepa is approaching himself in the mirror.'

      d.   Miren        bere buru-a-ri       mintzatu zaio.

           Miren(ABS) his   head-ART$_{sg}$-DAT talk-PRT  AUX

           'Kepa likes himself.'                                                    [*Rezac 2008b:75*]

As (35a–b) attest, the verb *gustatu* ("to like") is a *dative* ≫ *absolutive* verb. We would therefore expect, given (34), that this verb would exhibit the PCC effect, and this expectation is indeed borne out: as demonstrated in (36a–b), the absolutive argument of *gustatu* must be 3rd person.

(36)  a.      Miren-i     gozoki-ak         gusta-tzen Ø-zai-zki-o.

              Miren-DAT sweet-ART$_{pl}$(ABS) like-IMPF   3.ABS-$\sqrt{}$-pl.ABS-3sg.DAT

              'Miren likes candy.'

      b. */?? Ni        Miren-i     gusta-tzen na-tzai-Ø-o.

              me(ABS) Miren-DAT like-IMPF   1.ABS-$\sqrt{}$-sg.ABS-3sg.DAT

              'Miren likes me.'                                      [*Albizu 1997:21, Rezac 2008b:73*]

As Albizu (1997) and Rezac (2008b) show, applicative unaccusatives provide a particularly vivid illustration of the deeply syntactic nature of the PCC. That is because the very same auxiliary form that is ruled out in (36b) can be used felicitously with an *absolutive* ≫ *dative* verb:

(37)  Ni       Peru-ri    hurbildu  na-tzai-Ø-o.

      me(ABS) Peru-DAT approach 1.ABS-$\sqrt{}$-sg.ABS-3sg.DAT

      'I approached Peru.'                                              [*Rezac 2008b:73*]

Importantly, the identity between the auxiliary in (37) and the one ruled out by the PCC in (36b) is not merely phonological, but also morphological: the set of $\varphi$-feature values expressed by the auxiliary in (37) is the same as the target set in (36b). This casts considerable doubt on the possibility of accounting for the PCC in terms of a post-syntactic morphological filter (cf. Bonet 1991, 1994).

There are other properties of the Basque data in (36–37) that are worth noting, especially for readers more familiar with the PCC in Indo-European languages. As argued by Arregi & Nevins (2008, 2012) and in Preminger 2009, the dative (and ergative) agreement markers on the Basque auxiliary (and other finite verb forms) come about by way of *clitic doubling* of the relevant full noun phrase (e.g. *Peru-ri* "Peru-DAT"); but unlike some patterns of clitic doubling familiar from Romance or Greek, for example, these instances of clitic doubling are not conditioned by any semantic property (or properties) of the noun phrases in question. The dative argument in (36–37) can be animate or inanimate, new or given, specific or non-specific, etc.; it will undergo clitic doubling all the same. The only conditions on the application of clitic doubling in Basque are structural ones (roughly, the availability of a clausemate cliticization host; see Preminger 2009).

The agreement markers identified by Arregi & Nevins (2008, 2012) and in Preminger 2009 as clitics obey none of the semantic restrictions on clitic doubling that are familiar from Indo-European, yet they exhibit all of the morphosyntactic properties that distinguish cliticization and/or clitic doubling from agreement (see Alexiadou & Anagnostopoulou 2006, Arregi & Nevins 2012, Kramer to appear, and references therein). What this suggests is that the semantic properties associated with clitic doubling Indo-European (see Suñer 1988 and related literature) are not intrinsic properties of clitic doubling per se; instead, the availability of clitic doubling seems to vary cross-linguistically

from completely impossible (e.g. in English) to semantically restricted (e.g. in Spanish or Greek), to completely unrestricted (e.g. in Basque).[2]

Relatedly, dative (and ergative) clitics in Basque are in no way *optional*: their presence is necessary for well-formedness (whether or not the doubled noun phrase is *pro*-dropped). Their obligatoriness is, in fact, part of the reason that these clitics have traditionally been called 'indirect object agreement' (and 'subject agreement'). Cross-linguistically, however, obligatory clitic doubling is not unique to Basque: as noted by Arregi & Nevins (2012), the same is found with strong object pronouns in Spanish (Jaeggli 1982, Suñer 1988), and with subjects in certain Northern Italian dialects (Poletto 2000).

Turning now to the account put forth by Béjar & Rezac (2003; henceforth, B&R): the point of departure for their account is the idea that the set of features normally referred to as "$\varphi$-features" does not actually act as an atomic, indivisible unit, as far as the syntactic derivation is concerned. Instead, [person] features are probed for separately—and prior to—[number] features. Such a separation between agreement in [person] and in [number] has been argued for, in one form or another, by many authors, including Anagnostopoulou (2003) and Béjar (2003) and Laka (1993a) and Shlonsky (1989) and Sigurðsson (1996) and Sigurðsson & Holmberg (2008) and Taraldsen (1995).

This order of probing, in B&R's system, is implemented by extrinsically ordering the different $\varphi$-features occupying the same syntactic head, in a way that [person] probes before [number].[3] Here,

---

[2] A way of making sense of languages like Spanish or Greek, against the backdrop of this typology, is by recasting the semantic properties in question in structural terms. Clitic doubling in Romance, for example, seems to be conditioned by the *specificity* of the doubled noun phrase (Suñer 1988); if specific noun phrases are located higher in the structure than non-specific ones (following Diesing 1992, 1996), then even sensitivity to the specificity of the doubled noun phrase can be thought of purely in terms of locality (and locality restrictions on clitic doubling, of course, are observable even in Basque, where the semantic restrictions typical of Romance are absent; Preminger 2009).

[3] At first glance, there appears to be an inherent tension between Béjar & Rezac's (2003) proposal and that of Sigurðsson & Holmberg (2008). While both sets of authors argue for a separation between probing for [person] and [number]—and Sigurðsson & Holmberg go as far as to place the two in separate syntactic heads, which they label $Pn^0$ and $Nr^0$—the internal ordering seems to be at odds between the two proposals. As noted above, Béjar & Rezac argue that [person] probes before [number]; Sigurðsson & Holmberg's $Nr^0$, on the other hand, is merged before $Pn^0$, and consequently, by virtue of cyclicity, probes first.

I deviate from their implementation slightly, taking [person] and [number] to be probes that simply occupy separate syntactic heads (see also Béjar 2003): $\pi^0$ will be the label for the head that probes for person features, and $\#^0$ will be the label for the head that probes for number features. If we assume that $\pi^0$ is merged before $\#^0$, then by virtue of cyclicity, probing for person features will occur first. To some extent, this is an expository issue: we have replaced one stipulation, involving the order in which multiple features located on a single head engage in probing, with another stipulation, namely the order in which $\pi^0$ and $\#^0$ must be merged. Note, however, that stipulations regarding the order of merger of different heads in a functional sequence are commonplace—and perhaps, unavoidable—in syntactic theory (cf. the ordering of functional projections along the spine of a single clause).

Consider now the base-generated structure of a verb phrase with two internal arguments, in which the dative argument is higher than the Theme (as is the case in ditransitives and some applicative unaccusatives):[4]

---

I am not entirely convinced, however, that this tension is real. Both sets of authors are interested in explaining why dative noun phrases intervene in [person] probing, but not in [number] probing. For Béjar & Rezac, this is achieved by [person] probing first, and triggering clitic doubling of the dative, rendering it invisible by the time [number] probes (this is described in greater detail, below). For Sigurðsson & Holmberg, this is achieved by the dative intervener moving to a position that is above $Nr^0$ but still below $Pn^0$. So on the former account, the intervener stays in situ, and intervention is avoided through clitic doubling that occurs after one set of features ([person]) is probed for, but before the other ([number]) is probed for. On the latter account, the intervener moves across one of the probes ($Nr^0$), and therefore intervention for the purposes of this lower probe is avoided, but intervener for the purposes of the higher probe ($Pr^0$) is still in effect. The two sets of authors are obviously addressing different sets of data: PCC effects in Indo-European, as well as Basque and Georgian, for the former, and agreement with low nominatives in Icelandic, for the latter; and it is an independently observable fact that clitics occur in the aforementioned PCC contexts, and that Icelandic datives, on the other hand, undergo A-movement (Sigurðsson 1989, *et seq.*).

But the two approaches might be more similar than they seem. First, as Boeckx (2000) and Anagnostopoulou (2003) have noted, the desideratum is quite similar: an argument that is separated from the $\varphi$-probe by a dative (the Theme of a ditransitive in PCC contexts, or a low nominative in Icelandic) can be agreed with in [number], but not in [person]. If a coherent view of clitic doubling as XP movement is possible (see Harizanov to appear, as well as Alexiadou & Anagnostopoulou 1997, Anagnostopoulou 1994, Sportiche 1992, 1996), there might be a way to recast these two seemingly opposed analyses as rather close variants of one another. In both cases, the intervener "moves" (either by clitic doubling, or by XP-movement per se) to a position where it is no longer visible to the [number] probe (in the PCC scenario, this is because it has adjoined to a head along the clausal spine; in the Icelandic scenario, this is because it has moved across the [number] probe itself); and so in both cases, when [number] probes, the intervener behaves as if it is simply not there.

[4]These diagrams are head-final because they are meant to represent the structure of Basque sentences like (36–37), but nothing in the analysis hinges on this.

(38)    TWO INTERNAL ARGUMENTS: BASE-GENERATION

```
                ApplP
             ┌────┴────┐
          DAT-ARG     Appl'
                   ┌───┴───┐
                  VP      Appl⁰
                ┌──┴──┐
             THEME   V⁰
```
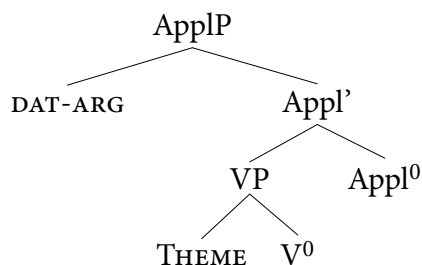
The next step of the derivation is the merger of $\pi^0$, which probes for [person] features. In a monotransitive (or unaccusative), $\pi^0$ successfully probes for and agrees with the Theme in [person] features. But in this case, because there is a nominal (the dative argument) that is structurally closer to $\pi^0$ than the Theme is, intervention arises:

(39)    TWO INTERNAL ARGUMENTS: PERSON PROBING

```
                       πP
                  ┌─────┴─────┐
               ApplP         π⁰
            ┌────┴────┐
         DAT-ARG     Appl'
                  ┌───┴───┐
                 VP      Appl⁰
               ┌──┴──┐
            THEME   V⁰
```

(blocked by closer DAT-ARG)
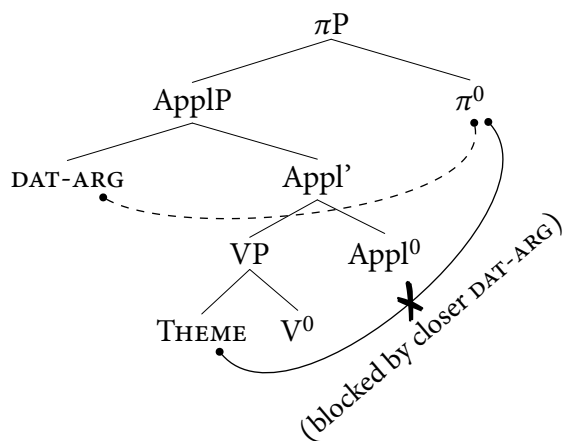
It is cross-linguistically quite common for dative nominals to be unable to transfer their own actual $\varphi$-feature values to clausal agreement probes. This issue is taken up in greater detail in chapter 8; but for our current purposes, it means that $\pi^0$ in (39) will be unable to reflect 1st or 2nd person feature values, regardless of the features of the dative nominal itself.

Equally important, on this account, is that $\pi^0$ has failed to enter into a formal relation with the Theme argument. B&R argue that speech-act participants (i.e., 1st/2nd person pronouns) must

be formally licensed via an agreement relation (an assumption is part and parcel of virtually every syntactic account of the PCC). This is formalized by B&R as the *Person Licensing Condition* (PLC):

(40)  PERSON LICENSING CONDITION ([Béjar & Rezac 2003])

Interpretable 1st/2nd person features must be licensed by entering into an `Agree` relation with an appropriate functional category.

The failure of $\pi^0$ to agree with the Theme, coupled with the inability of the dative argument to transmit its own $\varphi$-feature values to $\pi^0$, has two consequences:

(41)  a.  **the Theme argument cannot be 1st/2nd person**

(because 1st/2nd person arguments are not licensed unless agreed with; see (40))

b.  **no 1st/2nd person "object agreement"**

(because $\pi^0$, the syntactic node that normally agrees with the Theme in [person], cannot receive 1st/2nd person feature values from the Theme or from the dative argument)

Taken together, (41a) and (41b) constitute precisely the effects of the PCC. Crucially, had the dative argument not intervened, $\pi^0$ would be able to successfully probe the Theme, and these effects would not arise; this is how B&R derive the fact that the PCC is typically confined to verb phrases with two internal arguments, rather than one.

Continuing the derivation in (39), B&R argue that being probed by $\pi^0$ (albeit unsuccessfully) also triggers clitic doubling of the dative argument. A clitic is thus generated on or alongside $\pi^0$, whose features reflect the full $\varphi$-set of this argument:

(42)    two internal arguments: person probing of dative ⇒ clitic doubling

```
                              πP
                   ┌──────────┴──────────┐
                ApplP                  π⁰–CL[φᵢ]
          ┌───────┴───────┐              ╲
   <DAT-ARG[φᵢ]>        Appl'          clitic
            ╲        ┌────┴────┐      doubling
            VP              Appl⁰
         ┌───┴───┐
      THEME     V⁰
```
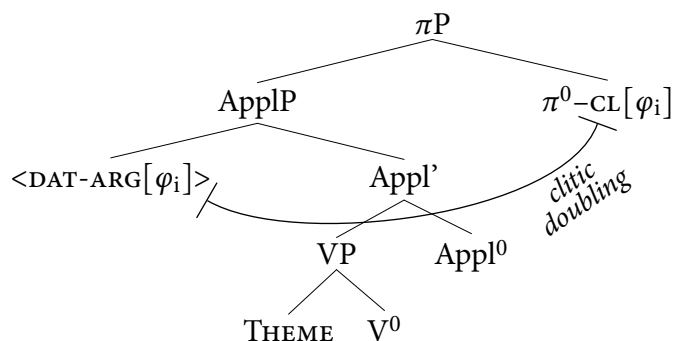
This clitic is the agreement marker typically referred to as 'indirect object agreement' (recall that the type of clitic doubling discussed here, certainly in a language like Basque, is neither optional nor conditioned by particular semantic properties of the doubled noun phrase, such as specificity or animacy).

There is an implicit property of B&R's account that I would like to make explicit at this juncture: in (39), the dative argument is probed by $\pi^0$, which as discussed earlier, only probes for [person] features; nevertheless, it is more than just the [person] features of the dative argument that are expressed on-or-near $\pi^0$, in the form of a clitic (see (42)). The pronominal form created by clitic doubling of the dative argument reflects the *entire φ-feature set* of the dative argument, rather than just its [person] features.

This might seem trivial if one thinks of clitic doubling as an instance of *pronominalization*; but it is worth highlighting, here, for reasons that will become apparent once we return to Kichean. Further support for this distinction between clitic doubling and "pure" agreement, so to speak, will be provided in §4.3; for now, in the context of presenting B&R's account of the PCC, I will take it as a given.

It has been well-established, in the literature on clitic doubling, that the doubled noun phrase behaves much like the trace of an A-chain (see Anagnostopoulou 2006 for a review)—for example, for binding-theoretic purposes (Alexiadou & Anagnostopoulou 1997, Anagnostopoulou 1994, Sportiche 1996, 1998). Another important aspect of the behavior of full noun phrases under clitic

doubling, which also recalls the behavior of an A-trace, is that they cease to count as interveners for the purposes of A-movement and agreement (Anagnostopoulou 2003; cf. Holmberg & Hróarsdóttir 2003 on A-traces). Importantly, the clitic itself does not intervene in such relations, either; this is presumably either because the relations in question are *phrasal* in nature, and the clitic is a minimal projection, or because the clitic undergoes head-adjunction and therefore does not c-command anything but its host (see Anagnostopoulou 2006, and references therein, for discussion).

Due to this ameliorating effect that clitic doubling has on intervention, when $\#^0$ is merged, it is able to establish an agreement relation with Theme without intervention by the dative argument:

(43)   TWO INTERNAL ARGUMENTS: NUMBER PROBING
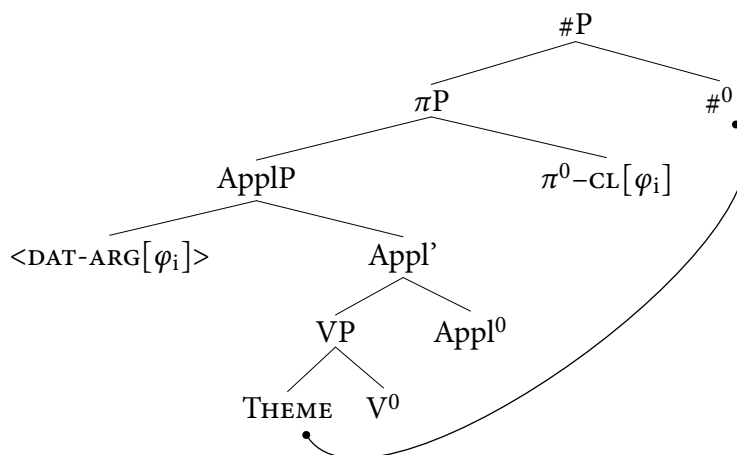


Note the emergent asymmetry between [person], for which successful agreement with the Theme is hindered, and [number], for which the parallel relation is able to go through. This asymmetry is a desideratum of the account: while one finds language after language that exhibit one form or another of the PCC, there is an absence of attestation for what would be an analogous *Number Case Constraint*: a constraint that would affect [number] agreement, but be blind to [person] features (Nevins 2011). This asymmetry is captured in B&R's account by ordering [person] probing prior to [number] probing (represented here as the merging of $\pi^0$ before $\#^0$). While in the context of accounting for the PCC, this ordering amounts to a stipulation, one can view the success of PCC accounts that adopt it (see also Anagnostopoulou 2003) as support for adopting the same

derivational ordering in the analysis of other empirical domains. This is precisely the approach pursued in §4.4, below, in accounting for agreement in the Kichean Agent-Focus construction (though see Nevins 2007, 2011 for a different approach to somewhat similar facts).

Let us now review the results of the account sketched in (38–43). First, in the absence of a dative argument located (structurally) in between the agreement probe(s) and the Theme argument, both the [person] probe ($\pi^0$) and the [number] probe ($\#^0$) would be able to establish agreement relations with the Theme, without impediment; as a result, both probes would come to bear the Theme's $\varphi$-feature values. Thus, $\pi^0$ and $\#^0$ together come to express what can be descriptively labeled 'object agreement'.[5]

On the other hand, in the presence of a dative argument of this sort, the [person] probe ($\pi^0$)—which probes first, by hypothesis—fails to reach the Theme, targeting the dative argument instead. The dative argument cannot transfer its own $\varphi$-feature values to $\pi^0$. But being probed by $\pi^0$ triggers clitic doubling of the dative argument, resulting in a pronominal form that reflects its entire $\varphi$-set (not just its [person] features, which is what $\pi^0$ was probing for). This is the morpheme that is sometimes referred to, descriptively, as 'indirect object agreement'.

In this scenario, there is no way for the [person] features on $\pi^0$ itself to come to bear 1st or 2nd person values, even if the dative argument and/or the Theme bear those values (because datives do not generally transfer their own $\varphi$-feature values to agreement probes, and because the Theme in this case is unreachable). Therefore, in this scenario, the [person] component of what is normally '(direct) object agreement' will never reflect 1st or 2nd person values; and due to the PLC (40), the appearance of a 1st/2nd person Theme argument will not be licensed.

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[5] It is of course the case that agreement with the object in [person] and in [number] does not surface as two separate exponents in every language where such agreement is overt. In some cases, this is might be a result of what is actually clitic doubling having been misidentified as 'object agreement' (see, for example, the case of 'indirect object agreement' in Basque; Arregi & Nevins 2008, 2012, Preminger 2009). In other cases, it might be that the two terminals undergo *Fusion* in the morpho-phonological component (Halle & Marantz 1993, Noyer 1997); or that one terminal receives no overt expression of its own, but conditions contextual allomorphy in the spellout of the other, thus giving rise to the impression of a single morpheme that expresses the featural content of both terminals.

Finally, having been clitic-doubled, the dative argument is rendered invisible for the purposes of intervention; thus, by the time the [number] probe ($\#^0$) scans the structure, it is able to successfully target the Theme.

In summary, the following agreement morphology has been generated: **(i)** the same person morphology as one finds with a 3rd person Theme in a monotransitive (which by virtue of the PLC, forces the Theme to indeed be 3rd person, hence the Person Case Constraint); **(ii)** number morphology that faithfully reflects the [number] features of the Theme; **(iii)** a clitic that reflects the full $\varphi$-set of the dative argument.

As mentioned above, this analysis, put forth by B&R to account for PCC effects in verb phrases containing multiple internal arguments, will prove instrumental in accounting for the patterns of agreement in the Kichean Agent-Focus construction (surveyed in chapter 3). Before turning to that account, however, I will address several other crucial aspects of the relevant theoretical background.

## 4.2. Relativized probing

As detailed in chapter 3, the Kichean Agent-Focus (AF) construction involves a single agreement marker, but two non-oblique core arguments. Descriptively, the question of which of these two arguments will determine the choice of agreement marker is resolved along the following scale (repeated from chapter 3):

(44)   1st/2nd person ≫ 3rd person plural ≫ 3rd person singular                    *[=(23)]*

In this section, I will demonstrate that (44) need not be posited as a linguistic primitive unto itself, but instead arises from other well-established linguistic principles; and that consequently, any connection of (44) to an extra-linguistic notion of 'salience' is spurious (in addition to more direct empirical problems that such a connection would face; see chapter 7).

### 4.2.1. What's good for [*wh*] is good for [plural] and [participant], too

In chapter 3, I used the term 'omnivorous agreement' (following Nevins 2011) to characterize the behavior of agreement in [person] and in [number] in the AF construction in Kichean. That is because this construction exhibits a property not often found in verbal agreement systems; informally, we could describe this property as the ability to skip over the subject, if it does not bear the "right" features, en route to the object. This was demonstrated in examples like (45a–b) with respect to [person] features; (46a–b) demonstrate the same pattern with respect to [number] features.

(45)   a. ja    rat        x-**at/*Ø**-ax-an              ri   achin                              (Kaqchikel)

FOC you(sg.) COM-**2sg/*3sg.ABS**-hear-AF the man

'It was you(sg.) that heard the man.'

b. ja    ri   achin x-**at/*Ø**-ax-an                  rat

FOC the man   COM-**2sg/*3sg.ABS**-hear-AF you(sg.)

'It was the man that heard you(sg.).'                                          *[=(15a–b)]*

(46)   a. ja    rje'   x-**e/*Ø**-tz'et-ö              rja'

FOC them COM-**3pl/*3sg.ABS**-see-AF him

'It was them who saw him.'

b. ja    rja'   x-**e/*Ø**-tz'et-ö              rje'

FOC him COM-**3pl/*3sg.ABS**-see-AF them

'It was him who saw them.'                                                    *[=(19a–b)]*

There is another perspective one could take on these facts, however, that makes them seem far less unusual. Consider the behavior of the *wh*-probe on C$^0$, in examples like (47a–c):

(47)   a. [C$^0$ [who]$_{<+wh>}$ gave [this dish] to [Bob]]

⟶    [**C$^0$ [who]$_{<+wh>}$ gave [this dish] to [Bob]**]

⟶    Who gave this dish to Bob?

b. $[C^0$ [John] gave [what]$_{<+wh>}$ to [Bob]]

$\longrightarrow$ **$[C^0$ [John] gave [what]$_{<+wh>}$ to [Bob]]**

$\longrightarrow$ What did John give to Bob?

c. $[C^0$ [John] gave [this dish] to [who]$_{<+wh>}$]

$\longrightarrow$ **$[C^0$ [John] gave [this dish] to [who]$_{<+wh>}$]**

$\longrightarrow$ Who did John give this dish to?

In each of these three sentences, there are (at least) three XPs that the probe could in principle target; and of these, some are closer to the probe than others. Crucially, the probe has the ability to skip over targets that do not bear the feature that the probe is looking for—in this case, [*wh*]—en route to a target that does. This observation is hardly new, of course; it is simply the 'relativized' part of *Relativized Minimality* at work (Rizzi 1990; see also Frampton 1991).

Now consider again the patterns of agreement in Kichean AF, as exemplified by (45–46). Let us assume that at the relevant stage in the derivation of such examples, both the subject and the object are located below the relevant agreement probe. (Given some version of the *vP/VP-Internal Subject Hypothesis*, any probe located properly outside of the verb phrase would satisfy this requirement; see also fn. 18.) If so, this agreement pattern, like the interrogative $C^0$ pattern discussed above, involves a probe that seeks a target XP bearing a particular feature ([*wh*] in the case of interrogative $C^0$, [plural] and/or [participant] in the case of Kichean AF), and is able to skip over XPs that lack this feature.[6] A pair like (46a–b) can therefore be analyzed in the same way as (47a–c):

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[6]The term [participant] refers to the morphosyntactic feature that distinguishes 1st and 2nd person pronouns—i.e., local speech-act participants—from 3rd person noun phrases (following Harley & Ritter 2002, *a.o.*). See §4.2.2 for further discussion.

(48)  a.  $\left[\,\#^0\;[\text{them}]_{<+pl.>}\;V^0\;[\text{him}]\,\right]$

        $\longrightarrow$  $\left[\,\mathbf{\#^0}\;[\mathbf{them}]_{<+\boldsymbol{pl.}>}\;\mathbf{V^0}\;[\mathbf{him}]\,\right]$

             $\longrightarrow$  ja    rje'   x-**e/*Ø**-tz'et-ö            rja'

                    FOC them COM-**3pl/*3sg.ABS**-see-AF him

                    'It was them who saw him.'                                        *[=(46a)]*

    b.  $\left[\,\#^0\;[\text{him}]\;V^0\;[\text{them}]_{<+pl.>}\,\right]$

        $\longrightarrow$  $\left[\,\mathbf{\#^0}\;[\mathbf{him}]\;\mathbf{V^0}\;[\mathbf{them}]_{<+\boldsymbol{pl.}>}\,\right]$

             $\longrightarrow$  ja    rja'  x-**e/*Ø**-tz'et-ö            rje'

                    FOC him COM-**3pl/*3sg.ABS**-see-AF them

                    'It was him who saw them.'                                        *[=(46b)]*

Examples like (45a–b) above, where the relevant probe ignores 3rd person phrases en route to non-3rd person ones, can be handled in an analogous fashion, except the probe in question would be $\pi^0$, and the feature it seeks would be [participant] (on the distinction between $\pi^0$ and $\#^0$, see §4.1).

What the parallelism between (47) and (48) shows, I think, is that the mechanisms underlying so-called 'omnivorous agreement' are really the same as those that underlie syntactic probing more generally. The probe—in this case, $\#^0$—is specified to look for the [plural] feature; it will therefore ignore phrases that do not bear this feature, much like an interrogative $C^0$ ignores phrases that do not carry the [*wh*] feature. I will refer to this property, of interrogative $C^0$ and Kichean $\varphi$-probes alike, as *relativized probing* (a term that is mean to recall Rizzi's 1990 use of the term 'relativized'; see also Nevins 2007 for a related but distinct proposal of how probes might be feature-relativized).

Of course, relativized probing effects are commonplace with interrogative $C^0$ (see Richards 2001, and references therein), but seem quite rare when it comes to $\varphi$-agreement. This, I contend, has to do with the particular featural specification required so that a non-oblique, structurally closer noun

phrase would nevertheless fail to satisfy the requirements of the probe, and be skipped over in favor of the object; the precise details of this featural specification will be taken up in §4.2.2.

At this point, one might wonder about indirect objects in Kichean, and how they interact with agreement in the AF construction (in other words, the fate of the $\varphi$-probing counterpart of (47c)). It turns out that Kichean does not have true indirect objects in the morphosyntactic sense. The notional Source/Goal argument, when present, is realized as an oblique phrase, headed by a preposition that takes a designated relational noun as its complement:[7]

(49)  a.  Juan x-Ø-u-ya'                    ri  wuj  [ch-a    **xta Maria**]
          Juan COM-3sg.ABS-3sg.ERG-give the book  PREP-RN **CLF Maria**
          'Juan gave the book to Maria.'

     b.  Juan x-Ø-u-ya'                    ri  wuj  [cha-**w**-a]
          Juan COM-3sg.ABS-3sg.ERG-give the book  PREP-**2sg.GEN**-RN
          'Juan gave the book to you(sg.).'

When the notional Source/Goal is a lexical noun phrase, it appears as a complement to the relational noun, as in (49a); when the notional Source/Goal is pronominal, it appears as possessor agreement on the relation noun, as in (49b) (note that across the Mayan family, ergative agreement and possessive/genitive agreement are identical).

Because the entire prepositional phrase is oblique, it does not interact with agreement marking on the finite verb in any way. This can already be seen in (49a–b), where the change from 3rd person to 2nd person in the notional Goal argument is not reflected in the verbal morphology; and the same is true in the AF construction, as well: the notional Source/Goal argument does not interact with agreement on the AF verb. For example, even if it is the *only* non-3rd person argument in the clause, the notional Source/Goal still fails to trigger non-3rd person agreement on the AF verb:

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[7]Thanks to Robert Henderson for sharing examples (49–50), from his own field notes.

(50)  a.   ja    ri   Juan x-**Ø**-y-on              ri   wuj   [cha-**w**-a]

           foc the Juan com-**3sg.abs**-give-af the book   prep-**2sg.gen**-rn

           'It was Juan that gave the book to you.'

     b. *  ja    ri   Juan x-**a(t)**-y-on          ri   wuj   [cha-**w**-a]

           foc the Juan com-**2sg.abs**-give-af the book   prep-**2sg.gen**-rn

           *Intended*: 'It was Juan that gave the book to you.'

The agreement morphology on the AF verb in (50a) (*x-Ø-y-on* "com-3sg.abs-give-af") is identical

to the morphology on an AF verb with only a subject and an object, both of which are 3rd person,

and no Source/Goal argument—cf. (51a–b), repeated from earlier:

(51)  a.   ja   **ri   tz'i'** x-Ø-etzel-an          **ri   sian**

           foc **the dog** com-3sg.abs-hate-af **the cat**

           'It was the dog that hated the cat.'

     b.   ja   **ri   xoq**     x-Ø-tz'et-ö          **ri   achin**

           foc **the woman** com-3sg.abs-see-af **the man**

           'It was the woman who saw the man.'                                        *[=(14a–b)]*

In summary, indirect objects in Kichean are irrelevant to finite agreement (both in regular clauses,

and in AF ones), just as any other oblique phrase would be.

   It is not the case, of course, that all Source/Goal arguments in all languages behave in this

fashion. In many languages, indirect objects (along with certain other dative nominals) interact

with $\varphi$-probing in a manner known as 'defective intervention'; this topic will be taken up in detail

in chapter 8.

## 4.2.2.  Feature relativization in a feature-geometric approach

Before turning to a more detailed analysis of agreement in AF clauses, I would like to briefly

discuss the state of the *relativized probing* mechanism discussed in §4.2.1 with respect to the cross-

linguistic typology of agreement. At first glance, it might seem that this approach to $\varphi$-agreement in Kichean AF, while assimilating it to probing by interrogative $C^0$, makes this particular instance of $\varphi$-agreement a complete outlier; after all, from a typological perspective, omnivorous agreement patterns are certainly the exception, rather than the norm. We therefore might ask why the effects of relativized probing seem absent in the usual case, where $\varphi$-agreement targets one argument (e.g. the subject) and cannot target the other argument (e.g. the object) under any circumstances.

The answer, I believe, is that they are *not* absent; relativized probing is alive and well in, e.g., the standard subject-agreement paradigm; the relevant probe is simply feature-relativized to a higher point in the geometry of $\varphi$-features, one can that be satisfied by a larger set of potential targets. Consider examples like the following:

(52)   There **seems/??seem** [to every attorney$_i$] to be [some client of his$_i$ who is innocent].

Examples like this illustrate a familiar point: probing by $Infl^0$ in English, presumably responsible for 3rd person singular agreement on the verb *seem*, is capable of skipping certain nodes, such as the dative experiencer in (52) (the quantifier-variable relation is included in order to verify that the subject is indeed c-commanded by the dative experiencer).[8] The same point can be made with unselected PP modifiers, as well:

(53)   There **are/??is** likely [in every class] to be [two troublemakers].

In fact, even in a much simpler example, where there is no PP intervener, any rudimentary sketch of the syntactic structure reveals that there are several nodes along the syntactic spine that must be skipped by the $\varphi$-probe en route to its eventual target:

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[8] Recent work by Hartman (2011, to appear) suggests that examples like (52) might constitute the exception, and that PP arguments other than the *to*-experiencer of *seem* and *appear* do intervene in English, just as they do in French, Italian, Spanish, Greek, and other languages (Anagnostopoulou 2003, Holmberg & Hróarsdóttir 2003, Rizzi 1986, Torrego 1996, *a.o.*; see chapter 8 for a more detailed discussion of intervention by dative nominals). If this is true, then (52) is not directly relevant to the argument in the main text; but note that the more general point made with regard to (54), about skipping other projections along the clausal spine, holds of (52) too.

(54)    There **are/??is** [$_{v\text{P/VP}}$ likely [$_{\text{TP}}$ to [$_{v\text{P/VP}}$ be [two troublemakers] here]].

The underlined nodes in (54) are bona fide syntactic projections, closer to the $\varphi$-probe than the

actual target (*two troublemakers*), and yet the $\varphi$-probe is able to skip them when searching for an

agreement target.[9]

These effects are perhaps most naturally handled in terms of categorial distinctions (namely, the

Infl[0] probe in (52–54) seeking a DP, rather than a PP or $v$P/VP). But if category-membership is

itself no more than featural specification (Chomsky 1995:241–249, among many others), then the

principle behind examples like (52–54) is no different than the *wh*-probing examples in (47a–c) or

the AF examples in (48a–b): they all involve a probe that is specified to look for a particular feature,

and is able to skip potential targets when they do not bear the feature in question.

Importantly, we have already seen evidence that the effect demonstrated by the English (52–54)

is operative in Kichean as well. Recall that in the Kichean AF construction, a 1st/2nd person subject,

for example, will necessarily determine agreement on the AF verb (45a). When the subject is 3rd

person and the object is 1st/2nd person, it is the object that is agreed with (45b). This shows that 3rd

person arguments, in Kichean AF, do not halt the probe (otherwise the object could not be agreed

with in (45b)). Crucially, however, when both the subject and the object are 3rd person, a notional

Source/Goal argument—realized as a PP—still cannot be targeted for agreement, even if it is 1st/2nd

person (50a). This means that just like $\varphi$-agreement in English ignores PPs, so does $\varphi$-agreement in

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[9]The argument in the main text goes through even if $\varphi$-agreement in expletive-associate constructions like (52–54) is handled by agreement of Infl[0] with the expletive *there*, rather than agreement directly with the associate. If the expletive is base-generated alongside the associate and subsequently moves to its matrix position (Deal 2009, Hartmann 2005, Hazout 2004, Hoekstra & Mulder 1990, Kayne 2006, Moro 1991, 1997, 2007, Williams 1994, *a.o.*), then the probe that dislocates the expletive must be able to skip the dative experiencer (52) or the adjunct (53), and every projection on the way (54), and the same *relativized probing* property holds. But even if the expletive is base-generated in its surface position, there must be some mechanism that transmits the $\varphi$-features of the associate to the expletive (since it is the features of the associate that ultimately determine the form of the finite verb in (52–54); see, for example, Chomsky 1986, Den Dikken 1995, Lasnik & Saito 1991). This transmission mechanism will itself need to be feature-relativized in the same way, to prevent transmission of the features of the dative/adjunct/$v$P/etc., instead of the features of the actual associate.

Kichean; and of course, $\varphi$-probing in Kichean must also be able to skip projections such as *v*P/VP, on the way to its eventual agreement target.

The kind of "skipping" exemplified by (52–54) is thus replicated in Kichean; the effect in Kichean is simply stronger, in that it extends beyond PPs and other non-DPs, to include 3rd person and/or singular nominals as well. We can therefore characterize the "skipping" effects found in English as a subset of those found in Kichean.

This subset-superset relation between the relativized probing effects found in English on the one hand, and those found in Kichean on the other, suggests an account in terms of a *feature geometry*. A feature geometry specifies the internal structure of the space of possible feature values, encoding implicational relations between the occurrence of different values. For concreteness, I will adopt the following $\varphi$-feature geometry, a simplified version of the geometry proposed by Harley & Ritter (2002) and McGinnis (2005):[10]

(55)   A SIMPLIFIED $\varphi$-FEATURE GEOMETRY
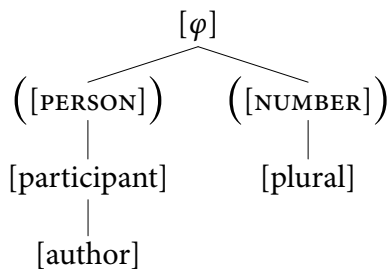


The feature [participant] is what distinguishes 1st/2nd person pronouns from 3rd person pronouns and other noun phrases; the feature [author] further distinguishes 1st person pronouns from 2nd person ones; and [plural] distinguishes singular noun phrases from plural ones. Because [participant] dominates [author] in the feature geometry, the latter cannot arise in the absence of

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[10]The feature geometry given in (55) is simplified in several respects. First, it abstracts away from gender features completely. Second, the morphological, syntactic, and semantic representations of number are significantly more complex than showed here; see Harbour (2007) and Harley & Ritter (2002) and McGinnis (2005) for discussion. Finally, the representation of person features in (55), while accurate, corresponds to what one finds in a language without a 1st person exclusive-vs.-inclusive distinction; languages with such a distinction employ an additional [addressee] node below [participant]. For further discussion, see McGinnis (2005) (as well as §4.5.1, below).

the former, ruling out the logically inconsistent "non-participant author" combination. At the root of the geometry, the feature $[\varphi]$ is the node shared by all nominals. If there is such a thing as a 'D-feature', which defines the natural class of extended nominal projections, and which must be visible on the maximal extended projection for a nominal to count as non-oblique, then this might be that feature (though see Déchaine & Wiltschko 2002 for a more articulated view).[11]

Crucially, the nodes in this feature geometry are *privative features*. Thus, a 1st person plural noun phrase (*we/us*) would carry [participant], [author], and [plural] features; a 2nd person plural noun phrase (*y'all*) would carry [participant] and [plural] features, but no [author] feature; a 1st person singular noun phrase (*I/me*) would carry [participant] and [author] features, but no [plural] feature; and so forth.

Following Béjar & Rezac (2009), I assume that this $\varphi$-feature geometry is relevant not only to the morphological realization of pronominals, as argued by Harley & Ritter, but crucially, is also how $\varphi$-features are represented in syntax.

A feature geometry of this sort is very well suited to account for the subset-superset relations among the "skipping" effects found in English, and those found in Kichean (as discussed above). Suppose that English Infl$^0$ is relativized to the root of the $\varphi$-geometry. Any $\varphi$-bearing phrase would then constitute a viable target (i.e., any DP, but not PPs, nor TPs/$v$Ps/VPs). As a result, regardless of the features of the direct object, the subject will always constitute a closer viable agreement target for Infl$^0$ than the object. That is the reason, on this view, that English lacks 'omnivorous agreement' effects in the sense of targeting the direct object in lieu of the subject. But crucially, English Infl$^0$ can be seen as omnivorous *with respect to [$\varphi$]*: it readily skips phrases that do not carry [$\varphi$], such as PPs, in favor of structurally lower phrases that do carry it—as in (52–54), above.[12]

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[11]The parenthesized nodes, [PERSON] and [NUMBER], are 'meta-nodes': insofar as there are syntactic probes that seek, e.g., person features, but do not require their targets to bear the marked versions of these features (1st/2nd person; i.e., [participant]), then the relevant 'meta-node' would be the point in the $\varphi$-feature geometry that such a probe is relativized to seek (cf. probing for person features and for number features in Béjar & Rezac's 2003 account of the PCC; §4.1). See below for further discussion of relativized probing in a feature-geometric approach to $\varphi$-features.

[12]Though see §8.3 for a more nuanced view of whether or not P$^0$/PPs carry $\varphi$-features.

Unlike English Infl$^0$, however, Kichean $\pi^0$ and $\#^0$ are not relativized to the root of the $\varphi$-geometry; instead, they are relativized to [participant] and [plural], respectively. They therefore skip not only non-DPs (i.e., non-bearers of [$\varphi$]), as in English, but also 3rd person DPs (non-bearers of [participant]) and singular DPs (non-bearers of [plural]), respectively.

It is in this way that a feature-geometric approach is well-suited to capture the subset-superset relation between these different "skipping" capacities: the reason the kind of phrases skipped by the English $\varphi$-probe are a <u>subset</u> of those skipped by its Kichean counterparts is because the node to which the English probe is relativized <u>dominates</u> (within the $\varphi$-feature geometry (55)) the nodes to which the Kichean probes are relativized. From this perspective, singling out patterns like the Kichean ones examined here as 'omnivorous agreement' would be misleading: all probes are 'omnivorous'—it is just that different probes are relativized to different features (e.g. [*wh*], [$\varphi$], [participant], [plural]), resulting in different patterns of what is and is not skippable.

### 4.2.3. Valuation in a feature-geometric approach

In a probe-goal approach (Chomsky 2000, *et seq.*), valuation amounts to copying the feature values encountered on the goal onto the probe. Prior to valuation, the probe carries so-called 'unvalued features', which we might imagine as a series of empty slots into which the eventual values will be copied. (This discussion abstracts away from the question of whether agreement results in the actual copying of values, or merely in the *sharing* of these slots; cf. Frampton & Gutmann 2000, 2006, Pesetsky & Torrego 2007).

However, once we adopt a feature-geometric approach to $\varphi$-features (as sketched in §4.2.2, following Béjar & Rezac 2009, Harley & Ritter 2002, McGinnis 2005), this notion of valuation proves inadequate. First, on this view, the featural contents of the goal are internally structured. Second, the particular feature sought by the probe might not be at the very root of the feature-structure borne by the goal (for example, when the goal is a DP but the probe is relativized to seek [participant] or [plural]; see §4.2.1–§4.2.2).

Suppose, then, that valuation is itself feature-geometric, and involves the copying of *snippets of feature geometry*, rather than individual features. Instead of 'unvalued features', the probe would enter into the derivation with a container for a piece of feature geometry; valuation would consist of copying an appropriate snippet of feature geometry from the goal onto the probe:

(56)  VALUATION AS A FEATURE-GEOMETRIC NOTION
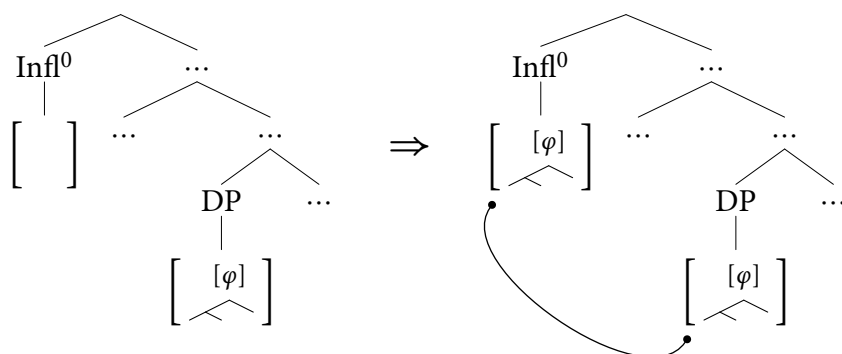


In such a system, *relativized probing* amounts to specifying, on this container, what the root of the snippet copied into it must be. In the case of English $Infl^0$, for example, any piece of feature geometry that is rooted in $[\varphi]$ would be appropriate for this container—meaning any nominal could be used for valuation:

(57)  FEATURE-GEOMETRIC VALUATION: ENGLISH
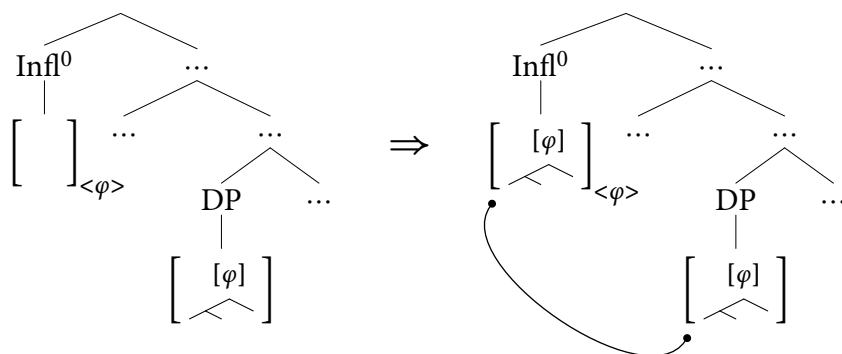


In the case of Kichean $\pi^0$, on the other hand, only pieces of feature geometry rooted in the [participant] node could be copied onto the probe, meaning only 1st/2nd person pronouns could be used for valuation; and similarly for $\#^0$ and [plural]:

(58)   FEATURE-GEOMETRIC VALUATION: KICHEAN $\pi^0$                    [prtc] = [participant]

$$\pi^0 \quad \ldots \qquad \qquad [\ ]_{<prtc>} \quad \ldots \quad \ldots \quad DP \quad \ldots \quad [\varphi], [prtc] \qquad \Rightarrow \qquad \pi^0 \quad \ldots \quad [prtc]_{<prtc>} \quad \ldots \quad \ldots \quad DP \quad \ldots \quad [\varphi], [prtc]$$
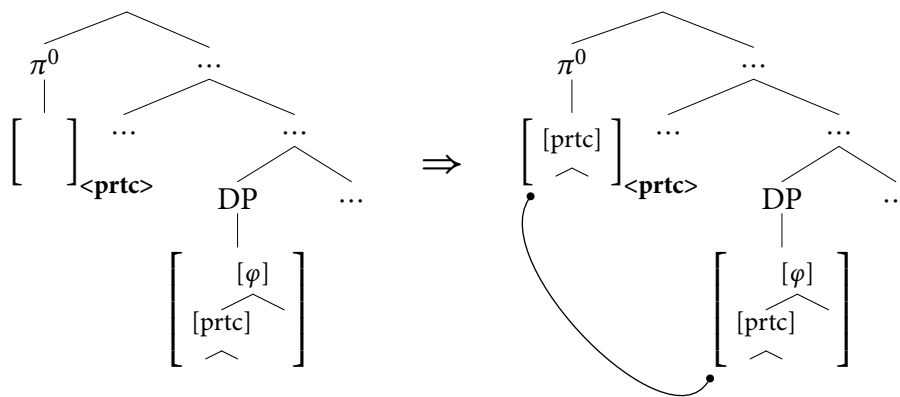
(59)   FEATURE-GEOMETRIC VALUATION: KICHEAN $\#^0$                    [pl] = [plural]

$$\pi^0 \quad \ldots \qquad \qquad [\ ]_{<pl>} \quad \ldots \quad \ldots \quad DP \quad \ldots \quad [\varphi], [pl] \qquad \Rightarrow \qquad \pi^0 \quad \ldots \quad [pl]_{<pl>} \quad \ldots \quad \ldots \quad DP \quad \ldots \quad [\varphi], [pl]$$
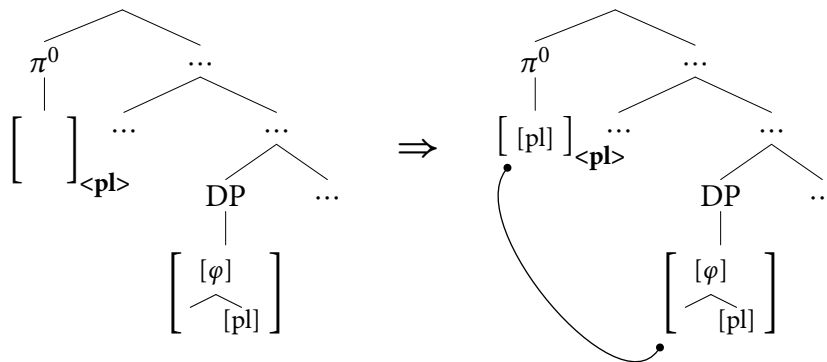
Note that this modification to the mechanism of valuation does not fundamentally alter the question posed in chapter 2, regarding how the obligatoriness of $\varphi$-agreement is enforced by the grammar. For instance, Chomsky's (2000, 2001) *uninterpretable features* approach—an instance of the more general derivational time-bombs model (§2.2.1)—could easily be adapted to state that feature-geometric containers are 'uninterpretable' (and therefore cause ungrammaticality) unless filled. The significance of the feature-geometric approach is in unifying the patterns of which nodes can and cannot be skipped by the $\varphi$-probe in a language like English with those found in a language like Kichean. I will therefore continue to use, in the text, non-geometric shorthand such as "unvalued $\varphi$-features" and "probing for [participant] features", as stand-ins for the relevant feature-geometric notions (in this case, "empty feature geometry containers" and "probing for a snippet of feature geometry rooted in [participant]", respectively).

### 4.2.4. Summary

In this section, we have assimilated so-called 'omnivorous agreement' found in the Kichean AF construction to mechanisms that are involved in standard syntactic probing, e.g. the behavior of interrogative $C^0$ with respect to phrases that are not [*wh*]-bearing. This property—namely, the ability of a probe to skip targets that lack the feature it is looking for—was termed *relativized probing* (following the use of 'relativized' in *Relativized Minimality*; Rizzi 1990).

I then argued that the categorial relativization of probes like English $Infl^0$ (i.e., the targeting of DPs but not PPs, nor $v$P/VPs) is an instance of the same phenomenon. Such categorial relativization is of course in need of an account one way or another; but given the idea that category membership is nothing more than featural specification, any apparent division between categorial relativization and other instances of featural relativization (such as probing only for [*wh*]-bearing phrases) would be illusory, in the first place.

If we accept that $\varphi$-features are organized in a feature geometry (Béjar & Rezac 2009, Harley & Ritter 2002, McGinnis 2005), then allowing syntactic probing to be relativized to different points in the feature hierarchy accounts naturally for the subset-superset relations among the kinds of phrases skipped by different probes in different languages. In particular, if a probe like English $Infl^0$ is relativized to the [$\varphi$] node, which dominates the [participant] node to which Kichean $\pi^0$ is relativized, then the kinds of phrases skipped by the former (non-DPs) will be a proper subset of the kinds of phrases skipped by the latter (non-DPs and 3rd person DPs). The same will hold with respect to the relation between English $Infl^0$ and Kichean $\#^0$, the latter of which is relativized to the [plural] node (also dominated by [$\varphi$]).

On this view, there is nothing special about 'omnivorous agreement' to begin with, because all probes are omnivorous (i.e., they all skip targets that do not bear the right featural specification). Different probes are simply relativized to search for different featural specifications.

Before turning to the analysis of agreement in the Kichean AF construction, and in Kichean more generally, I will discuss a particular contrast between agreement and clitic doubling that

emerges from B&R's analysis of the PCC (§4.1), and will prove instrumental in the forthcoming analysis.

## 4.3. On the featural coarseness of clitic doubling

An implicit component of B&R's account of the PCC, highlighted in the discussion in §4.1, is a distinction between the featural granularity of "true" agreement (i.e., a valuation relation between a probe and a goal), and the featural coarseness of clitic doubling. Because the account of $\varphi$-agreement in Kichean that I will pursue in §4.4 will make use of the same clitic doubling mechanism implicated in B&R's account, I would like to first discuss this distinction in greater detail.

If a syntactic probe $H^0$ is relativized to look for a particular subset $F$ of the entire $\varphi$-set (as detailed in §4.2), it seems reasonable to assume that only the values of features belonging to $F$ will be copied from the target onto $H^0$ (this was an explicit part of the feature-geometric approach sketched in §4.2.3, for example). This contrasts with clitic doubling: if clitic doubling is a kind of pronominalization, it is expected to behave like any other form of pronominalization in treating the $\varphi$-set of the pronominalized noun phrase as an atomic unit, which must be copied as a whole. It should therefore be impossible, under clitic doubling, to tease apart different subparts of the $\varphi$-set, and copy some but not all of the $\varphi$-features of the noun phrase onto the clitic (see Rezac 2004, 2010 for related discussion). We can formalize this observation as follows:

(60)  the coarseness property of clitic doubling[13]

If $\text{CL}^0$ is the result of clitic doubling of some noun phrase $\alpha$, then $\text{CL}^0$ will reflect the full set

of $\varphi$-features on $\alpha$.

This distinction between clitic doubling and "true" agreement is immaterial if $\varphi$-probes always

probe for, and copy, $\varphi$-sets in their entirety; but once we allow person and number features to probe

separately, as in B&R's account and in §4.2, the distinction becomes relevant.[14]

Importantly, insofar as clitic doubling is a reflex of being probed by a particular syntactic head

(as proposed by B&R, and detailed in §4.1; see also Harizanov to appear, Kramer to appear), the

specific features sought by the probe—or in feature geometric terms, the point in the $\varphi$-geometry

to which the probe is relativized—will not affect this result. That is because regardless of how it is

triggered, clitic doubling is ultimately still an instance of pronominalization. We therefore expect

there to be mismatches (at least in some cases), where a syntactic head is relativized to search only

for a proper subset of the $\varphi$-feature geometry, but being probed by this head triggers clitic doubling

which ends up copying the entire $\varphi$-set of the targeted nominal.

If we examine B&R's account once again, we see that precisely such a mismatch exists in the

case of the person probe, which I have labeled $\pi^0$. In their account, $\pi^0$ probes for person features

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[13]One concern that arises with respect to (60) involves the morphological operation known as *Fission* (Halle 1997, Noyer 1997), where a vocabulary item realizes only a subpart of the $\varphi$-features contained in a given morphosyntactic node, leaving the remainder of the features to be realized by subsequent instances of Vocabulary Insertion. If we were to let Fission apply to clitics in an unrestricted manner, (60) would be weakened to the point of vacuity. However, even within morphological theories that employ Fission, it is recognized that the application of such an operation must be severely restricted:

"Fission of morphemes during Spell-out in some cases allows multiple phonological pieces to correspond to single morphemes, further obscuring the morphosyntactic structure. Nevertheless, these departures are considered marked options within a grammar, and therefore are assumed to require (substantial) positive evidence during acquisition."

[*Harley & Noyer 1999*]

Just as Fission obscures the correspondence of morphological nodes to vocabulary items, so does it obscure the effects of (60); but instances of Fission are the marked option, which following Harley & Noyer, will only be posited during the acquisition process when they cannot be avoided.

Thanks to Karlos Arregi, Andrew Nevins, and Milan Rezac for illuminating discussions of this and related points.

[14]This distinction between clitic doubling and "true" agreement recalls the shift from agreement as $\text{X}^0$-movement, as in Chomsky 1995, to agreement as valuation, as in Chomsky 2000. See Rezac (2010) for further discussion.

only, to the exclusion of number features (which are probed for separately). When a dative nominal is the structurally closest agreement target, this results in clitic doubling, as schematized earlier and repeated in (61–62):

(61)   TWO INTERNAL ARGUMENTS: PERSON PROBING                                                    *[=(39)]*
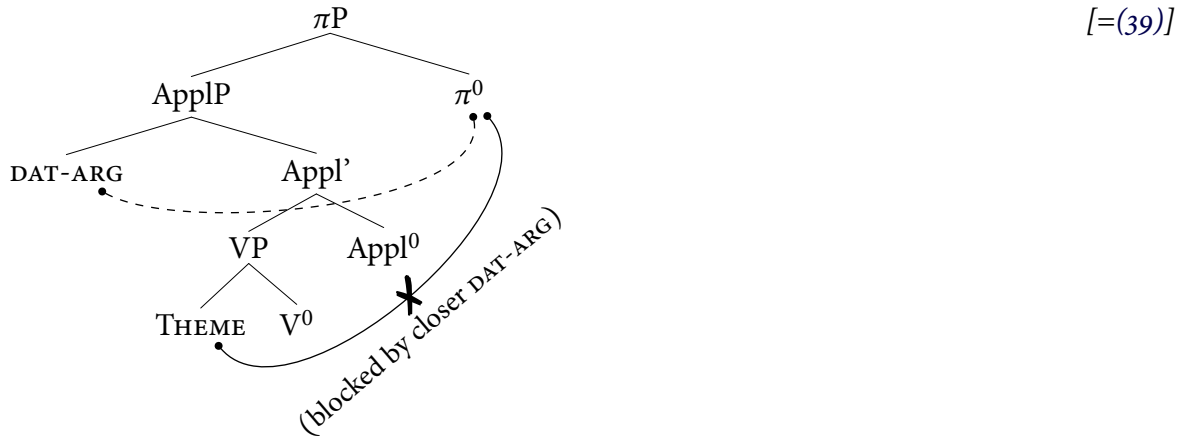


(62)   TWO INTERNAL ARGUMENTS: PERSON PROBING OF DATIVE ⇒ CLITIC DOUBLING                       *[=(42)]*
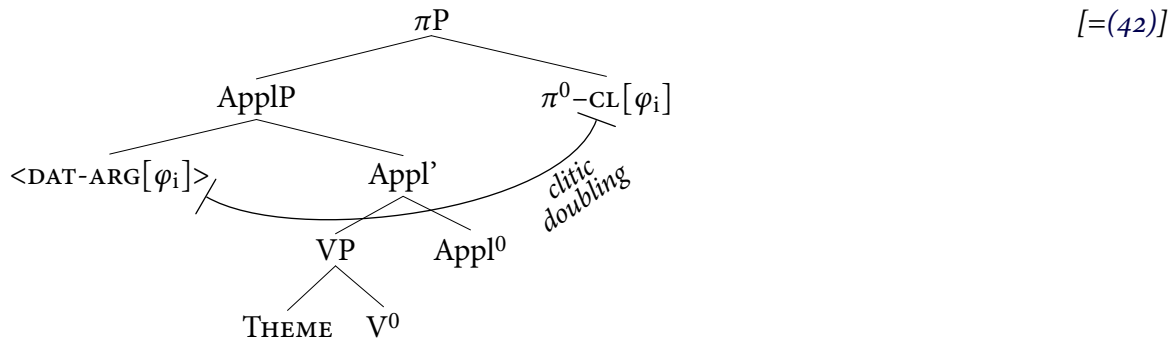


Crucially, the resulting clitic matches the dative nominal in its entire $\varphi$-set, person and number features alike. This is precisely the behavior we expect given the featural coarseness of clitic doubling, as formalized in (60).

Support for this principle can be found in the form of finite agreement in Basque. Finite auxiliaries in Basque carry agreement morphology corresponding to the $\varphi$-features of each core argument (absolutive, ergative, and dative, or whatever subset of these three is present in a given clause):

(63)   Guraso-e-k            niri      belarritako ederr-ak            erosi  **d-**   **i-**  **zki-**

       parent(s)-ART$_{pl}$-ERG  me.DAT  earring(s)  beautiful-ART$_{pl}$(ABS)  bought  **3.ABS-**  **√-**  **pl.ABS-**

       **da-**      **te**.

       **1sg.DAT-**  **3pl.ERG**

       '(My) parents have bought me beautiful earrings.'                                            [*Laka 1996*]

As argued in Preminger 2009, not all of the agreement morphemes found on the finite auxiliary in Basque arise in the same manner. The dative and ergative agreement morphemes are the result of clitic doubling of the corresponding noun phrases. The absolutive agreement morphemes, on the other hand, arise via "true" agreement, by separate person and number probes, essentially following B&R's proposal (see Preminger 2009:655–662). Similar conclusions have been reached, on largely independent grounds, by Arregi & Nevins (2008, 2012).

Focusing on the agreement morphology corresponding to the $\varphi$-features of the absolutive argument, one finds that exponents reflecting different subparts of the absolutive $\varphi$-set sometimes show up on opposite sides of the auxiliary root. This is the case in the ABS-DAT present-indicative paradigm, for example:[15]

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[15]The table in (64) shows how to assemble an auxiliary form for a present-indicative finite clause containing absolutive and dative arguments (but no ergative argument), based on the $\varphi$-features of the arguments in question. The person-number combination of *2pl*, while formally plural, is used for polite addressing of 2nd-person singular individuals (cf. French *vous*). To differentiate actual 2nd-person plurality from mere "polite" uses of *2pl*, Basque adds another pluralizing morpheme, which I have labeled "*number+*". I refer to this person-number configuration as "*2pl+*". Dative (as well as ergative) 2nd-singular agreement morphemes alternate based on gender. The meaning of the '↝' symbol is that *-te*, corresponding to the "*number+*" feature of the absolutive argument, appears after the DAT morpheme (rather than before it). This is particular to the paradigm in (64).

(64) ABS-DAT PRESENT-INDICATIVE AUXILIARY PARADIGM

|  | ABS person | ROOT (have) | ABS number | ABS "number+" | DAT all $\varphi$-features |
|---|---|---|---|---|---|
| 1sg | *na* | *tzai* |  |  | *t* |
| 2sg | *ha* | *tzai* |  |  | {*k,n*} |
| 3sg |  | *zai* |  |  | *o* |
| 1pl | *ga* | *tzai* | *zki* |  | *gu* |
| 2pl | *za* | *tzai* | *zki* |  | *zu* |
| 2pl+ | *za* | *tzai* | *zki* | *te* ⤳ | *zue* |
| 3pl |  | *zai* | *zki* |  | *e* |

The status of what I have dubbed here the absolutive 'person marker' (i.e., the first column in (64)) is subject to some disagreement in the literature. In Preminger 2009, I argued that this morpheme is the overt reflex of person agreement, despite being subject to number-conditioned contextual allomorphy. Arregi & Nevins, on the other hand, argue that this morpheme is an absolutive clitic. What both analyses agree upon is that the morpheme in the third column (*-zki*) is <u>not</u> a clitic: for Preminger 2009, it is the overt reflex of number agreement; for Arregi & Nevins, it is part of the spellout of valued features on $T^0$. In either case, it is the reflex of "true" agreement, not clitic doubling.

Let us therefore concentrate on the difference between this morpheme (*-zki*) and the agreement morphology corresponding to the dative argument—i.e., the final column of (64)—which consists of a single exponent, expressing both number and person distinctions. First, note that much like 1st/2nd person absolutive agreement morphemes in Kichean (§3.4), these dative agreement morphemes in Basque (as well as their ergative counterparts, not present in (64); see Preminger 2009:646–650) bear a strong morpho-phonological resemblance to the corresponding strong pronouns in the language. As noted above, Arregi & Nevins, as well as Preminger 2009, provide several additional arguments that dative (as well as ergative) finite agreement morphology in Basque arises through clitic doubling of the relevant nominal arguments. It then *follows* from the featural coarseness property of clitic doubling (60) that a morpheme like *-zki*, which expresses number

distinctions to the exclusion of person distinctions, could only be found within the absolutive agreement morphology on the Basque auxiliary. This is because only the absolutive agreement morphology is the reflex of "true" agreement and not clitic doubling.

We have seen that the morphological makeup of finite agreement in Basque provides some support for the generalization given in (60), concerning the featural coarseness of clitic doubling. As mentioned earlier, this property of clitic doubling is already implicit in accounts such as B&R's, where being probed for person features alone gives rise to a clitic reflecting the full set of $\varphi$-features borne by the dative nominal.[16]

I will therefore take (60) to be correct, as we turn to the discussion of agreement morphology in Kichean AF. As discussed earlier, the proposal by B&R—meant to account for the PCC—when combined with the results of §4.2, yields a comprehensive account of $\varphi$-agreement in the Kichean AF construction. This account will derive the apparent scale or hierarchy effects found in this construction (discussed in §3.2) without recourse to an extrinsic device of that sort. Moreover, it will derive the morpho-phonological distinctions observed in §3.4, between 1st/2nd person absolutive agreement markers in Kichean (which resemble the corresponding strong pronouns, and encode number distinctions suppletively), and 3rd person ones (which do not resemble the corresponding pronouns, and exhibit what may be an isolable plural morpheme). That account is the topic of the next section.

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[16] Andrew Nevins (p.c.) suggests that Romance may provide support for the same conclusion, regarding the featural coarseness of cliticization. In many Romance languages, participial agreement targets gender and number, while finite agreement targets number and person—two different subsets of the full set of $\varphi$-distinctions available in Romance. On the other hand, Romance clitics, for the most part, express all three distinctions (gender, number, and person).

As pointed out to me by Karlos Arregi, there are instances where Romance clitics fail to express certain available $\varphi$-featural distinctions, which is unexpected given the coarseness property, such as dative clitics that fail to make any gender distinctions. We might hypothesize that this is a matter of lexical inventory—namely, that there happen to be no vocabulary items in the relevant dative clitic paradigm whose insertion rules make distinctions for gender. This would be ad hoc, however; and more importantly, once we allow for such vocabulary-based impoverishment, the claim regarding featural coarseness of clitics loses its predictive power.

I leave the resolution of these issues with respect to Romance morphosyntax for future research.

## 4.4. Applying Béjar & Rezac's (2003) account to Kichean

In this section, I combine the results of §4.2–§4.3 with B&R's account of the PCC (surveyed in §4.1) to yield an account of $\varphi$-agreement in the Kichean AF construction. The central argument will be that 1st/2nd person absolutive agreement markers in Kichean are actually clitics, the result of clitic doubling that is triggered when the absolutive argument is probed by the person probe, $\pi^0$. In this sense, they are on a par with 'indirect object agreement' in B&R's account of the PCC (also analyzed as the result of clitic doubling, triggered when the argument in question is probed by $\pi^0$). On the other hand, 3rd person absolutive agreement markers in Kichean—in particular, the 3rd person plural absolutive marker—will be argued to be the overt spellout of the number probe, $\#^0$.

Importantly, it will be shown that this account not only derives the very effects typically attributed to a 'salience' hierarchy or scale (§3.2), but also derives which agreement markers in the absolutive series do and do not resemble the corresponding strong pronouns, as well as which morphemes encode number suppletively and which contain an isolable number morpheme (§3.4). This will render the account proposed here empirically superior to one based directly on hierarchies/scales.[17]

Recall that the same agreement markers found in the AF construction are also found in regular transitives and intransitives in Kichean (see chapter 3); as will be shown §4.6, the account proposed here derives the behavior of absolutive agreement in non-AF clauses, as well. I will begin, however, with agreement in the AF construction, since it is in some sense the limiting case in terms of the complexities of $\varphi$-agreement in Kichean.

### 4.4.1. The basic clause structure and derivation

I will continue to assume that just as in B&R's account of the PCC, probing for person features in Kichean occurs separately from, and prior to, probing for number features. (There is in fact independent evidence, coming from the Mayan family itself, for such a separation; see the APPENDIX

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[17] A more detailed comparison with hierarchy/scale-based approaches will be undertaken in chapter 7.

to this chapter, §4.A, for details.) The basic structure of the Kichean AF clause will therefore be
as follows:

(65)   BASIC CLAUSE STRUCTURE IN KICHEAN AF
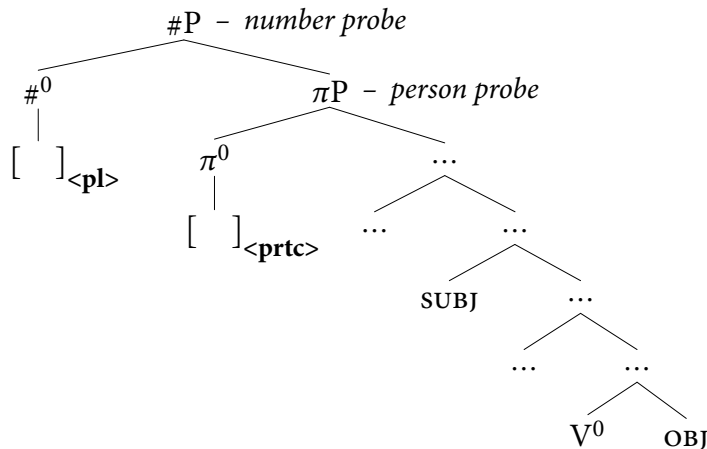


As discussed in §4.2, the person and number probes $\pi^0$ and $\#^0$ in Kichean are feature-relativized to
probe for [participant] and [plural], respectively. Consequently, these probes will skip nodes that
lack the requisite features (much like interrogative $C^0$, which skips nodes that lack the [*wh*] feature).

Now recall that in B&R's system, being probed by $\pi^0$ results in clitic doubling (see §4.1; on the
idea that clitic doubling arises when a nominal is probed by a specific functional head, see also
Harizanov to appear, Kramer to appear); and recall that such clitic doubling is not optional in any
sense, nor is it dependent on any particular semantic properties of the doubled noun phrase (cf. the
obligatory and semantically indiscriminate clitic doubling of dative arguments in Basque).

In B&R's account of the PCC, the noun phrase probed by $\pi^0$ (the person probe) was always the
structurally closest one—in a ditransitive construction, this amounted to the indirect object—and
therefore, this was also invariably the noun phrase that underwent clitic doubling. But since $\pi^0$ in
Kichean is relativized to [participant], it will not necessarily be the closest noun phrase in (65) that
is probed by $\pi^0$. In particular, when the subject is 3rd person (and therefore bears no [participant]
feature) but the object is 1st/2nd person, the noun phrase probed by $\pi^0$ will be the object (as argued
in §4.2.1).

Holding constant B&R's assumption that $\pi^0$ triggers clitic doubling of the probed nominal, the prediction is that in a Kichean AF clause, the closest bearer of [participant] will be doubled:[18]

(66) CLITIC DOUBLING IN KICHEAN AF
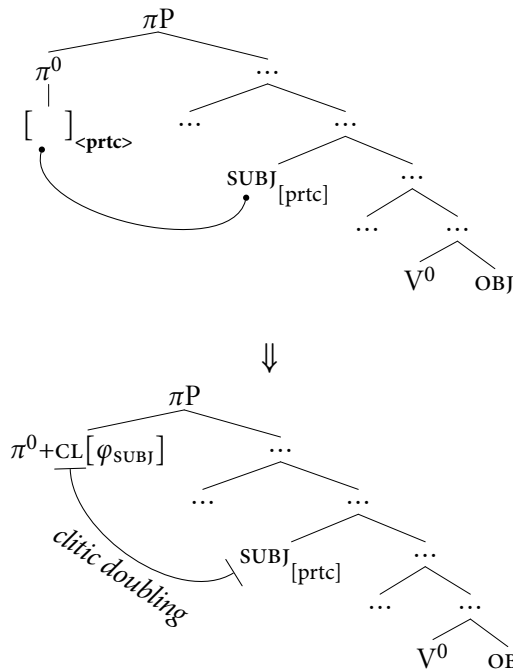
    a. 1ST/2ND-PERSON SUBJECT,         b. 3RD-PERSON SUBJECT,
        ANY OBJECT                     1ST/2ND-PERSON OBJECT
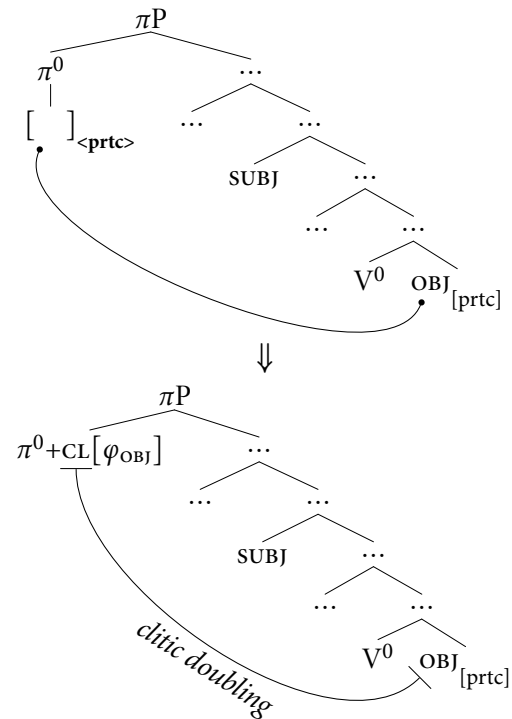


Given the derivations sketched here, as long as we hold constant the set of $\varphi$-features that the closest [participant]-bearing argument carries, there should be no difference in the agreement morphology (now analyzed in terms of clitic doubling) that arises when that argument is in subject position vs. object position. Thus, for example, a combination of *<1sg subject, 3sg object>* should yield the same agreement morphology as a combination of *<3sg subject, 1sg object>*. This prediction is borne out: as

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[18]The same result would obtain if we were to adopt Béjar & Rezac's (2009) *Cyclic Agree* proposal. In the Cyclic Agree system, the relevant probe is located above the object but below the subject (rather than outside of the verb phrase altogether, as assumed here; cf. (66a–b)). The object is probed first, and the subject is then probed (via *Cyclic Expansion*) only if the features sought were not found on the object. The same two derivational sequences shown in (66a–b) would still apply, *mutatis mutandis*, yielding the same outcome we have descriptively characterized as omnivorous agreement. In light of this equivalence, and in the interest of maintaining the parallelism established in §4.2.1 with *wh*-probing, I will continue assuming that both potential targets are located below the relevant $\varphi$-probe(s) in Kichean—though as far as I can tell, nothing crucially hinges on this choice.

already noted in §3.2, the $\varphi$-feature combinations of the two core arguments in Kichean AF are fully commutative, yielding no change in the resulting agreement morphology. A representative pair of examples, repeated from earlier, is given in (67a–b).

(67)  a.  ja   yïn x-**in/*Ø**-axa-n              ri   achin                          (Kaqchikel)

        FOC me COM-**1sg/*3sg.ABS**-hear-AF the man

        'It was me that heard the man.'

    b.  ja   ri   achin x-**in/*Ø**-axa-n              yïn

        FOC the man   COM-**1sg/*3sg.ABS**-hear-AF me

        'It was the man that heard me.'                                              *[=(18a–b)]*

Furthermore, as argued in detail §4.3, clitic doubling is *featurally coarse*: it must copy the entire $\varphi$-feature set of the doubled noun phrase, even if clitic doubling was triggered by a probe seeking only a subset of the $\varphi$-feature geometry. (This assumption was already implicit in B&R's own proposal, as shown in §4.1.) Thus, while Kichean $\pi^0$ probes only for [participant] features, the clitic that arises as the result of this probing will reflect *the full $\varphi$-set of the [participant]-bearing target*. This means that in (66a–b), the resulting clitic will also reflect the number features of the [participant]-bearing argument, alongside its person features—even if those conflict with the number features of the other core argument. As noted in §3.2, this is precisely what one finds in Kichean AF with argument combinations of this sort:[19]

(68)  a.  ja   rje'   x-**i**-tz'et-ö        yïn

        FOC them COM-**1sg**-see-AF me

        'It was them who saw me.'

    b.  * ja   rje'   x-**oj/Ø/e**-tz'et-ö         yïn

        FOC them COM-**1pl/3sg/3pl**-see-AF me                                      *[=(20a)]*

---

[19]On the interaction of plurality an animacy/inanimacy in Kichean, see fn. 9 in chapter 3.

(69)  a.  ja   rja'  x-**oj**-tz'et-ö    röj

         FOC him COM-**1pl**-see-AF us

         'It was him who saw us.'

     b. * ja   rja'  x-**i/Ø/e**-tz'et-ö        röj

          FOC him COM-**1sg/3sg/3pl**-see-AF us                    *[=(21a)]*

Note especially (68), where the subject is plural, but the resulting agreement marker is still singular. This is because the [participant]-bearing object, whose entire φ-set was copied under clitic doubling, is singular.

As discussed in §3.4, the forms of 1st/2nd person absolute agreement markers in Kichean—which are the markers found in examples like (68–69)—show no sign of an independent plural morpheme. The morpho-phonological relation between the singular 1st/2nd person markers and their plural counterparts is entirely suppletive. The fact that there is no isolable plural morpheme to be found here can be naturally accommodated if the markers in question come about as the result of clitic doubling, and therefore involve the copying of complete φ-sets.

But perhaps the strongest support for clitic doubling as the mechanism that gives rise to these 1st/2nd person markers comes from their actual forms. Recall from §3.4 that it is precisely the 1st/2nd person members of the absolute series of agreement markers that are morpho-phonologically reduced variants of the corresponding strong pronouns:

(70)

|      | ABS agreement marker | strong pronoun |
|------|:--------------------:|:--------------:|
| 1sg  | *i(n)-*              | *yïn*          |
| 1pl  | *oj-*                | *röj*          |
| 2sg  | *a(t)-*              | *rat*          |
| 2pl  | *ix-*                | *rïx*          |

The current approach straightforwardly derives this: by hypothesis, these morphemes arise via clitic doubling; and clitics are, in many if not all cases, literally *reduced pronouns* (as noted earlier, the

same mechanism will also derive the appearance of these forms in regular Kichean transitives and intransitives; see §4.6).

On this account, the overt agreement morphology found with 1st/2nd person arguments—which probing by $\pi^0$ gives rise to—is *not* the overt spellout of valued features on the syntactic probe, but a clitic adjoined to $\pi^0$. There is no reason to think that the syntactic features on $\pi^0$ are not also valued when a [participant]-bearing argument is found; after all, as noted in §3.1, both arguments in the AF construction are non-oblique, and should therefore be accessible for such valuation. One may therefore wonder why these syntactic features receive no overt phonological expression of their own. It is of course conceivable that as a matter of lexical content, the exponents in question are all null (cf. person agreement on non-auxiliary verbs in English). But as we will see below, it will prove helpful to make the following assumptions:

(71)   MORPHOLOGICAL COMPETITION IN KICHEAN ABSOLUTIVE AGREEMENT SLOT

In Kichean:

**a.** the overt exponence of $\pi^0$, $\#^0$, and any clitics adjoined to them, all compete for a single morphological slot

**b.** a clitic will always beat out other competing morphological material

In other words, the clitic generated in (66) competes with $\pi^0$ (as well as with $\#^0$, which probes next) for overt expression in the single available morphological slot; and given (71b), phonological expression of the clitic takes precedence. (It is possible that (71b) is itself derivable from more general principles, e.g. a general preference for expressing pronominal material at the expense of functional material, rather than the other way around; I will not pursue this matter further, here.)

The idea that the person marker (or more accurately, given the current account, the $\pi^0$-adjoined clitic) blocks the exponence of $\#^0$ from surfacing finds support in the behavior of verbal agreement in Tzotzil, where a morpheme indicating plurality can surface in the same verbal complex as the

corresponding person marker exactly in those cases where the person marker is prefixal and the number marker is suffixal (see the APPENDIX to this chapter, §4.A, for details).

Returning to Kichean, it is important to note that the sort of morphological competition outlined in (71) does not undo the earlier observation regarding the absence of an independently identifiable plural morpheme in 1st/2nd person absolutive agreement markers. The crucial point was that these markers *do* express number distinctions (e.g. *i(n)-* "1sg.ABS" vs. *oj-* "1pl.ABS"), they just do so suppletively; and it was the suppletive nature of these distinctions, as well as the particular forms of the markers themselves, that aligned well with the clitic doubling analysis.

In the part of the derivation sketched up to this point, only $\pi^0$ has probed. As in §4.1, the next head merged will be $\#^0$, the number probe. Given (71b), the overt effects of probing by $\#^0$ will not be visible unless no clitic was generated that would occupy the single morphological agreement slot. Recall also from the discussion of B&R's proposal that while being probed by $\pi^0$ results in clitic doubling, being probed by $\#^0$ does not. Thus, if for some reason $\pi^0$ fails to trigger clitic doubling of any argument whatsoever, the agreement slot will in principle be available for the exponence of $\#^0$ to surface.

Consider, therefore, the derivation of AF clauses in which both the subject and object are 3rd person. Since $\pi^0$ in Kichean is feature-relativized to [participant], it will be unable to target either of the two core arguments (since neither carries this feature). I leave aside, for the moment, the question of what (if anything) *is* targeted by $\pi^0$ in such a derivation; this issue is at the center of chapter 5. But if neither of the core arguments can be targeted by $\pi^0$, then we expect that no clitic doubling would be triggered in this case. This, in turn, means that it is precisely in this scenario— where both core arguments are 3rd person—that we would have a chance to see the valued features on $\pi^0$ and/or $\#^0$ spelled out overtly (since there is no clitic that would compete with them for the single agreement slot).

Given (71), it is conceivable that $\pi^0$ and $\#^0$ would compete amongst themselves for spellout in the single agreement slot. But recall from §3.4 that what we would pre-theoretically characterize

as the 'absolute agreement paradigm' in Kichean contains no overt morphology that would be associated with 3rd person features; as a result, the only overt material that stands to appear in this agreement slot is the spellout of $\#^0$. This is exactly what we find: as discussed in §3.2, in Kichean AF clauses where both core arguments are 3rd person we find either **(i)** no overt agreement morphology at all; or **(ii)** the morpheme *e-* (which as noted in §3.4, is not really a reduced version of any extant Kichean pronoun).

As also noted in §3.4, there is some support for viewing *-e-* as a general marker of plurality in Kichean. In this vein, we may take *e-* to be the spellout of $\#^0$ that has entered into an agreement relation with a [plural]-bearing target in the course of the derivation. If $\#^0$ is relativized to seek bearers of [plural] (much like $\pi^0$ is relativized to seek bearers of [participant]), we get another instance of the general pattern sketched in §4.2.1: $\#^0$ will skip over projections that lack [plural], even if those projections are nominal; and valued [plural] on $\#^0$ will arise when either argument (subject or object) carries a [plural] feature.[20]

A pair like (72a–b) (repeated from earlier) can therefore be derived as in (73a–b):

(72)  a. ja    rje'   x-**e/*Ø**-tz'et-ö          rja'

        FOC them COM-**3pl/*3sg.ABS**-see-AF him

        'It was them who saw him.'

---

[20]One concern that might arise about identifying *e-* as the overt exponence of $\#^0$ is that it is *TAM-invariant*: it shows no allomorphy or suppletion based on the tense or aspect of the clause in which it appears. Compare (i.a) and (i.b), for example:

(i)  a. x-**e**-wär
     COM-**3pl.ABS**-sleep
     'They have slept.'

   b. y-**e**-wär
     INC-**3pl.ABS**-sleep
     'They are sleeping.'

Following Arregi & Nevins (2008, 2012), TAM-invariance seems to be the most reliable diagnostic for distinguishing clitics from the spellout of agreement heads; and on this diagnostic, *e-* appears to pattern with clitics. But crucially, TAM-invariance is a unidirectional diagnostic: while it rules out clitics that exhibit TAM-based allomorphy or suppletion, it does not rule out agreement heads whose spellout does not show such variance.

b. ja   rja'  x-**e/\*Ø**-tz'et-ö            rje'

FOC him COM-**3pl/\*3sg.ABS**-see-AF them

'It was him who saw them.'                                                        *[=(46a–b)]*

(73)   RELATIVIZED PROBING FOR [PLURAL]

   a. PL SUBJECT, SG OBJECT          b. SG SUBJECT, PL OBJECT
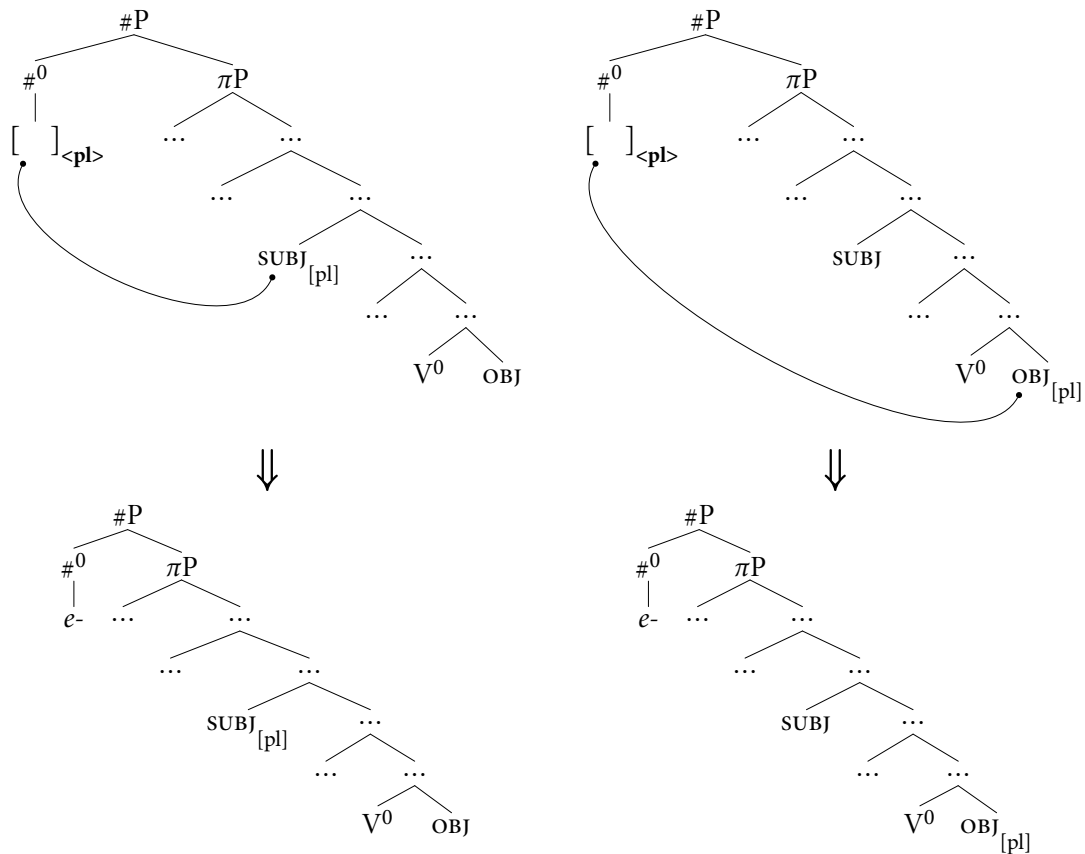


The derivations sketched in (73a–b) will take place whether the arguments in question are 3rd person or not; but following (71), it is only when both arguments are 3rd person—and therefore, probing by $\pi^0$ does not give rise to a clitic—that the spellout of $\#^0$ will be observable on the surface.

We now have in place the basis for a derivational account of $\varphi$-agreement in the Kichean AF construction. I have assumed that just like $C^0$ probing for a *wh*-feature (§4.2), a $\varphi$-probe that has failed to find the features it seeks on the subject will skip the subject altogether, entering into a single

agreement relation with the object (when the object does bear the features in question).[21] On this view, since Kichean $\pi^0$ is relativized to [participant], arguments that do not bear this feature (i.e., 3rd person arguments) will be skipped by this probe—and therefore, not undergo clitic doubling. Consequently, if both the subject and the object are 3rd person, the single morphological agreement slot on the AF verb will remain available for the overt exponence of $\#^0$ (in the event that the latter is overt).

This accounts not only for the distribution of agreement markers in the AF construction, but also for the morpho-phonological distinctions observed in §3.4. The 1st/2nd person agreement markers resemble the corresponding strong pronouns because they are clitics; conversely, since agreement with 3rd person arguments in the Agent-Focus construction is the overt spellout of $\#^0$, it spells out as what may be a general-purpose plural marker in Kichean (-*e*-).

The results of this account are summarized in the table in (74):

(74)    verbal morphology generated in Agent-Focus (Kaqchikel)

| SUBJ/OBJ $\varphi$-features | probing for [participant] (by $\pi^0$) finds a target? | clitic whose creation is triggered | | probing for [plural] (by $\#^0$) finds a target? | exponent of $\#^0$ | actual morph. found in agreement slot |
|---|---|---|---|---|---|---|
| {1sg, 3sg} | *yes* | *i(n)*- | (1sg) | *no* | Ø | *i(n)*- |
| {2sg, 3sg} | *yes* | *a(t)*- | (2sg) | *no* | Ø | *a(t)*- |
| {1pl, 3sg} | *yes* | *oj*- | (1pl) | *yes* | *e*- | *oj*- |
| {2pl, 3sg} | *yes* | *ix*- | (2pl) | *yes* | *e*- | *ix*- |
| {1sg, 3pl} | *yes* | *i(n)*- | (1sg) | *no* | Ø | *i(n)*- |
| {2sg, 3pl} | *yes* | *a(t)*- | (2sg) | *no* | Ø | *a(t)*- |
| {1pl, 3pl} | *yes* | *oj*- | (1pl) | *yes* | *e*- | *oj*- |
| {2pl, 3pl} | *yes* | *ix*- | (2pl) | *yes* | *e*- | *ix*- |
| {3sg, 3sg} | *no* | *N/A* | | *no* | Ø | Ø |
| {3pl, 3sg} | *no* | *N/A* | | *yes* | *e*- | *e*- |
| {3pl, 3pl} | *no* | *N/A* | | *yes* | *e*- | *e*- |

---

[21]In §4.5.1, I will provide arguments against a *Multiple Agree* analysis of the same pattern.

The notation $\{\varphi_1, \varphi_2\}$ is fully commutative, since in Kichean AF, there is never any difference between the agreement morphology found with <SUBJ$[x]$, OBJ$[y]$> and <SUBJ$[y]$, OBJ$[x]$> for any pair of $\varphi$-feature bundles $x$ and $y$. This is derived, on the account presented here, from the "skipping" property of relativized probing (§4.2). Combinations not listed in (74) are ruled out either on binding-theoretic grounds (e.g. {1pl, 1sg}), or due to the AF person restriction (see §4.4.2, below). The final column in (74), representing the actual morphology found on the AF verb in each case, is the result of the aforementioned morphological competition for the single agreement slot (71): if there is a morpheme in the *clitic* column, the agreement slot (i.e., the final column) will contain that clitic; only in the event that no clitic is generated does the morpheme in the $\#^0$ column (if it is non-null) stand to appear in the agreement slot. The reader will notice that this derives the complete pattern of agreement in the Kichean AF, given earlier in (22) (§3.2).

I now turn to the AF person restriction, and how it is derived on the current proposal.

### 4.4.2. Licensing asymmetries in Kichean AF, and the AF person restriction

Despite the clear similarities in Kichean between the mechanisms that apply to [participant] (66) and to [plural] (73), there is one crucial difference between the two, having to do with the licensing of arguments. Recall from B&R's account of the PCC (§4.1) that 1st/2nd person arguments are assumed to require licensing-by-agreement; this is captured in B&R's *Person Licensing Condition* (PLC), repeated here:

(75)  PERSON LICENSING CONDITION (Béjar & Rezac 2003)

Interpretable 1st/2nd person features must be licensed by entering into an `Agree` relation

with an appropriate functional category.                                    *[=(40)]*

As noted in §4.1, an assumption of this sort is part and parcel of virtually every syntactic account of the PCC; as such, it is motivated independently of Kichean in general, or the AF construction in particular. Now let us consider the derivation of Kichean AF clauses—and in particular, the portion

of their derivation that is sketched in (66)—in light of this condition on the licensing of 1st/2nd person arguments.

Recall that on the current proposal, probes like $\pi^0$ and $\#^0$ simply skip targets that lack the feature for which they are searching. This means that $\pi^0$, for example, will enter into at most one agreement relation, with the closest argument that carries a [participant] feature. (Arguments against a *Multiple Agree* approach to the same facts will be provided in §4.5.1.) By hypothesis, then, $\pi^0$ can license at most one 1st/2nd person argument, for the purposes of the PLC (75). The question is, are there any other licensors in the Kichean AF clause that could license another, second 1st/2nd person argument.

Unlike normal transitive clauses in Kichean, which have separate person/number agreement with both the (ergative) subject and the (absolutive) object, Kichean AF clauses have only one set of person/number agreement markers, taken from the absolutive series (§3.2). This means that there is no second $\pi^0$ in the AF clause. Therefore, the only other potential licensor in the AF clause would be the $\#^0$ probe associated with the same set of agreement markers. But now note the way B&R phrase their PLC (75): it is a condition on the licensing of 1st/2nd person <u>features</u>—or in our current terms, [participant] features—rather than the licensing of nominals more generally. This is for good reason: it is quite obvious that agreement with a *wh*-probe, or a *Focus* probe, etc., could not and should not license nominals for the purposes of the PLC (75). From this perspective, a [plural] probe (which $\#^0$ in Kichean is) would be no different: it does not agree with its target in [participant], and is therefore irrelevant for this kind of licensing.[22]

What we are left with is a single licensor for [participant] features ($\pi^0$), in a clause with two core arguments. With these premises in place, the *AF person restriction* (§3.3; repeated below) follows straightforwardly:

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[22] An alternative way of phrasing the PLC (75) would thus be as follows:

(i)  Person Licensing Condition (alternative formulation)
    A [participant] feature on a pronoun must participate in a valuation relation.

This formulation transparently rules out the possibility of satisfying the PLC through agreement in features like [plural], [*wh*], or [*Focus*].

(76)  THE AF PERSON RESTRICTION

In the Kichean AF construction, at most one of the two core arguments can be

1st/2nd person.                                                                        *[=(25)]*

To see why, suppose that the object is 1st/2nd person (assume for the present purposes that all

binding-theoretic conditions are satisfied). Given the PLC (75), this means that the [participant]

feature on the object must enter into an agreement relation. On the current proposal, AF clauses

that exhibit agreement with the object involve the probe $\pi^0$ skipping the subject altogether; if so, the

subject in the same clause cannot be of the kind that requires its own licensing by way of agreement—

in other words, the subject cannot be 1st/2nd person.

Conversely, if the subject is 1st/2nd person (i.e., the subject bears [participant], and is therefore

the kind of target that the probe is searching for), standard minimality considerations apply. As

a result, the single argument with which $\pi^0$ enters into an agreement relation must be the subject.

Consequently, the object cannot be of the kind that requires its own licensing by way of agreement—

in other words, the object cannot be 1st/2nd person.

Thus, the relativized probing approach sketched in §4.2, coupled with common assumptions

regarding the licensing of speech act participants (namely, the PLC (75)), derives the restriction in

(76) on argument/person combinations in the Kichean AF construction.

The state of affairs differs significantly when we turn to agreement in number features. First,

as already noted, probing for [plural] by $\#^0$, and the agreement relations established as a result,

are irrelevant for the purposes of the PLC (75) (not unlike agreement in [*wh*] or [*Focus*] features).

Second, just as agreement in [plural] features does not license arguments, the appearance of [plural]

on an argument does not require licensing by agreement: there is no restriction in Kichean that

parallels (76) but forbids the co-occurrence of two [plural]-bearing arguments as opposed to two

[participant]-bearing ones (a hypothetical *AF number restriction*). That no such restriction exists is

demonstrated by examples like (77a–b):

(77)  a.  ja  **rje'**  x-oj-tz'et-ö        **röj**

FOC **them** COM-1pl.ABS-see-AF **us**

'It was them who saw us.'

b.  **röj** x-oj-tz'et-ö         **rje'**

FOC **us**  COM-1pl.ABS-see-AF **them**

'It was us who saw them.'

In (77a–b), both the subject and the object are plural. The agreement marker that arises in both cases is the clitic *oj-*, a reduced form of the 1st person plural pronoun *röj*. Aside from being relativized to [plural] features, $\#^0$ obeys minimality as any other probe would, and so we can conclude that in both cases, $\#^0$ has entered into an agreement relation with the plural subject. The derivation of such examples is shown in (78); while the exponent *e-* is shown in (78), recall that the overt exponence of $\#^0$ will only be observable on the surface in instances where probing by $\pi^0$ has not given rise to a clitic (see (71), above), which is not the case in examples like (77a–b). (For examples in which this *e-* can be observed, see (72a–b), above.)

(78) PLURAL SUBJECT, PLURAL OBJECT
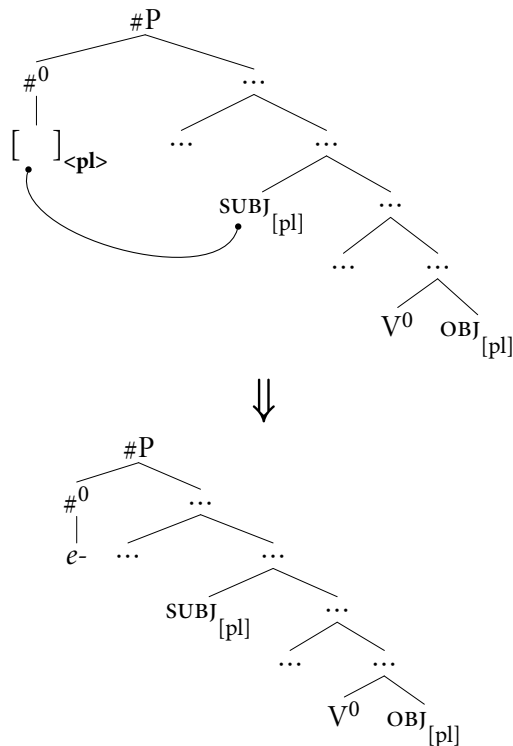


Crucially, as the grammaticality of (77a–b) attests, the presence of a plural subject (which is agreed with by #$^0$) does not preclude an object that is also plural from appearing in the same AF clause.

Compare this with the parallel configuration involving [participant] features—i.e., a subject and object both of which are 1st/2nd person—which as already shown in §3.3, is ruled out (regardless of the agreement morphology used):

(79)  a. * ja    rat      x-in/at/Ø-ax-an              yin

         FOC you(sg.) COM-1sg/2sg/3sg.ABS-hear-AF me

         *Intended*: 'It was you(sg.) that heard me.'

     b. * ja    yin x-in/at/Ø-ax-an            rat

         FOC me COM-1sg/2sg/3sg.ABS-hear-AF you(sg.)

         *Intended*: 'It was me that heard you(sg.).'                    *[=(24a–b)]*

On the current account, this difference between [participant] and [plural] features and their interaction with licensing is due to the PLC applying specifically to [participant] features. While stipulative in the context of the current account, this stipulation is in fact motivated by the behavior of a separate empirical domain: it is needed to derive the existence of a Person Case Constraint but no analogous Number Case Constraint (see §4.1 for details).

We have now arrived at a comprehensive account of $\varphi$-agreement in the Kichean Agent-Focus construction. To summarize, the derivation involves separate $\pi^0$ and $\#^0$ probes, relativized to [participant] and [plural], respectively (see the APPENDIX to this chapter, §4.A, for evidence from within the Mayan family for this separation of person and number agreement). As shown in §4.5, when the features sought by the probe are not present on the subject, the probe skips the subject altogether and enters into an agreement relation directly with the object (at least when the object does in fact bear the features in question).

Building on Béjar & Rezac (2003) (see also Harizanov to appear, Kramer to appear), being probed by $\pi^0$ triggers clitic doubling of the probed argument, while being probed by $\#^0$ does not. A further asymmetry between $\pi^0$ and $\#^0$ concerns their interaction with licensing. Since the PLC is specific to [participant] features, two bearers of [participant] cannot co-occur (the *AF person restriction*; §3.3), but two bearers of [plural] can. Finally, since $\pi^0$ will only target a bearer of [participant], in derivations that lack such an argument (i.e., when both arguments are 3rd person) no clitic will be generated, leaving the single agreement slot available for the exponence of $\#^0$ (should the latter be overt, which is the case when it has agreed with a [plural]-bearing argument).

This analysis accounts for the choice of agreement target for each combination of subject-object features in Kichean AF (§3.2), but also for the morpho-phonological distinctions exhibited by the agreement markers in question (§3.4): only the 1st/2nd person agreement markers resemble the corresponding strong pronouns, because only they arise through clitic doubling; 3rd person agreement markers do not. Conversely, agreement with 3rd person arguments exhibits what may be an isolable plural morpheme, which is derivable on the current account since this morpheme

is analyzed as the overt spellout of (plural) #$^0$. This contrasts with the 1st/2nd person agreement markers which—like the pronouns they are derived from—encode number suppletively (in line with the featural coarseness of clitic doubling; §4.3).

As noted at the beginning of §4.4, this account compares favorably to an account of the same agreement pattern in terms of 'salience' hierarchies or scales, since that account would have nothing to say regarding the finer morpho-phonological properties that the current account derives, nor would it explain the AF person restriction. Other problems with a hierarchy/scale-based account will be discussed in chapter 7.

In §4.6, I will show how the same account can be extended to regular transitives and intransitives in Kichean. Before turning to that, however, I will address several possible alternative approaches to the facts surveyed so far, and discuss how they fare in comparison to the account sketched here.

## 4.5. Some alternative analyses, and their drawbacks

### 4.5.1. Multiple Agree

The discussion so far has taken it for granted that what *looks* like a probe skipping over a potential target XP is indeed that. Probes like an interrogative C$^0$ looking for [*wh*]-bearing XPs, or Kichean $\pi^0$ looking for [participant]-bearing DPs, appear to enter only into a single agreement relation—the relation between the probe and the feature-appropriate target it eventually finds.

This assumption can be questioned, however. There are proposals in the literature that appeal to a one-to-many agreement relation between probes and goals, dubbed *Multiple Agree* (Anagnostopoulou 2005, Hiraiwa 2001, 2004, *a.o.*). In line with these proposals, one might hypothesize that the derivation of Kichean AF clauses that include, e.g., a 3rd person subject and a 1st/2nd person object involve Multiple Agree of $\pi^0$ with *both* core arguments:

(80)
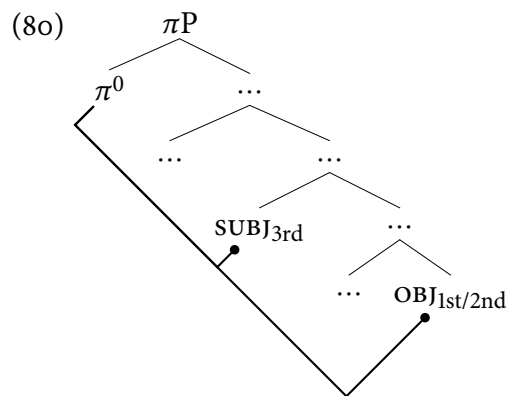


There are reasons to reject such an analysis as it pertains to Kichean, some of them theoretical and some empirical. On the theoretical side, Multiple Agree relations—at least those implicated in the work cited above—adhere to a particular restriction concerning the feature combinations borne by the different targets involved. Specifically, the second target in a Multiple Agree relation cannot bear features that were not already present on the first target. For example, Anagnostopoulou (2005) exploits this restriction in her account of the PCC, to rule out 3rd person indirect objects (lacking [participant] features) co-occurring with 1st/2nd person direct objects (which carry [participant] features) in configurations where the indirect object is structurally higher than the direct object:

(81)    A RESTRICTION ON Multiple Agree (Anagnostopoulou 2005)
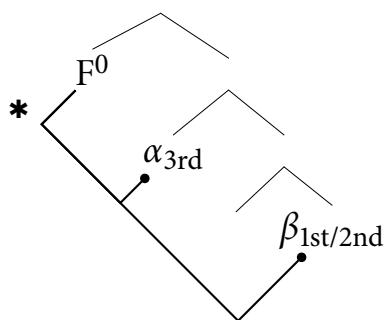


But modulo differences in labeling, this is exactly the structural configuration we are faced with in an example like (82), repeated from earlier: the probe c-commands two possible targets, the higher of which is 3rd person and the lower of which is 1st/2nd person.

(82)  ja   ri   achin x-**at/\*Ø**-ax-an              rat

FOC the man   COM-**2sg/\*3sg.ABS**-hear-AF you(sg.)

'It was the man that heard you(sg.).'                                    *[=(45b)]*

Crucially, unlike in PCC contexts, this argument combination is *felicitous* in the Kichean AF construction, even though it does not comply with the restriction in (81).

Thus, if the Multiple Agree relation responsible for omnivorous person in the AF construction is to be understood as the same Multiple Agree relation proposed in the literature—which obeys the restriction in (81)—it cannot account for the facts observed in Kichean.

It is conceivable (if not terribly pleasing, theoretically) that there would be a second one-to-many agreement relation—call it Multiple Agree$_2$—that is not subject to the restriction in (81). Let us consider what the properties of Multiple Agree$_2$ would have to be, in order to account for the facts at hand. If Multiple Agree$_2$ encounters a 3rd person target first, it must keep probing, and a subsequent 1st/2nd person target would overwrite the values on the probe. If, on the other hand, it encounters a 1st/2nd person target first, Multiple Agree$_2$ does not keep probing—or at least, subsequent 3rd person targets will not affect the features on the probe (otherwise a 1st/2nd person subject with a 3rd person object would result in "3sg.ABS" agreement morphology, contrary to fact; cf. (45a)).

As far as I can see, this renders Multiple Agree$_2$ almost identical to regular, *single* agreement (given the relativized probing property established in §4.2). This, coupled with the ad hoc nature of Multiple Agree$_2$ (in particular, the ways in which it differs from any kind of Multiple Agree operation implicated in the literature) might already constitute an argument against Multiple Agree$_2$. Its theoretical status aside, however, there is an empirical argument against Multiple Agree$_2$ as the basis for agreement in the Kichean AF construction. The argument comes from the AF person restriction (76), which prohibits more than one 1st/2nd person core argument from appearing in the AF construction (see §3.3). As shown in §4.4.2, a relativized probing account, in which the probe only ever enters into an agreement relation with a single argument in the clause, is able to

straightforwardly derive this restriction from independently motivated licensing conditions on the appearance of speech-act participants (namely, B&R's PLC (75)).

The same cannot be said regarding Multiple Agree$_2$: if the person probe is able to agree with more than one argument, then given the PLC, more than one 1st/2nd person argument should be able to be licensed by this one probe.[23] We could instead pursue an account that eschews the PLC, and seeks to derive the AF person restriction from the restriction on Multiple Agree schematized in (81), above, which prohibits the second target in an Multiple Agree relation from bearing any $\varphi$-featural content not already borne by the first target. We have already seen that in Kichean AF, a 3rd person subject can co-occur with a 1st/2nd person object, in apparent violation of this restriction. But suppose that for the purposes of (81), 3rd person targets were systematically ignored, and the effects of this restriction were therefore limited to combinations of 1st person and 2nd person arguments only.

Given the $\varphi$-feature geometry adopted in §4.2.2, the $\varphi$-features borne by 2nd person arguments (namely, [participant]) are a subset of the $\varphi$-features borne by 1st person arguments (namely, [participant, author]). Therefore, even given the Multiple Agree restriction in (81), we would expect a 2nd person argument to be able to serve as the second target in an Multiple Agree$_2$ relation when the first target was a 1st person argument. But this is not the attested behavior in Kichean AF: the AF person restriction is entirely symmetric, ruling out combinations of a 1st person subject with a 2nd person object *or vice versa* (§3.3).

The same problem arises in an alternative $\varphi$-feature geometry, where 2nd person arguments are distinguished from 1st person ones by a feature, [addressee], borne by the former but not the latter. This is due, once again, to the symmetric nature of the AF person restriction. Therefore, in order to derive the AF person restriction from the Multiple Agree restriction in (81), we need a $\varphi$-geometry where *neither* 1st person arguments nor 2nd person ones bear a subset of the features

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[23]One could entertain a modification of the PLC (75), such that the agreement relation licensing a 1st/2nd person pronoun would need to have a distinct overt reflex, in an attempt to explain why Multiple Agree$_2$ with both the subject and the object cannot license both arguments, PLC-wise. I think the reader would agree that this is a reductio of the Multiple Agree approach to the point where the 'Multiple' part has been voided of any testable consequence whatsoever. I therefore do not consider this a viable alternative to the line of reasoning pursued in the text.

borne by the other. This could be achieved using a $\varphi$-geometry that includes *both* [author] and [addressee] features. This is the type of geometry argued for by Harley & Ritter (2002) for languages with a 1st person (plural) exclusive-vs.-inclusive distinction: 1st person exclusive is represented using [participant, author], whereas 1st person inclusive is represented using [participant, author, addressee]. If we further stipulate that 2nd person is represented using [participant, addressee] (rather than just [participant], which is sufficient to represent 2nd person, even on Harley & Ritter's 2002 original proposal), the result is that neither 2nd person nor 1st person exclusive would be a subset of one another, and so (81) would rule out a combination of two such arguments *in any order*. Notice, though, that this is not the case for 1st person *inclusive*: both 1st person exclusive and 2nd person are subsets of 1st person inclusive, featurally speaking.

As the reader may have noticed, however, the Kichean languages lack a 1st person exclusive-vs.-inclusive distinction, in the first place; and crucially, this rules out the type of account just sketched. For one thing, the interpretation of 1st person plurals in Kichean is simply not exclusive of the addressee, and there is therefore no clear justification for choosing the *exclusive* featural representation, rather than the *inclusive* one, as the one considered for the purposes of (81) (and as noted above, the Multiple Agree$_2$ account would not work if the inclusive representation were chosen instead). But more important is McGinnis' (2005) observation, that in no language that lacks an exclusive-vs.-inclusive distinction, is the 2nd person plural pronoun used to refer to pluralities that include both the addressee and the speaker. A $\varphi$-geometry that includes an [addressee] node, however, affords this possibility.[24] Therefore, McGinnis argues, the unmarked $\varphi$-geometry includes only an [author] node below [participant]; and an [addressee] node is only added by the learner in the face of positive evidence—namely, a morphological distinction between 1st person exclusive

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[24]To see this, suppose that the lexical entry for *we* was specified as [plural, participant], while the lexical entry for *y'all* was specified as [plural, participant, addressee]. Given a system where more specified lexical entries take precedence over less specified ones (as is the case in *Distributed Morphology*, for example; Halle & Marantz 1993), we would predict that *y'all* would be used to refer to any plurality that includes the addressee. It is conceivable, of course, that it is merely an idiosyncratic fact about the lexical entries of English pronouns that *we* is specified for [plural, participant, author], while *y'all* is specified only for [plural, participant]; but the fact that there is <u>no</u> language where pluralities that include both the addressee and the speaker are collapsed with "pure" 2nd person pluralities suggest that this is more than an idiosyncrasy. This is the crux of McGinnis' (2005) argument.

and inclusive. Crucially, since Kichean lacks such a distinction, it cannot have both an [author] node and an [addressee] node in its $\varphi$-geometry. This rules out even the attenuated version of this Multiple Agree$_2$ alternative.

To summarize, a Multiple Agree approach to agreement in the Kichean AF construction would have to posit a new kind of one-to-many relation, which I have dubbed Multiple Agree$_2$, that differs from the Multiple Agree relation put forth in the literature. The properties that Multiple Agree$_2$ would need to have render it nearly indistinguishable from *single* agreement (given relativized probing; §4.2), with one important exception: Multiple Agree$_2$ fares worse than relativized probing in deriving the AF person restriction.

It is beyond the scope of the current work to address the question of whether Multiple Agree is ever truly an available operation (see Haegeman & Lohndal 2010 for some discussion); the point of this sub-section is merely to show that it is not the correct account of agreement in the Kichean AF construction.

### 4.5.2. Feature percolation

There is another alternative that one might pursue to account for the omnivorous person effects found in the Kichean AF construction: feature percolation. Let us suppose that the features on a given XP can, under certain circumstances, make their way (or "percolate") onto the YP node that most closely dominates XP (see Chomsky 1973, Cowper 1987, Gazdar et al. 1985, Grimshaw 2000, Kayne 1983, Webelhuth 1992, *a.o.*), as schematized in (83):

(83)   FEATURE PERCOLATION
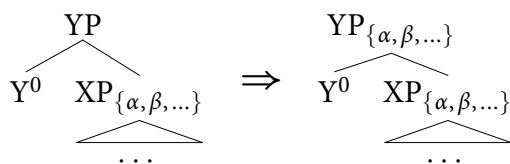
It is not entirely clear that feature percolation of this sort is a necessary part of the syntactic apparatus (see Heck 2004, Cable 2007, 2010). But if it is, one might use it to derive what looks like omnivorous agreement, in the following fashion:

(84)  OMNIVOROUS AGREEMENT AS FEATURE PERCOLATION: STEP 1

$$
\begin{array}{ccc}
vP & & vP \\
\diagup \diagdown & \Rightarrow & \diagup \diagdown \\
\text{SUBJ}_{\varphi_1} \quad v' & & \text{SUBJ}_{\varphi_1} \quad v' \\
\quad \diagup \diagdown & & \quad \diagup \diagdown \\
\quad v^0 \quad \text{VP} & & \quad v^0 \quad \text{VP}_{\varphi_2} \Leftarrow \\
\qquad \diagup \diagdown & & \qquad \diagup \diagdown \\
\qquad V^0 \quad \text{OBJ}_{\varphi_2} & & \qquad V^0 \quad \text{OBJ}_{\varphi_2}
\end{array}
$$

(85)  OMNIVOROUS AGREEMENT AS FEATURE PERCOLATION: STEP 2

$$
\begin{array}{ccc}
vP & & vP_{f(\varphi_1,\varphi_2)} \Leftarrow \\
\diagup \diagdown & \Rightarrow & \diagup \diagdown \\
\text{SUBJ}_{\varphi_1} \quad v' & & \text{SUBJ}_{\varphi_1} \Uparrow \quad v' \\
\quad \diagup \diagdown & & \quad \diagup \diagdown \\
\quad v^0 \quad \text{VP}_{\varphi_2} & & \quad v^0 \quad \text{VP}_{\varphi_2} \\
\qquad \diagup \diagdown & & \qquad \diagup \diagdown \\
\qquad V^0 \quad \text{OBJ}_{\varphi_2} & & \qquad V^0 \quad \text{OBJ}_{\varphi_2}
\end{array}
$$
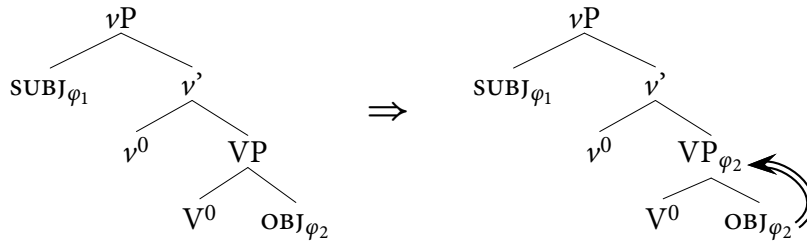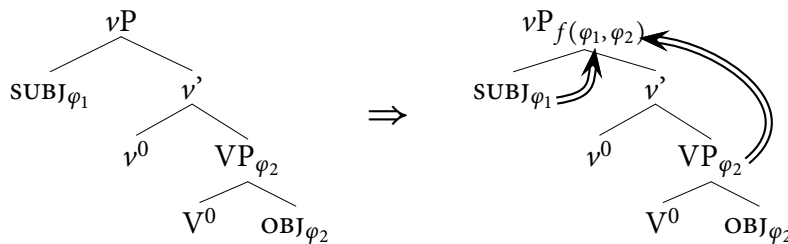
Here, I've chosen $vP$ as the relevant node dominating both the subject and the object, though not much hinges on this particular choice. The precise featural contents that $vP$ ends up with will depend on how $\varphi_1$ and $\varphi_2$ (the feature bundles originally borne by the subject and object) are combined to form a single feature bundle—an issue to which I return immediately below. But given that features originating on either the subject or the object may find their way to $vP$, agreement of a given probe with $vP$ may result in the *appearance* of omnivorous agreement.

The crucial question then becomes the nature of the function $f$, in (85), which combines the feature bundles that originate on the subject and object into a single feature bundle, to be borne by $vP$. In a system like this, a feature like [participant] is not licensed by direct agreement with the subject or object, since the probe does not enter into an agreement relation with the arguments themselves (cf. §4.4). Therefore, to derive the AF person restriction (76), the function $f$ must be able

to distinguish a pair of feature bundles like (86) from a pair like (87)—since the former is possible in Kichean AF, but the latter is not.

(86)

| SUBJ$_{\varphi_1}$ | OBJ$_{\varphi_2}$ | (possible) |
|---|---|---|
| 3rd person: Ø | 1st person: $\begin{bmatrix} \text{participant} \\ \text{author} \end{bmatrix}$ | |

(87)

| SUBJ$_{\varphi_1}$ | OBJ$_{\varphi_2}$ | (ruled out) |
|---|---|---|
| 2nd person: $\begin{bmatrix} \text{participant} \end{bmatrix}$ | 1st person: $\begin{bmatrix} \text{participant} \\ \text{author} \end{bmatrix}$ | |

The condition required in order to distinguish pairs like (86) from pairs like (87) is formally identical to the one required on a *Multiple Agree* account (see §4.5.1, above), and therefore faces the same set of problems. Ultimately, the set of admissible (or inadmissible) pairings of feature bundles has to be stipulated in order to capture the AF person restriction. This contrasts with the relativized probing account presented in §4.4, which was able to derive the AF person restriction with recourse only to the independently motivated PLC (75).

### 4.5.3.  A positional account

Suppose we were to insist that the agreement probes ($\pi^0$ and $\#^0$) in Kichean AF always target the closest nominal, and that what looks like omnivorous agreement is the result of movement—namely, that arguments that bear [participant] or [plural] features move closer to the relevant probe than their more feature-depleted counterparts.

Consider those AF clauses in which the verb ends up agreeing with the object—for example, combinations of a 3rd person singular subject with a 3rd person plural object.

(88)   ja    rja' x-**e/\*Ø**-tz'et-ö              rje'

FOC him COM-**3pl/\*3sg.ABS**-see-AF them

'It was him who saw them.'                                                          *[=(72b)]*

If $\#^0$ always targets the closest nominal, then in (88), the plural object has to have moved past the subject at the point in the derivation at which $\#^0$ probes:

(89)
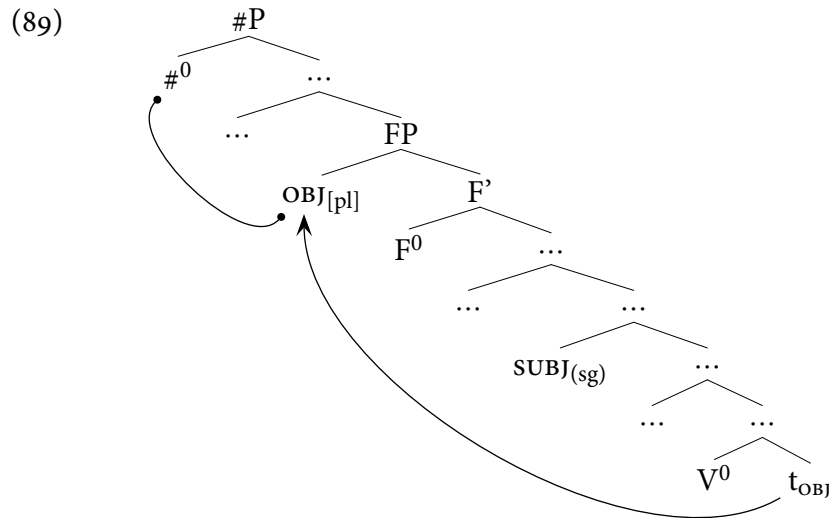


Thus, when $\#^0$ probes, it will target the object by virtue of minimality—without requiring recourse to relativized probing. Subsequent movement operations could undo the [object » subject] order created by (89), so we might not expect to see this order in the spelled out string.

While I am not aware of any evidence in favor of this kind of movement in Kichean (i.e., movement of the object across the subject exactly and only when the object bears [participant] or [plural] features), that does not mean that such movement does not occur. However, this analysis—even if true—does not really do away with relativized probing; it simply relegates it from $\pi^0/\#^0$ to whatever triggers movement of the object in (89), represented here as $F^0$. The reason is that $F^0$ must be able to skip the subject and move the object to [Spec,FP] when the object carries [participant]/[plural] and the subject does not; but it must not do so when the subject does carry those features and the object does not (otherwise, we would falsely predict that Kichean AF would exhibit object agreement throughout). So while $\pi^0/\#^0$ no longer have to be 'omnivorous' on this account, $F^0$ now has to be.

In other words, this "positional" alternative involves a selective movement operation, whose application facilitates a treatment of agreement by $\pi^0/\#^0$ as determined by minimality alone; but

relativized probing is then required to handle the behavior of the syntactic probe responsible for moving the relevant argument to its closest-to-$\pi^0$/$\#^0$ position. Moreover, the same conclusions that will be argued in chapter 5 to follow from the behavior of $\pi^0$ and $\#^0$ in Kichean AF could be drawn from the behavior of $F^0$, if the alternative sketched here turns out to be independently preferable.

Given that I know of no positive evidence in favor of this alternative (i.e., in support of the kind of movement shown in (89)), I will—if only for expository purposes—continue to follow the analysis as presented in §4.4.

I now turn to regular (i.e., non-AF) transitives and intransitives in Kichean, illustrating how the account sketched in §4.4 derives the behavior of absolute agreement in those cases, as well.

## 4.6. Absolute agreement in regular transitives and intransitives

The account presented in §4.4 was shown to capture the syntactic and morphological properties of $\varphi$-agreement in the Kichean AF construction. In this section, I will show how the same account extends to the behavior of absolute agreement in non-AF transitives and intransitives in Kichean.

### 4.6.1. Intransitives

In intransitive clauses, there is of course only one (non-oblique) noun phrase in the domain of the two agreement probes, $\pi^0$ and $\#^0$:

(90)    BASIC CLAUSE STRUCTURE IN KICHEAN INTRANSITIVES
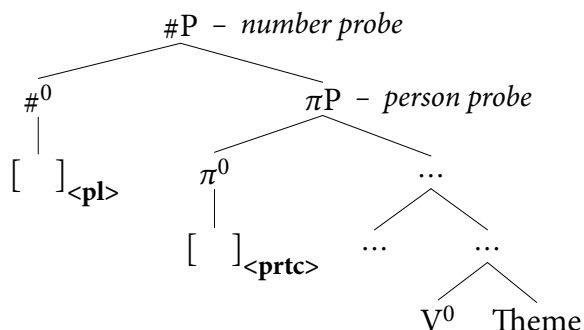
The very same derivational sequence argued for in §4.4 applies here, as well. First, $\pi^0$ probes for a target bearing [participant]. In this case, the only noun phrase that could possibly be targeted is the Theme argument, since there are no other non-oblique nominal targets available. Thus, if the Theme is 1st/2nd person (and thus, carries a [participant] feature), it will be targeted by $\pi^0$.

As before, being probed by $\pi^0$ triggers clitic doubling of the probed argument; thus, if the Theme is indeed 1st/2nd person, a clitic will be generated that reflects the complete $\varphi$-feature set of the Theme (recall the featural coarseness property of clitic doubling; §4.3). This clitic will occupy the single morphological slot afforded to absolutive agreement markers in Kichean (see (71), above), and therefore no other overt morphology—in particular, the spellout of $\#^0$—will be able to surface in that slot.

Let us now consider what happens when the Theme is 3rd person. Recall that $\pi^0$ in Kichean systematically skips any target that lacks a [participant] feature; relaxing this assumption would generate the wrong prediction for combinations of a 3rd person subject with a 1st/2nd person object in the AF construction (where agreement with the object is, in fact, obligatory). This means that when the single argument of an intransitive is 3rd person, it will not be targeted by $\pi^0$, and therefore will not be clitic doubled. Consequently, the agreement slot will remain available for the spellout of other morphological material.

Recall also that in Kichean, as in the rest of Mayan, the absolutive agreement paradigm contains no overt morphology that one could associate with 3rd person singular (§3.4). Thus, if anything in this scenario stands to appear in the agreement slot, it will be the overt spellout of $\#^0$ (as was the case in AF clauses where both the subject and object are 3rd person). As before, $\#^0$ is relativized to seek [plural] features; and so, if the Theme is plural, $\#^0$ will be able to target it. This is the case whether a clitic has been generated or not (i.e., whether the Theme is a 1st/2nd person argument or a 3rd person one), but as in §4.4, only when no 1st/2nd person argument is present—and thus, no clitic is created—will the exponence of $\#^0$ (*e-*) be able to surface.

The results of this account are summarized in the table in (91) (cf. (74), above):

(91)    VERBAL MORPHOLOGY GENERATED IN INTRANSITIVES (KAQCHIKEL)

| Theme $\varphi$-features | probing for [participant] (by $\pi^0$) finds a target? | clitic whose creation is triggered | | probing for [plural] (by $\#^0$) finds a target? | exponent of $\#^0$ | actual morph. found in agreement slot |
|---|---|---|---|---|---|---|
| 1sg | *yes* | *i(n)-* | (1sg) | *no* | Ø | *i(n)-* |
| 2sg | *yes* | *a(t)-* | (2sg) | *no* | Ø | *a(t)-* |
| 1pl | *yes* | *oj-* | (1pl) | *yes* | *e-* | *oj-* |
| 2pl | *yes* | *ix-* | (2pl) | *yes* | *e-* | *ix-* |
| 3sg | *no* | *N/A* | | *no* | Ø | Ø |
| 3pl | *no* | *N/A* | | *yes* | *e-* | *e-* |

As was the case in (74), the final column of (91) (representing the actual agreement morphology found on the verb in each scenario) is generated by the logic of morphological competition outlined in (71). If probing by $\pi^0$ is successful in locating a [participant]-bearing argument, the result is clitic doubling of that argument, and the resulting clitic will occupy the agreement slot. If no such clitic was generated (which is the case when the Theme is 3rd person), the exponence of $\#^0$ has a chance to surface.

### 4.6.2. Transitives

Turning now to the analysis of absolute agreement in regular Kichean transitives, the account presented in §4.6.1 will work as is, provided that $\pi^0$ and $\#^0$ are unable to see the external argument. One could imagine various ways of achieving this result. First, we might conjecture that the probes that I have labeled $\pi^0$ and $\#^0$ correspond to what is usually thought of as $v^0$ (this is explicitly assumed for Basque, for example, in Preminger 2009)—rather than, say, corresponding to Infl$^0$/I$^0$/T$^0$. If this were the case, then under certain assumptions the external argument would be outside the probing domain of these heads (*pace* Béjar & Rezac 2009), meaning they could only see the internal argument. The problem with this approach is that we could not carry over this assumption to AF clauses, where these probes clearly need to be able to access both core argument; and so, we would

need ad hoc stipulations in order to differentiate between the locations of these probes in AF and non-AF clauses.[25]

A second avenue worth exploring is case-theoretic: if the external argument bears ergative case at the relevant level of representation, this might preclude $\pi^0$ and $\#^0$ from accessing its $\varphi$-features, even if these probes are located higher than the base positions of both core arguments (e.g. if $\pi^0$ and $\#^0$ are in the $\mathrm{Infl}^0/\mathrm{I}^0/\mathrm{T}^0$ area). This seems particularly plausible if we adopt the view that ergative is inherent case (Aldridge 2004, Legate 2008, Woolford 1997; but see below), since other inherently case-marked arguments—e.g. dative experiencers—are typically impenetrable to $\varphi$-agreement, as well. The problem with this approach is that unlike full-fledged PPs (§4.2.2), inherently case-marked nominals are not truly invisible to $\varphi$-probes: while they cannot transfer their own $\varphi$-feature values to the probe, they still interact with $\varphi$-agreement in the form of *intervention* (as will be discussed extensively in chapter 8). Crucially, intervention by the external argument would preclude absolutive agreement with the lower internal argument from going through, which is not the desired result here.

Instead, suppose that the difference between AF clauses and regular transitives with respect to the external argument is a positional one. Let us assume, following Preminger 2012, that ergative is assigned in a dedicated projection (see Preminger 2012, Rezac, Albizu & Etxepare to appear for arguments that ergative is, in fact, structural and not inherent). As shown by Holmberg & Hróarsdóttir (2003), the traces of A-moved phrases are invisible to $\varphi$-probes (at least under certain conditions). Thus, if the external argument is base-generated below $\pi^0$ and $\#^0$, but moves out of this position and into a position above these two probes to receive ergative case, then only the internal argument would be visible to these $\varphi$-probes:[26]

---

[25] It is of course conceivable that the external argument is generated in a different position in the AF construction than it is in a regular transitive clause (though this would constitute a violation of UTAH, the *Uniformity of Theta Assignment Hypothesis*; see Baker 1988). But while there are certainly differences between AF clauses and regular transitive clauses in Kichean, I know of no independent evidence that points specifically to a difference in the base position of the external argument.

[26] On the apparent counter-cyclicity of such derivations, see Holmberg & Hróarsdóttir 2003, Asarina 2011.

(92)  ABSOLUTIVE $\varphi$-PROBING IN KICHEAN TRANSITIVES
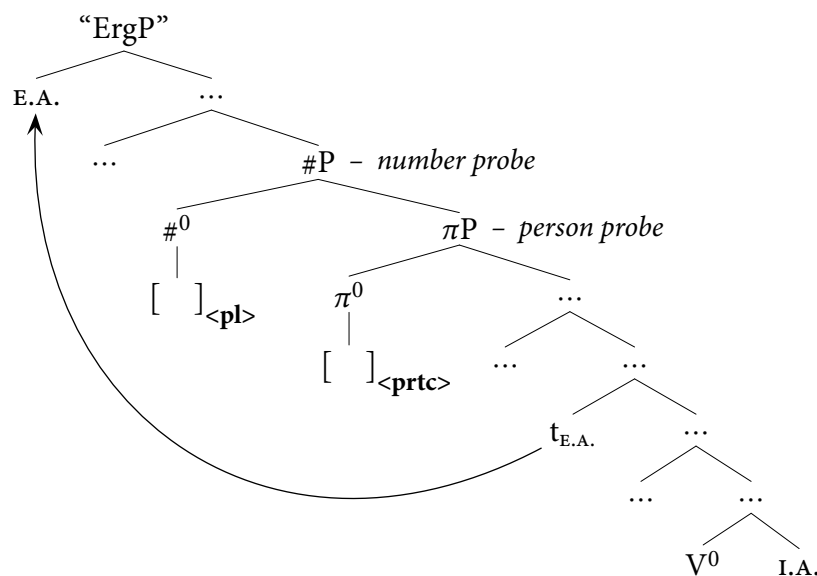


We therefore expect no interaction in regular transitive clauses between the external argument and the $\varphi$-probes identified as $\pi^0$ and $\#^0$ in §4.4. This correctly predicts that when one considers only the internal argument, the behavior of the so-called 'absolutive agreement marker' (which on the current account, is in some cases a clitic whose creation is trigger by $\pi^0$, and in other cases the overt exponence of $\#^0$) would be the same in non-AF transitives as it is in intransitives.

This does not address the question, of course, of how the *ergative* agreement morphemes in Kichean come about, and in particular, whether they are clitics, or the spellout of a $\varphi$-probe whose features have been valued. While I have little to say about this here, it is worthwhile noting that the ergative agreement paradigm, repeated below, encodes number distinctions suppletively in all three persons (cf. the absolutive paradigm, where this is only the case for 1st/2nd person):

(93)

|     | ERG agreement marker (sg.) | ERG agreement marker (pl.) |
| --- | --- | --- |
| 1st | *n/w-* | *q(a)-* |
| 2nd | *a(w)-* | *i(w)-* |
| 3rd | *r(u)/u-* | *k(i)-* |

This suggests that these agreement markers are either **(i)** clitics; or **(ii)** the overt exponence of a single probe $H^0$ that probes for number and person features simultaneously. These markers are also *TAM-invariant* (i.e., they do not show allomorphy based on the tense or aspect of the host; see Arregi & Nevins 2008, 2012, as well as fn. 20), which provides some suggestive evidence in favor of the clitic analysis. Since the precise nature of these agreement markers is immaterial to the current discussion (in particular, these markers are not found in the Kichean AF construction), I leave this question aside for now.

To summarize, we have seen that the same proposal put forth in §4.4 to account for agreement in the Kichean AF construction correctly predicts that the same agreement markers will arise when there is only one argument in the domain of the 'absolutive' $\varphi$-probes ($\pi^0$ and $\#^0$)—which I have argued is the case both in intransitive clauses and in regular transitive clauses.

## 4.A.  Appendix: evidence from Tzotzil for the separability person and number in Mayan

In §4.4–§4.6, I put forth an account of $\varphi$-agreement in Kichean AF based on the idea that person features and number features are syntactically separable, and that they probe independently of one another (Anagnostopoulou 2003, Béjar 2003, Béjar & Rezac 2003, Laka 1993a, Shlonsky 1989, Sigurðsson 1996, Sigurðsson & Holmberg 2008, Taraldsen 1995; see §4.1). In this appendix, I present evidence from the work of Aissen (1987) and Woolford (2011) for the separability of person and number from within the Mayan language family itself.

Tzotzil is a Mayan language of the Tseltalan branch, a somewhat distant relative of the Kichean languages which are at the center of this chapter. As discussed by Aissen and Woolford, Tzotzil has two series of absolutive agreement markers, one that appears in the prefixal field (as in (94a)), and one that appears in the suffixal field (as in (94b)):[27]

(94)  a. ch- **a-**   s-    mil                                        (Tzotzil)

INC- **2.ABS-** 3.ERG- kill

'He is going to kill you.'                                    [*Aissen 1987*:62]

   b. j-      mala -oj   **-oxuk**

1.ERG- wait  -PERF **-2pl.ABS**

'I have waited for y'all.'                                    [*Aissen 1987*:48]

As Woolford notes, Tzotzil is rather exceptional in exhibiting both the prefixal pattern and the suffixal one within one and the same language (other Mayan languages generally exhibit just one of these patterns, and adhere to it throughout; see Bricker 1977, Tada 1993).

The reader may have noticed that the gloss of the prefixal agreement markers does not include a number component; indeed, while the suffixal series is differentiated for number, the prefixal

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[27] I thank Jessica Coon for turning my attention to this Tzotzil pattern and its relevance to the arguments made in this chapter.

series is not (this actually extends to other prefixal agreement markers as well, namely the series of ergative/genitive markers):

(95)  Tzotzil absolutive prefixes

| 1 | *i-* |
|---|------|
| 2 | *a-* |
| 3 | *Ø-* |

(96)  Tzotzil absolutive suffixes

| 1sg | *-on* |
|------|---------|
| 1pl.INCL | *-otik* |
| 1pl.EXCL | *-otikotik* |
| 2sg | *-ot* |
| 2pl | *-oxuk* |
| (3)sg | *-Ø* |
| (3)pl | *-ik* |

[*Aissen 1987, Woolford 2011*]

Consider now the marker *-ik*, which is listed in (96) under '(3)pl'. First, note that the segmental content of this marker is present, modulo a change in the high vowel (from *i* to *u*), in all plural members of the suffixal paradigm (96). This already suggest that *-ik* may be less of a '(3)pl' marker and more of a general-purpose marker of plurality in Tzotzil.

But perhaps more strikingly, there are circumstances under which *-ik* is actually used in Tzotzil to signal the plurality of a 2nd person argument—compare (97) and (98):

(97)  Ɂi-    j-      mil -**ik**

COM- 1.ERG- kill -**(3)pl.ABS**

'I killed them.'

(98)  ch-  a-     j-      mil -**ik**

INC- 2.ABS- 1.ERG- kill -**(3)pl.ABS**

'I am going to kill y'all.'                                                    [*Aissen 1987:49*]

The factors governing the choice of prefixal versus suffixal absolutive agreement morphology in Tzotzil are beyond the scope of the current work; I refer the reader to Aissen (1987) and Woolford

(2011) for discussion.[28] What is crucial here is that in (98), the $\varphi$-features of the 2nd person plural object are expressed discontinuously, by two separate morphemes: one that reflects its person features (*a-* "2.ABS"), and one that reflects its number features (*-ik* "(3)pl.ABS"). The same holds for 1st person plural absolutive arguments, modulo the morphological decomposition of 1st person suffixal markers suggested earlier and schematized in (99):[29]

(99)   a.   *-otik* ("1pl.INCL.ABS") =

$$-o\begin{Bmatrix} n \\ t \end{Bmatrix} \text{ ("1.ABS")} + \textit{-ik} \text{ ("(3)pl.ABS")}$$

   b.   *-otikotik* ("1pl.EXCL.ABS") =

$$-o\begin{Bmatrix} n \\ t \end{Bmatrix} \text{ ("1.ABS")} + \textit{-ik} \text{ ("(3)pl.ABS")} + \text{REDUPL ("EXCL.ABS")}$$

(100) a.  l-      i-      s-      pet    **-ot**    **-ik**          (=*-otik*)

       COM- 1.ABS- 3.ERG- carry **-1.ABS** **-(3)pl.ABS**

       'He carries us(incl.).'

   b.  ch- i-     s-      mil **-ot**    **-ik**        **-REDUPL** (=*-otikotik*)

       INC- 1.ABS- 3.ERG- kill **-1.ABS** **-(3)pl.ABS** **-EXCL.ABS**

       'He is going to kill us(excl.).'                              [*Aissen 1987:1, 47; glosses modified*]

Due to the absence of an overt 3.ABS prefix, one cannot verify the discontinuous expression of $\varphi$-features with 3rd person plural absolutive arguments; but at the very least, they do not counter-exemplify the generalization that plural is expressed by an independent morpheme (see (97), above).

We have seen that absolutive agreement in Tzotzil can be expressed discontinuously, in which case it consists of a prefix expressing person features only, and a set of suffixes consisting of a

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[28]Broadly speaking, prefixal absolutive agreement morphology in Tzotzil is parasitic on the presence of a prefixal aspect marker (Aissen 1987, Woolford 2011). There is one exception to this generalization, involving 1st person absolutive agreement in conjunction with 2nd person ergative agreement. Woolford (2011) claims that this exception is phonologically motivated, though I find the arguments brought against a syntactic account (assimilating this pattern to, say, the *Inverse* system of Algonquian) less than convincing.

[29]The notation '$\begin{Bmatrix} n \\ t \end{Bmatrix}$' reflects a coronal that surfaces as *-n* in final position (cf. *-on* in (96)), but as *-t-* in medial position. The notation 'REDUPL' represents reduplication as a morphological exponent.

number morpheme, and potentially, morphemes related to the clusivity distinction (i.e., 1sg.INCL vs. 1sg.EXCL).[30]

Note the similarity between this pattern and the Basque agreement data, presented in §4.3 and repeated here:

(101)  Guraso-e-k          niri      belarritako ederr-ak               erosi  **d-**   i-  **zki-**

parent(s)-ART$_{pl}$-ERG me.DAT earring(s)  beautiful-ART$_{pl}$(ABS) bought **3.ABS-** $\sqrt{}$- **pl.ABS-**

**da-**        **te**.                                                              *[=(63)]*

**1sg.DAT- 3pl.ERG**

'(My) parents have bought me beautiful earrings.'                  [*Laka 1996*]

(102)  ABS-DAT PRESENT-INDICATIVE AUXILIARY PARADIGM

|  | ABS person | ROOT (have) | ABS number | ABS "number+" | DAT all $\varphi$-features | *[=(64)]* |
|---|---|---|---|---|---|---|
| 1sg | *na* | *tzai* |  |  | *t* | |
| 2sg | *ha* | *tzai* |  |  | *{k,n}* | |
| 3sg |  | *zai* |  |  | *o* | |
| 1pl | *ga* | *tzai* | *zki* |  | *gu* | |
| 2pl | *za* | *tzai* | *zki* |  | *zu* | |
| 2pl+ | *za* | *tzai* | *zki* | *te* ↝ | *zue* | |
| 3pl |  | *zai* | *zki* |  | *e* | |

As shown in (101–102), the absolutive plural marker *-zki* in the absolutive-dative present indicative auxiliary paradigm in Basque shows up on the opposite side of the auxiliary root from absolutive person marking—much like the suffixal number marker *-ik* in Tzotzil. In Preminger 2009, I argued that this Basque pattern comes about because a separate head, $\#^0$, probes for a [plural] feature on the absolutive argument, and *-zki* is the spellout of $\#^0$ when it has found such a feature; it seems feasible to handle the Tzotzil suffixal plural marker along similar lines.

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[30]I assume that the appearance of a 1st person suffix in cases like (100a–b) is merely a form of morpho-phonological support for expressing the clusivity distinction, rather than an actual person marker. Note the absence of a suffixal person marker in those discontinuous agreement constructions involving 2nd person (where there is no inclusive/exclusive distinction), as in (98).

It is of course also possible to handle cases where different $\varphi$-features of the agreement target are expressed discontinuously, as in the Tzotzil and Basque examples shown here, within a purely morphological approach (e.g. using the *Fission* operation of Distributed Morphology; Halle 1997, Noyer 1997, and see also fn. 13 in this chapter). However, this separability of person and number— and specifically, the fact that they sometimes surface on opposite sides of the stem—is at least suggestive that the two operate independently of one another in syntax as well.

The significance of these Tzotzil data for the analysis pursed earlier in this chapter is that they provide support from within the Mayan language family for the separability of person and number (a central part of the account proposed in §4.4). This state of affairs contrasts with Kichean, where the appearance of person morphology (which on the account proposed in §4.4, arises through clitic doubling triggered by the [participant] probe $\pi^0$) crucially blocks the plural marker from appearing. Importantly, the Kichean plural marker (e.g. *e-*, in Kaqchikel) is not suffixal: when it appears in the verbal complex, it appears in the same prefixal slot that in other cases is occupied by the person marker. Therefore, whether or not the plural marker can co-occur with the person marker in the same verbal complex appears to depend on its position: in Tzotzil, the plural marker is suffixal, allowing the two to co-occur; in Kichean, it is prefixal, and is in complementary distribution with person markers. This lends support to the assumption regarding morphological competition among Kichean absolutive agreement markers, put forth in (71) (§4.4) and repeated here:

(103)  MORPHOLOGICAL COMPETITION IN KICHEAN ABSOLUTIVE AGREEMENT SLOT          *[=(71)]*

    <u>In Kichean:</u>

    **a.** the overt exponence of $\pi^0$, $\#^0$, and any clitics adjoined to them, all compete for a single morphological slot

    **b.** a clitic will always beat out other competing morphological material

# Chapter 5

# Derivational time-bombs: inadequate for deriving the obligatoriness of $\varphi$-agreement

"Our hypothesis, then, is that the consequences of ordering, obligatoriness, and contextual
dependency can be captured in terms of surface filters, **something that surely need not be
the case in principle**."

[*Chomsky & Lasnik 1977:433*, emphasis added]

Based on the detailed investigation of the Kichean Agent-Focus (AF) construction in
chapters 3–4, we are now in a position to present the argument against *derivational time-bombs*
(§2.2.1) as the means of deriving the obligatoriness of $\varphi$-agreement (as in Chomsky's 2000, 2001
'interpretability'-based proposal, for example). This argument is the focus of the current chapter.

I begin, in §5.1, by laying out the argument from number agreement in Kichean AF against
a derivational time-bombs account. In §5.2, I present a second argument, very similar in
form, based on person agreement in the same construction. Finally, in §5.3, I sketch two
accounts of $\varphi$-agreement—one within the *obligatory operations* model (§2.2.3), and one within the
*violable constraints* model (§2.2.2)—which unlike their derivational time-bombs counterpart, can
successfully derive the obligatoriness of number and person agreement in Kichean AF.

In the APPENDIX (§5.A), I provide a brief historical survey of how syntactic theory came to regard
'uninterpretable features' as having anything to do with the obligatoriness of $\varphi$-agreement, in the first
place. I also offer a roadmap for how we might selectively undo this component of contemporary
syntactic theory, while retaining the other developments that came with it (in particular, the move
to a *probe-goal* perspective on syntactic relations).

## 5.1.  Failed number agreement in Kichean Agent-Focus

In this section, I present an argument from number agreement in the Kichean Agent-Focus (AF)
construction showing that *derivational time-bombs* (§2.2.1)—including Chomsky's (2000, 2001)
'uninterpretable features'—are inadequate as a means of deriving the obligatoriness of $\varphi$-agreement.
Recall from chapter 4 that the exponent of the number probe, $\#^0$, can only surface overtly in Kichean

in clauses where no 1st/2nd person clitic was generated (see §4.4.1 for details). Therefore, examples in this section are restricted to combinations of 3rd person arguments only.

We begin with what may seem like a rather trivial observation: agreement with plural arguments in Kichean AF is obligatory; its absence results in ungrammaticality.[1] This is demonstrated in (104a–b):

(104)  a.  ja    rje'    x-**e/\*Ø**-tz'et-ö                    rja'                         (Kaqchikel)

FOC them COM-**3pl/\*3sg.ABS**-see-AF him

'It was them who saw him.'

   b.  ja    rja'    x-**e/\*Ø**-tz'et-ö                    rje'

FOC him COM-**3pl/\*3sg.ABS**-see-AF them

'It was him who saw them.'                                                          *[=(19a–b)]*

Let us review how the obligatoriness of agreement is derived in the derivational time-bombs model (§2.2.1), and in particular, within Chomsky's (2000, 2001) 'interpretability'-based framework. In this framework, inflectional probes enter the derivation bearing features that are uninterpretable to the semantic interface. These features, in their uninterpretable state, cannot be part of a well-formed, end-of-the-derivation structure delivered to the interfaces for interpretation. Establishing a successful φ-agreement relation has the effect of rendering these features *interpretable*—or perhaps, deleting them altogether—thereby avoiding the ill-formedness that would otherwise arise.

It is important to note that on this approach, the obligatoriness of agreement is derivative, not direct. Instead of the grammar affording obligatory status to the agreement operation itself, its obligatoriness arises because it is the only way for the computational system to rid itself of the offending representational elements (in Chomsky's framework, the uninterpretable features).

Under these assumptions, the obligatory nature of φ-agreement in Kichean AF means that a probe like $\#^0$ in Kichean enters the derivation bearing an uninterpretable [plural] feature, and

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[1]The picture is more complex when it comes to inanimate arguments; see fn. 9 in chapter 3. I therefore keep to animate arguments, in this chapter and throughout.

that this is the reason why, in examples like (104a–b), this probe must enter into an agreement relation with an argument bearing [plural]. On this view, the reason the non-agreeing variants of (104a–b) are ruled out is that an agreement relation with a [plural]-bearing argument has not been established, leaving the relevant feature on $\#^0$ in its initial, uninterpretable state, and thus yielding ungrammaticality at the interface.

Next, let us consider the fate of the same probe in examples where both core arguments are singular, as in (105a–b):

(105)  a.  ja  **ri**  **tz'i'** x-Ø-etzel-an       **ri**  **sian**

           FOC **the dog** COM-3sg.ABS-hate-AF **the cat**

           'It was the dog that hated the cat.'

       b.  ja  **ri**  **xoq**    x-Ø-tz'et-ö       **ri**  **achin**

           FOC **the woman** COM-3sg.ABS-see-AF **the man**

           'It was the woman who saw the man.'                              *[=(14a–b)]*

Let us set aside, for the time being, the possibility that $\#^0$ in (105a–b) is generated without the relevant uninterpretable features in the first place; I will return to this shortly.

That possibility aside, examples like (105a–b) should be ungrammatical unless some syntactic node has checked the relevant features on $\#^0$. There are no plural arguments in (105a–b), nor does any plural agreement morphology show up on the verb; therefore, we can be quite certain that the putative checker of the features on $\#^0$ must be some formally singular node. Crucially, however, $\#^0$ in Kichean was shown in chapter 4 to systematically skip singular targets. Let us remind ourselves why this assumption cannot be relaxed: if $\#^0$ did not have to skip formally singular targets, we would predict that in AF clauses where the subject is 3rd person singular and the object is 3rd person plural (e.g. (104b), above), 3rd person singular agreement morphology on the verb would be possible; but this is not the case.

The same facts preclude even an analysis in terms of a null expletive *pro* checking the relevant features on the probe, or a functional projection along the clausal spine (e.g. the *v*P in its entirety)

doing so. Since no plural morphology arises on the verb in (105a–b), these putative agreement targets would have to have been formally singular as well; but once again, the probe in question cannot enter into an agreement relation with formally singular targets.

We have now arrived at a contradiction: the node that checks the relevant features on $\#^0$ in (105a–b) must be formally singular, but $\#^0$ in Kichean must systematically ignore formally singular nodes. The relevant features on $\#^0$ thus could not have been checked at all—and yet the utterances in question are perfectly grammatical.

It is important to note that this contradiction is not an artifact of the particular implementation argued for in chapter 4, in which the two (absolutive) φ-probes in Kichean are relativized to marked features in the φ-feature geometry (namely, [participant] and [plural]). Any approach to φ-agreement in Kichean AF that is based on uninterpretable features (and in fact, any approach based in probing, more generally) would have to include some provision whereby formally singular nodes are ignored by the relevant φ-probe. The reason is as follows: uninterpretable features are a hypothesis put in place to enforce the obligatory nature of probing by inflectional nodes, and consequently, the obligatoriness of φ-agreement in language (§2.2.1); if 3rd person singular subjects could check the uninterpretable features on the probe, then they could—by hypothesis—halt the probe (i.e., cause it to stop searching for a target). To deny this is to concede that there is something beyond the mere need to have all uninterpretable features be checked that drives the probe to continue searching for agreement targets.

One might entertain the possibility that in the scenario exemplified by (104b), the probe continues past the 3rd person singular subject not due to the features on the probe but due to properties of the (3rd person) plural object. In chapter 4, I adopted Béjar & Rezac's (2003) *Person Licensing Condition* (PLC), which is a condition requiring [participant] features on pronouns to participate in agreement relations. But crucially, as detailed in §4.4.2, no comparable requirement exists for [plural] features, at least not in Kichean. Thus, the relative paucity of agreement probes in the AF construction—one (absolutive) set of probes, rather than two sets (one absolutive and one

ergative), as in regular transitives—restricts the number of [participant]-bearing arguments that can co-occur in a single AF clause, but has no such effect on the number of plural arguments. Compare (106a–b) with (107a–b):

(106) a. * ja   rat     x-**in/at/Ø**-ax-an            yin

          FOC you(sg.) COM-**1sg/2sg/3sg.ABS**-hear-AF me

          *Intended*: 'It was you(sg.) that heard me.'

    b. * ja   yin x-**in/at/Ø**-ax-an            rat

          FOC me COM-**1sg/2sg/3sg.ABS**-hear-AF you(sg.)

          *Intended*: 'It was me that heard you(sg.).'               *[=(24a–b)]*

(107) a.   ja  **rje'**  x-oj-tz'et-ö      **röj**

          FOC **them** COM-1pl.ABS-see-AF **us**

          'It was them who saw us.'

    b.   ja  **röj** x-oj-tz'et-ö      **rje'**

          FOC **us** COM-1pl.ABS-see-AF **them**

          'It was us who saw them.'                   *[=(77a–b)]*

There is thus no general requirement in Kichean for [plural]-bearing arguments to be agreed with in number, and therefore no plausible property of the object in (104b) that could be responsible for the probe not halting upon reaching the 3rd person singular subject. This means that we are back to having to assume that $\#^0$ in Kichean systematically skips targets that are formally singular, which in turn means that the contradiction identified above stands as previously described.

Let us now return to the possibility set aside earlier, that $\#^0$ in Kichean essentially comes in two varieties: one that bears uninterpretable [plural], and one that does not.[2] (A similar lexical ambiguity is quite standardly posited as part of the inventory of declarative complementizers in a single language; see §10.1.3 for discussion, and an alternative that does away with such ambiguity in

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[2]This analytical possibility was independently suggested to me by David Pesetsky and by Heidi Harley.

that domain, as well.) If the bare version of $\#^0$—i.e., the variant without uninterpretable [plural]—were the one merged in examples like (105a–b), then the absence of a [plural]-bearing target capable of checking the uninterpretable [plural] feature on the probe would not pose an obstacle for convergence, and the contradiction identified above would dissolve.

The question faced by such an approach is what forces the appearance of the non-bare variant of $\#^0$ (i.e., the variant equipped with uninterpretable [plural]) in those cases where a [plural]-bearing target is there to be agreed with (e.g. in (104a–b), as well as in (107a–b)). If the bare variant of $\#^0$ were allowed to appear freely, we would incorrectly predict the grammaticality of what I will call "gratuitous non-agreement": cases where a suitable agreement target is available, but the verb nevertheless surfaces in its non-agreeing, 3rd person singular form.

(108) * ja    rja'   x-Ø-tz'et-ö            **rje'**                              *[≈(104b)]*
        FOC him COM-**3sg.ABS**-see-AF **them**

        'It was him who saw them.'

On the hypothesis that agreement is driven exclusively by the need to check uninterpretable features, merging the bare variant of $\#^0$ in (108) would result in a structure where nothing compels agreement with the plural *rje'* ("them") to take place, falsely predicting grammaticality in this case. Crucially, we have already seen that there is no requirement on the part of [plural]-bearing arguments to be agreed with, so that could not be the source of the ungrammaticality of (108), either.

In short, once we allow the finite verbal complex in examples like (105a–b) (where both the subject and object are 3rd person singular) to occur without uninterpretable number features, there seems to be no way of enforcing agreement in an example like (108) that does not falsely predict ungrammaticality for examples like (107a–b) (where both the subject and object are plural).

Another alternative to consider involves the idea of a last-resort repair mechanism. Suppose that there is a mechanism that eliminates unchecked uninterpretable features from the representation right before the representation is shipped to the interfaces for interpretation (cf. Béjar's 2003 *Default*

*Valuation* operation). Such an operation could eliminate the uninterpretable features on $\#^0$ in examples like (105a–b) (where both the subject and object are 3rd person singular) before they had a chance to give rise to ungrammaticality. However, to maintain empirical adequacy, we would need to make sure that this mechanism was indeed deployed *only* as a last resort, otherwise we would erroneously predict agreement to be optional throughout the grammar. In other words, the syntactic computation would need to distinguish cases where a probe has scanned the structure and failed to find a suitable target (as in the aforementioned (105a–b)) from scenarios where an agreement target is available, but agreement is simply not instantiated (the state of affairs I have labeled "gratuitous non-agreement"; e.g. (108)).

Recall that the backdrop for this discussion is a system where agreement is driven only by the need to deliver to the interfaces a representation that is free of derivational time-bombs (i.e., unchecked uninterpretable features), and there is no independent force compelling agreement to take place. Both in examples like (105a–b) (which we want to rule in), and in "gratuitous non-agreement" examples like (108) (which we want to rule out), the featural state of the probe upon reaching the interfaces would be the same: its features would not have been checked. To make sure the repair mechanism in question is only be deployed in the former scenario, and not in the latter, the system must keep track of whether agreement was *attempted*, independently of whether or not it culminated successfully (which is what is tracked by the checked/unchecked or interpretable/uninterpretable distinctions).

But given the need for a separate mechanism that keeps track of whether agreement has been *attempted* (and indeed, makes sure that it has), the role of feature checking or lack thereof in determining ungrammaticality is rendered entirely redundant. There is no longer any utterance whose ungrammaticality arises from unchecked features, that is not also ruled out due to agreement not having been attempted. In other words, these derivational time-bombs no longer bear any of the empirical burden. (Note that this does not equate to the claim that uninterpretable features do not exist, in the sense of there being a class of features that have no effect at the semantic interface; but

it does mean that they have no utility in determining syntactic well-formedness. See the APPENDIX to this chapter, §5.A, for further discussion.)

Finally, let us briefly reconsider *Multiple Agree* (Anagnostopoulou 2005, Hiraiwa 2001, 2004, *a.o.*), the family of approaches where multiple core arguments enter into an agreement relation with a single agreement probe. It was already shown in §4.5.1 that Multiple Agree is not a viable analysis of $\varphi$-agreement in the Kichean AF, the empirical domain serving as the basis for the current discussion. But admittedly, the argument against Multiple Agree was based on the behavior of *person* agreement in Kichean AF, whereas we are presently discussing *number* agreement in that construction. There is therefore a possible (if not entirely appealing) avenue whereby Multiple Agree is available in Kichean AF exactly and only for number agreement.

Crucially, however, this does not fundamentally alter the problem at hand. Since combinations of two 3rd person singular arguments are acceptable in this construction (as in (105a–b)), it must be the case that the featural composition of a $\#^0$ probe that has encountered only formally singular arguments in the course of the derivation is admissible at the interfaces. But if that is the case, then when the subject is singular and the object is plural (as in (104b)), the probe should be able to stop without having probed the object—the formally singular subject having addressed all of the probe's featural needs (just as in (105a–b))—as far as admissibility at the interfaces is concerned.

Recall furthermore that the agreement morphology found in the Kichean AF construction is the same as regular absolutive agreement morphology in Kichean (§3.4). In chapter 4, I argued that this is because the same syntactic probes are involved (see, in particular, §4.6). If so, then intransitives whose sole argument is formally singular provide further evidence that featurally speaking, nothing goes wrong when the number probe $\#^0$ comes into contact with only one argument, even if that argument is not plural.

Again, then, something else must compel the probe to search past the singular subject in the relevant AF clauses and access the features of the object (since in examples like (104b), plural agreement is obligatory); and that something cannot be any representational property of the probe,

since that would falsely predict ill-formedness for AF clauses in which both arguments are singular, as well as the aforementioned intransitive cases.

To summarize this section, we have seen that in light of the facts of $\varphi$-agreement in Kichean AF (analyzed in detail in chapter 4), there is no adequate way to derive the obligatoriness of agreement exclusively from the need to eliminate derivational time-bombs (i.e., ungrammaticality-inducing representational elements, as in Chomsky's 2000, 2001 conception of 'uninterpretable features'). In particular, in order to derive agreement with a plural object in lieu of a singular subject, one must posit features on the probe that could not be checked by a singular argument—leading to the expectation that AF clauses consisting only of singular arguments would result in ungrammaticality, contrary to fact. Plainly put, we have arrived at the conclusion that unchecked features do not cause ungrammaticality, and are therefore inadequate as a means of deriving the obligatoriness of $\varphi$-agreement.

It is worth pausing to note that the considerations surveyed here also militate against an account of the obligatory nature of $\varphi$-agreement based on derivational time-bombs borne by the *goal(s)*, rather than by the probe. As noted earlier, a probe-goal account of agreement in Kichean AF must assume that the number probe skips formally singular targets altogether; this by itself already entails that (3rd person) singular arguments are not agreed with in this construction. Note also that the arguments in the relevant examples (e.g. in (105b), *ri xoq* "the woman" and *ri achin* "the man") are both full DPs, rather than any kind of bare or reduced nominals.

Even [plural]-bearing arguments are not necessarily agreed with: this is evidenced by the ability of two plural arguments to co-occur in a clause with only one number probe (as in (107a–b), above). This means, among other things, that theories that tie the licensing of nominals to successful agreement with the nominal in question (for example, Chomsky's 2000, 2001 theory of abstract case assignment) are a non-starter for Kichean.[3] This issue is taken up in greater detail in chapters 8–9.

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[3]A reviewer suggests an alternative account in which agreement *is* driven by derivational time-bombs, borne exclusively by the goals—based on the following assumptions:

(i)   a.   [participant] and [plural] are derivational time-bombs on the DPs that carry them.

Finally, while this is by no means the first argument in the literature against tying unchecked features to ungrammaticality (for similar ideas, see for example Anand & Nevins 2006, López 2007, Preminger 2010a, Schütze 1997), the current argument is arguably stronger than some of its predecessors. That is because we were able to rule out even the possibility of resorting to null expletives, and/or functional nodes along the clausal spine, as invisible agreement targets that would "rescue" the derivational time-bombs approach (cf. earlier work, e.g., Preminger 2010a).

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    b.  syntactic agreement is required to defuse the aforementioned derivational time-bombs—crucially, allowing for Multiple Agree.

    c.  agreement in [participant] must be morphologically expressed; agreement in [plural] must be expressed, but only where the morphological template allows for it.

    d.  there is only a single morphological slot for the expression of absolute agreement.

The reviewer argues that (i.a–d) (some of which are also required on the analysis advocated in chapter 4 and later in this chapter) involve only derivational time-bombs, and crucially, no recourse to additional mechanisms such as *obligatory operations* (§2.2.3; cf. §5.3).

    Examining the second half of (i.c), however, we find precisely the logic of obligatory operations: a grammatical process (in this case, the overt expression of syntactic agreement) whose application is obligatory when possible, but whose non-application in other contexts is tolerated. In this rendition, of course, the obligatory operations logic is located extra-syntactically—presumably, as part of the morpho-phonological component. (This bears some similarity to the approach advocated by Bobaljik 2008, and discussed in detail in §9.1, of viewing *all* morpho-phonologically overt φ-agreement as part of the extra-syntactic computation.) In chapter 10, I discuss several different phenomena that exhibit the same obligatory operations logic, and clearly belong within syntax. Thus, it is not clear that there is any conceptual reason to prefer placing the obligatory operations logic, required in this alternative, outside of syntax, as (i) does.

    There is, however, an argument against (i.a–d) based on (non-)restrictiveness. Any account that involves a single head $H^0$ entering into a Multiple Agree relation with several targets faces the question of how conflicting feature values on the different targets are resolved, in determining the ultimate exponence given to $H^0$. For example, in an AF clause whose subject is 3rd person plural, and whose object is 1st person singular, why does $H^0$ not express the marked features of both arguments (i.e., 1st person plural)? After all, this would do the best job of satisfying (i.c). (It seems to me that (i.c) was phrased the way it is to allow two bearers of [plural] to co-occur in AF, unlike two bearers of [participant]; but nothing about that should disallow the sort of 'feature mixing' that I have just sketched.) More generally, assuming a probe outside of $v$P that enters into a relation with both core arguments, how does one determine whether it will be the features of the subject, the object, or even the entire $v$P, that will control the morphology on the probe? It seems that on a Multiple Agree account of this sort, this would need to be stipulated (see also the discussion of Multiple Agree in §4.5.1).

    The account presented in chapter 4, based on single agreement by two probes ($\pi^0$ and $\#^0$), compares favorably to this alternative. On the chapter 4 account, the node that controls a probe's overt exponence—or the shape of the adjoined clitic—is the only syntactic node ever targeted by the probe (modulo morphological competition for the single agreement slot, which both that account and this alternative employ).

## 5.2. Failed person agreement in Kichean Agent-Focus

In this section, I will outline the argument from person agreement in Kichean AF for the inadequacy of derivational time-bombs (including Chomsky's 2000, 2001 'uninterpretable features') as a means of deriving the obligatory nature of agreement. The argument follows the same structure as the argument from number agreement, already presented in §5.1; it is therefore presented here largely for the sake of completeness.

Like agreement in number, agreement in person in Kichean is obligatory. With respect to person agreement, there exists a complication—one that is ultimately innocuous, but which did not exist with number agreement. In chapter 4, I argued that the overt (absolutive) agreement morphology that arises in Kichean in the presence of 1st/2nd person arguments is not actually the spellout of the person probe, $\pi^0$, but rather the result of clitic doubling of the argument that is probed by $\pi^0$. Crucially, though, this does not affect the logic of feature-checking, agreement, and grammaticality: just like the instances of clitic doubling observed in Basque (Arregi & Nevins 2008, 2012, Preminger 2009), clitic doubling in Kichean is neither optional, nor does it depend on particular semantic properties of the doubled noun phrase (e.g. animacy, specificity, etc.); see §4.1, §4.4 for details. Indeed, if there were any possibility of suppressing or opting out of clitic doubling of this sort, the non-agreeing variants of examples like (109–110) would be grammatical, contrary to fact.

(109) a. ja    yïn x-**in/\*Ø**-ax-<u>an</u>                ri   achin
           FOC me COM-**1sg/\*3sg.ABS**-hear-<u>AF</u> the man
           'It was me that heard the man.'

     b. ja    ri   achin x-**in/\*Ø**-ax-<u>an</u>              yïn
           FOC the man   COM-**1sg/\*3sg.ABS**-hear-<u>AF</u> me
           'It was the man that heard me.'                                        *[=(18a–b)]*

(110) a. ja   rat       x-**at/\*Ø**-ax-<u>an</u>              ri  achin

       FOC you(sg.) COM-**2sg/\*3sg.ABS**-hear-<u>AF</u> the man

       'It was you(sg.) that heard the man.'

   b. ja   ri   achin x-**at/\*Ø**-ax-<u>an</u>              rat

       FOC the man   COM-**2sg/\*3sg.ABS**-hear-<u>AF</u> you(sg.)

       'It was the man that heard you(sg.).'            *[=(15a–b)]*

Instead, clitic doubling is inescapably triggered when an argument is probed by $\pi^0$, meaning the presence of the relevant agreement morphology is a reliable indicator of $\pi^0$ having found a viable agreement target.

    Having established this, let us return to the question of how the derivational time-bombs model in general (§2.2.1), and Chomsky's (2000, 2001) 'interpretability'-based framework in particular, would derive the obligatoriness of person agreement in the Kichean AF construction. To derive data like (109–110), we would need to assume that the probe $\pi^0$ enters the derivation bearing an uninterpretable [participant] feature. Derivations of (109–110) in which this probe has not entered into an agreement relation with a 1st/2nd person argument would be ruled out because the uninterpretable [participant] feature on $\pi^0$ would reach the interfaces unchecked.

    As we did for number features, let us now consider those cases where *neither* argument bears the marked feature sought by the probe:

(111) a. ja   **ri  tz'i'** x-Ø-etzel-an        **ri  sian**

       FOC **the dog** COM-3sg.ABS-hate-AF **the cat**

       'It was the dog that hated the cat.'

   b. ja   **ri  xoq**     x-Ø-tz'et-ö        **ri  achin**

       FOC **the woman** COM-3sg.ABS-see-AF **the man**

       'It was the woman who saw the man.'       *[=(105a–b)]*

Once again, I will set aside the possibility that there exists two variants of $\pi^0$, with and without the uninterpretable [participant] feature; see §5.1 on why this is not a generally viable approach to $\varphi$-agreement in Kichean AF.[4] Examples like (111a–b) should thus be ungrammatical unless the uninterpretable features on $\pi^0$ have been checked. Since there are no 1st/2nd person arguments in (111a–b), nor does any 1st/2nd person agreement morphology show up on the verb, we can conclude that if anything has checked the features on $\pi^0$, it must be some 3rd person node that has done so. But crucially, $\pi^0$ in Kichean was shown in chapter 4 to systematically skip 3rd person targets. Relaxing this assumption would lead to the false expectation that in clauses with a 3rd person subject and a 1st/2nd person object, 3rd person agreement morphology would be possible, contrary to fact (see (109b, 110b); recall also §4.5.1, where it was shown that a *Multiple Agree* approach to person agreement in Kichean AF is not viable).

For the same reason, even a null expletive *pro*, or some clausal projection (e.g. *v*P), could not be what checks the features on $\pi^0$ in (111a–b). To account for the lack of 1st/2nd person morphology on the verb, such targets too would have to be formally 3rd person; but that entails that they could not enter into an agreement relation with the probe, in the first place.

The same contradiction observed in §5.1 for number agreement therefore obtains here, as well: only 1st/2nd person targets can check the features on $\pi^0$, but no such targets exist in (111a–b). This means that the derivation of such examples culminates without the features on $\pi^0$ being checked; but crucially, these examples are completely grammatical.

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[4]The problem identified in §5.1 had to do with the absence of an overall requirement for arguments in Kichean AF to be agreed with (as evidenced by the ability of two [plural]-bearing arguments to co-occur in this construction, despite there being only a single number probe; see (107a–b), above). This, in turn, meant that there was nothing to force the non-bare variant of the probe to appear, even in the presence of an appropriate agreement target. When it comes to person agreement, however, things are slightly different. Empirically, it is not the case that two [participant]-bearing arguments can co-occur in Kichean AF (an effect I have dubbed the *AF person restriction*; see §3.3). In chapter 4, I attributed this effect to Béjar & Rezac's (2003) *Person Licensing Condition* (PLC), a condition requiring 1st/2nd person arguments to participate in agreement relations involving the [participant] feature. This means that for person agreement in particular, there actually is a principle that would correctly force the non-bare variant of the probe to appear in the presence of a 1st/2nd person agreement target. This does not affect the argumentation in §5.1, of course; at most, it furnishes a [participant]-specific alternative, which is compliant with Chomsky's (2000, 2001) assumptions but does extend to agreement in [plural] in Kichean.

As in §5.1, one may posit a last-resort repair mechanism which removes unchecked features from the representation before they have a chance to reach the interfaces and cause ungrammaticality. But to ensure that this mechanism applies *only* as a last resort—and in particular, to avoid erroneously predicting that "gratuitous non-agreement" would be acceptable— there must be a separate device that ensures that agreement at least be attempted (the unchecked status of the features themselves, given the existence of a repair mechanism, would not cause ungrammaticality at the interface). There would then be no remaining derivations that are actually ruled out on the basis of an unchecked uninterpretable feature, rendering the checked/unchecked (or interpretable/uninterpretable) distinction redundant for the purposes of determining grammaticality. (See §5.1 for a more detailed version of this discussion.)

As before, the overall conclusion is that unchecked features do not cause ungrammaticality, and are therefore inadequate as a means to derive the obligatoriness of φ-agreement.

## 5.3. If not derivational time-bombs, then what? On obligatory operations and violable constraints

We have seen that the particular patterns of φ-agreement observed in the Kichean Agent-Focus construction rule out an account where the obligatoriness of agreement is the result of the kind of representational device I have termed *derivational time-bombs* (§2.2.1), including Chomsky's (2000, 2001) 'uninterpretable features' mechanism. Two more case studies supporting the same conclusion, based on data from Basque and from Zulu, will be presented in chapter 6.

These results actually extend to any framework where grammaticality is bi-conditionally related to the successful culmination of φ-agreement, since what we have uncovered is the existence of grammatical utterances in which the agreement host (in this case, the finite verb) has demonstrably failed to find a suitable target with which to agree. As such, these results also militate against unification-based theories of agreement, such as HPSG or LFG (Bresnan 2001, Pollard & Sag 1994,

*a.o.*), at least unless the need for unification itself is taken to be a violable requirement (cf. the discussion of a violable constraints approach, below).

We are therefore in need of an account that enforces the obligatoriness of agreement, but is simultaneously compatible with the grammaticality of utterances in which $\varphi$-agreement has failed to find an appropriate target. Of the three models surveyed in chapter 2, this leaves the *obligatory operations* and *violable constraints* models as viable contenders. In this section, I offer an alternative account within each of these two models. The proposals put forth here are not unprecedented in the literature—see, for example: Schütze's (1997) 'Accord Maximization Principle'; Anand & Nevins' (2006) 'maximized, but not obligatory' agreement; and López's (2007) 'reactive, non-teleological' reformulations of *Agree* and *Move*.

Starting with the *obligatory operations* model (§2.2.3), we could posit an operation whose effects are—as was the case for Chomsky's (2000, 2001) *Agree* operation—the transmission of $\varphi$-feature values from the goal to the probe. Despite the similarity to Chomsky's *Agree*, however, the proposed operation would differ in two important respects. First, it would be triggered immediately and obligatorily whenever a head with unvalued features is merged into the derivation (cf. Chomsky's *Agree*, whose obligatoriness is only derivative, a side effect of the crash-inducing nature of uninterpretable features; see §5.1). Second, the proposed operation would be allowed to fail—for example, when no appropriate target is available—without halting or crashing the derivation. This operation is formalized in (112) (cf. the 'reactive' formulation of *Agree* argued for by López 2007):

(112)   FIND($f$): given an unvalued feature $f$ on a head H$^0$, look for an XP bearing a valued

            instance of $f$, and assign that value to H$^0$

Note that there is no explicit mention of *c-command* or *cyclicity* in (112). I assume here, with plenty of other contemporary work in syntactic theory (e.g. Chomsky 1995, *et seq.*), that the c-command requirement on the relations formed by FIND($f$) is simply a by-product of the way in which

syntactic structures are constructed. If the derivation proceeds cyclically, and FIND($f$) is triggered immediately upon the merge of an $f$-bearing head $H^0$, then the only structure to built up to that point—and therefore, the only structure available for FIND($f$) to scan—is the structure reflexively dominated by $H^0$'s sister. Thus, principles like *c-command* need not be stipulated as part of the formulation of FIND($f$) itself.

As discussed in §4.2.3, the terms "unvalued feature $f$" and "XP bearing a valued instance of $f$" in (112) should be understood as shorthand for the corresponding feature-geometric notions (namely, a placeholder for a snippet of feature geometry rooted in $f$, and an XP that carries the privative feature $f$, respectively).

Now recall that $\pi^0$ and $\#^0$ in Kichean are relativized to seek [participant] and [plural] features, respectively (§4.2, §4.4). Thus, at the point at which one of these heads is merged, the operation in (112) is obligatorily triggered. Given this model, if nothing in the existing structure carries the relevant (valued) feature, FIND([participant]) or FIND([plural]) will simply fail. This is the case when both the subject and object are 3rd person singular, for example (as in (111a–b), above). The failure of FIND([participant])/FIND([plural]) simply means that no [participant]/[plural] values will be assigned to $\pi^0$ and $\#^0$; crucially, this lack of valuation does not give rise to ill-formedness, nor does it afford any special status to $\pi^0$ or $\#^0$, or assign any ungrammaticality 'diacritic' to them. The derivation simply continues unhindered:

(113)  FAILURE OF FIND([PARTICIPANT]) AND FIND([PLURAL]) DUE TO LACK OF VIABLE TARGETS[5]

*[≈(111a–b)]*
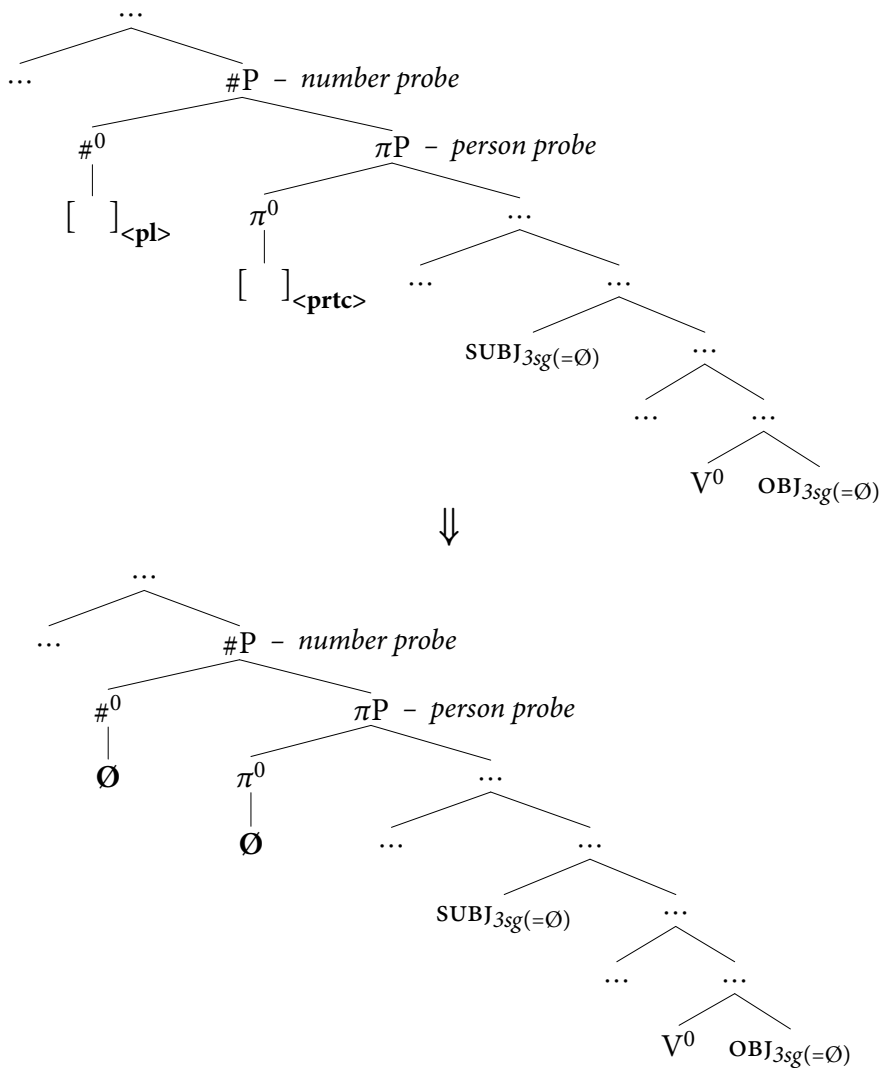


On the other hand, the obligatory triggering of FIND([participant]) and FIND([plural]) correctly rules out instances of "gratuitous non-agreement"—where a viable agreement target is available, but the values it bears are not transferred to the probe—as in (114), for example:

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[5]The derivation schematized in (113) abstracts away from the fact that $\pi^0$ and $\#^0$ are merged separately from one another (see §4.4 for details). As a result, FIND([participant]) and FIND([plural]) will each be triggered in separate derivational steps.

(114)  * ja    rja'   x-Ø-tz'et-ö          **rje'**

FOC him COM-**3sg.ABS**-see-AF **them**

'It was him who saw them.'                                                    *[=(108)]*

Let us pause to highlight a particular architectural point that arises with respect to such examples, already foreshadowed in §2.2.3: an example like (114), on the current approach, is not ruled out due to some offending diacritic or representational property that it carries. It is ruled out because there is simply no derivational sequence sanctioned by the grammar in which the operation in (112) (specifically, FIND([plural])) is not triggered—and therefore, no derivational sequence in which the available [plural] feature on the object *rje'* ("them") is not transmitted to the [plural]-relativized probe, $\#^0$.

As already noted, the idea that certain outcomes are ruled out not because of any offending representational element or diacritic, but because there is simply no well-formed derivation that produces them, is virtually inescapable—even within a much more canonical version of minimalist syntax than the one proposed here. This was illustrated in §2.2.3 using *minimality* effects (Richards 2001, among many others); these effects were shown to require that certain derivations be ruled out not based on the featural content of particular nodes, but rather because they violate the locality condition in question.

On the proposal advanced here, the ill-formedness of an example like (114) is the same sort of phenomenon: there are simply no well-formed derivations in which a $\varphi$-probe like $\#^0$ is merged, but the operation FIND($f$) is not triggered. This extends to other cases of "gratuitous non-agreement", as in (115), as well:

(115)  a.    ha-necig-im            dibr-u                                    (Hebrew)

the-representative-PL spoke-3pl

'The representatives spoke.'

124

If not derivational time-bombs, then what?
On obligatory operations and violable constraints

b. * ha-necig-im          diber

the-representative-PL spoke(3sg.M)                              *[=(2a–b)]*

Assuming that finite verb agreement in Hebrew reflects the fact that (finite) Infl$^0$ carries unvalued $\varphi$-features when initially merged, the only derivation sanctioned by the grammar will be one in which FIND($[\varphi]$) is triggered immediately upon the merger of Infl$^0$. In this case, the subject (*ha-necig-im* "the-representative-PL") carries valued $\varphi$-features, and is already in the derivation (in its *v*P-internal position) when Infl$^0$ is merged.[6] Therefore, following the definition of FIND($f$) in (112), the $\varphi$-feature values found on the subject will be transmitted to Infl$^0$ in any well-formed derivation of (115), and their spellout will be the agreement marker *-u* ("-3pl").

The same logic also rules out what can be described as "gratuitous agreement"—the appearance of plural or 1st/2nd person agreement morphology in a derivation where no plural or 1st/2nd person agreement target exists:

(116) a. * ja  ri  tz'i' x-**at/e/ix/…**-etzel-an      ri  sian          (Kaqchikel)

FOC the dog COM-**1sg/3pl/2pl/…** ABS-hate-AF the cat

'It was the dog that hated the cat.'

b. * ja  ri  xoq    x-**at/e/ix/…**-tz'et-ö        ri  achin

FOC the woman COM-**1sg/3pl/2pl/…** ABS-see-AF the man

'It was the woman who saw the man.'

(117) * ha-nacig          dibar-**ti**/dibr-**u**/dibar-**tem**/…                (Hebrew)

the-representative spoke-**1sg**/spoke-**3pl**/spoke-**2pl**/…

'The representative spoke.'

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[6]In the current framework, it is in principle possible to treat corresponding cases in which the only accessible argument (i.e., the subject) is 3rd person singular on a par with (113), as the outright failure of FIND($[\varphi]$). This will be discussed in greater detail in §8.4.

Examples like (116a–b, 117) are ruled out because the grammar simply does not generate a derivation in which [plural], [participant], or [author] values have been transmitted to the relevant $\varphi$-probes, since $\text{FIND}(f)$ can only transmit such values when they have been found on some XP target. In other words, just like instances of "gratuitous non-agreement" and violations of minimality, these examples are ruled out because there is no derivation sanctioned by the grammar that leads to the result in question.

Given that $\text{FIND}(f)$ can terminate without having successfully found a valued instance of $f$ to copy onto the head $\text{H}^0$, the absence of an admissible derivation that leads to a given string (as in the scenarios just discussed) is generally the only way on the current account that agreement-related ungrammaticality could arise. This will prove particularly important once the empirical picture is broadened to include instances of *dative intervention*, which are the topic of chapter 8.

As an alternative to $\text{FIND}(f)$, one may opt for a solution within the *violable constraints* model. In §2.2.2, I outlined the basic form such an account would take, using a constraint I labeled HaveAgr:

(118)   HaveAgr: Assign one violation mark for every failure to represent the $\varphi$-features of the

designated argument on a finite verb.                                                *[=(4)]*

On this approach, instances of "gratuitous non-agreement" would incur violations of HaveAgr without performing any better with respect to constraints outranking HaveAgr.[7] To be predictive (and hence, falsifiable), this approach would require an explicit theory of the set of constraints that could conceivably dominate HaveAgr, as well as a theory of GEN (the function that generates the set of competing output candidates for a given input representation).

On the other hand, even in the absence of an explicit theory of this sort, it is easy to see that a structure like the one arrived at in (113), above—where neither the subject nor object carry

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[7]Instances of "gratuitous agreement" may have to be handled separately, depending on whether representing the *absence* of $\varphi$-features does or does not fall within the purview of (118).

[participant] or [plural] features, and the probes carry no valued features, either—will not incur any violations of HaveAgr. Since there are no $\varphi$-features on the arguments, (118) is vacuously satisfied. Assuming, then, that no violations of other relevant constraints are incurred by a structure like (113), this candidate will harmonically bound its competitors (i.e., outperform them regardless of the constraint ranking), correctly predicting the well-formedness of examples like (111a–b), above (in which both the subject and the object are 3rd person singular, and no 1st/2nd person or plural agreement morphology arises on the finite verb).

In order to choose between the two accounts presented in this section, we will first need to investigate in some detail a different sort of failed agreement: *dative intervention*. That will be the topic of chapter 8.

## 5.A.  Appendix: How did we get here? A historical interlude

In light of the inadequacy of Chomsky's (2000, 2001) 'interpretability'-based proposal as a means of deriving the obligatoriness of φ-agreement (as was demonstrated in §5.1–§5.2), it is worth pausing to consider how it is that this proposal came about, in the first place.

The last couple of decades of work in generative syntax have seen a shift towards a radically reduced inventory of fundamental grammatical *operations*, down to perhaps only two: *Agree* and *Merge* (see Chomsky 2008, for example). As an essentially unavoidable result, the explanatory burden has been shifted onto increasingly articulated *representations*.[8] The fundamental operations that do remain are seen as a response, by the computational system, to the demands placed on these representations by the interfaces of syntax with other computational modules (specifically, the semantic interface and the morpho-phonological one). Any meaningful classification of these operations into "obligatory" and "optional" therefore becomes redundant, as whether or not they are deployed is governed by the aforementioned interface needs.

Historically, this representationally-driven approach to syntactic theory was preceded by a *transformational* approach, where a significantly larger portion of the explanatory burden was borne by the inventory of syntactic operations.[9] For example, *wh*-movement was captured at this stage of the theory by means of a transformation (or 'rule') labeled "Move *wh*-phrase" (Chomsky 1977:72); importantly, the obligatoriness of *wh*-movement—rather than being attributed to properties of the *wh*-phrase, or of its potential landing site—was attributed to the obligatory status of "Move *wh*-phrase" itself.

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[8] A prime example of this shift is the exploded inventory of functional projections known as "syntactic cartography", as espoused by authors such as Rizzi (1997), Belletti (2004), and Cinque (1999) (see also Starke's 2009 "Nanosyntax" program, perhaps the apogee this approach). Work such as Neeleman & van de Koot 2008 and van Craenenbroeck 2006 has shown not only that these exploded functional inventories can be dispensed with, given much more modest expansions to the inventory of operations—but also that operational alternatives provide empirical coverage that is superior to their "cartographic" counterparts.

[9] The *obligatory operations* model discussed in §5.3 shares certain significant properties with the transformational approach discussed here.

The shift from this transformational approach to the representationally-driven approach discussed earlier coincided, in the course of the development of syntactic theory, with a crucial change in the perspective taken towards movement. The various empirical patterns that fall under the umbrella of Rizzi's (1990) *Relativized Minimality* (such as superiority effects in multiple-*wh* questions, for example) prompted a shift to an analysis of movement as a response to the needs of the landing site, or of an "attractor" structurally adjacent to the landing site (see, in particular, Frampton 1991). This eventually gave rise to the *probe-goal* theory of how pairs of positions come to be related in syntax (Chomsky 2000)—a theory used throughout this book, as well.

In conjunction with this change of perspective on movement, it was noted that in at least some probe-goal pairings—in particular, those referred to here as *φ-agreement* (see the definition in §2.1)—there was a systematic interpretive asymmetry between the probes and the goals. The asymmetry concerns whether the features involved in the probe-goal relation (e.g. φ-features) make a semantic contribution to the interpretation of the probe and/or of the goal. The observation was that features like [plural] and [participant] on a noun phrase affect the interpretation of that noun phrase, whereas they do not alter the semantic interpretation of a verb or TAM-marker, even if they are morphologically expressed there (Chomsky 1995:277–278).[10] In other words, the idea was that φ-features can be *interpreted* on the goal, but not on the probe—hence the terms *interpretable* and *uninterpretable*.

Given that accounting for the obligatoriness of φ-agreement is a desideratum one way or another, Chomsky made the move to derive this obligatoriness from the aforementioned interpretive asymmetry. This was done by adding the conjecture that features that are uninterpretable on a verb or TAM-marker cannot be handled by the semantic interface, and would cause the derivation to "crash" if they were still present at the point at which the structure was subjected to interpretation.[11]

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[10] This distinction might ultimately prove to be too simplistic, once issues such as pluractionality are brought into the fold; it is presented here as a matter of historical faithfulness, not as a decisive theoretical commitment.

[11] It is important to note that this is, indeed, a conjecture: even accepting that such features have no interpretation on verbs and TAM-markers, it does not follow that they would cause ill-formedness at the semantic interface. They could just as easily be ignored by the semantic component, just as certain other syntactic features (e.g. c-selectional features) seem to be.

Agreement (or `Agree`), on this view, would serve to eliminate these problematic features from the representation, or at least alter their uninterpretable status (see §2.2.1). With this move, Chomsky had effectively "tethered" the obligatoriness of φ-agreement to the interpretive asymmetry between φ-features on nominals and their counterparts on verb-like elements.

The discussion so far has touched upon two specific changes that have taken place in the history of syntactic theory: the shift to a probe-goal perspective on syntactic relations, and the tethering of obligatoriness to uninterpretability. Crucially, the two—though historically related—are logically independent of one another. Indeed, the FIND($f$) proposal advanced in §5.3 is entirely based in probe-goal relations, but eschews 'interpretability' as a syntactically meaningful distinction altogether (as will the refinements of this proposal that will be introduced in chapter 8). Instead, this proposal makes use of probe-goal relations as the underpinning of feature valuation (see, in particular, §4.2.3), but with no special status afforded to as-of-yet unvalued features, beyond lacking a value (in particular, while unvalued features trigger the FIND($f$) operation, they are not considered to be any kind of 'ungrammaticality diacritic').

Furthermore, while the argumentation in favor of the probe-goal approach was empirical in nature (e.g. *wh*-superiority patterns), the argumentation in favor of tethering obligatoriness to 'interpretability' was purely conceptual—a classic attempt to reduce one observed phenomenon (the obligatoriness of φ-agreement) to another (the aforementioned interpretive asymmetry between φ-features on the probe and on the goal). As such, it was a completely reasonable null hypothesis to pursue; but one that can and should be abandoned, in the face of compelling contradictory evidence. Such evidence is precisely what I hope to have shown in this chapter (building on the results of chapter 4).

I remain agnostic as to where the flaw lurks, exactly, in Chomsky's argument. Perhaps φ-features on verbs/TAM-markers are not 'uninterpretable' in the first place. Or alternatively, perhaps uninterpretable features do not cause ill-formedness at the syntax-semantics interface, and are instead simply ignored by the interpretive procedure. I leave the resolution of these questions for

future research. What is clear, given the outcome of §5.1–§5.2, is that uninterpretable features (even if such a thing exists) cannot be what is responsible for the obligatory nature of $\varphi$-agreement. See chapter 10—and in particular, §10.2—for further discussion regarding the status of uninterpretable features in other domains of syntactic theory.

What these results show, I think, is that the radical shift of the explanatory burden onto representations, and away from the intricacies of the derivational engine itself, is ill-conceived—at least as it pertains to $\varphi$-agreement. The derivational engine cannot be as stripped down as some (e.g. Chomsky 2008) would contend; and perhaps, the "representationalist tide" discussed earlier should be stemmed, if not reversed.

# Chapter 6

# Two more case studies in failed agreement

In this chapter, I present two more case studies in failed-but-tolerated agreement in grammatical utterances (*failed agreement*, as defined in §2.1). The first involves the interaction of two morpho-syntactic properties in Zulu: the *conjoint/disjoint* alternation in Zulu verbal morphology, and the distribution of nouns lacking the nominal *augment* morpheme. The second involves simplex (i.e., non-periphrastic) unergative verbs in Basque.

These case studies provide further support for the conclusions reached in chapter 5: that failed agreement results only in the features on the probe(s) going unvalued, not in ungrammaticality (or any kind of "crash"). This, despite the fact that the agreement relations in question—in Zulu and in Basque—are decidedly obligatory, when possible.

The data from Zulu, and the argumentation pertaining to them, are presented in §6.1. The Basque data and their analysis are presented in §6.2.

## 6.1.  The *conjoint/disjoint* alternation and nominal *augment* morphology in Zulu

In this section, I present an argument based on data from Zulu which supports the conclusions reached in chapter 5, that a derivational time-bombs approach (including Chomsky's 2000, 2001 'interpretability'-based proposal; see §2.2.1) cannot properly account for the obligatory nature of syntactic probing. The argument is based on a particular alternation in Zulu verbal morphology known as the *conjoint/disjoint* alternation, and its interaction with the distribution of a certain class of nominals—namely, those that lack the morpheme known as nominal *augment*.[1]

The conjoint/disjoint alternation is introduced in §6.1.1. The basic facts of nominal augment are presented in §6.1.2. Halpert's (2012; henceforth, H12) analysis of the interaction between these two phenomena is given in §6.1.3. Finally, in §6.1.4, I show how these facts further demonstrate the

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[1]All of the insights regarding Zulu that appear here, as well as the data themselves, are due to Claire Halpert, who has graciously shared them with me and allowed me to reproduce them here (see, in particular, Halpert 2012). This does not imply her endorsement of the conclusions I draw, and any misrepresentations and errors herein are my own.

inadequacy of the derivational time-bombs model in accounting for the obligatoriness of syntactic probing.

### 6.1.1. The *conjoint/disjoint* alternation

In certain tenses, the Zulu verb alternates between two morphological forms, known as the *disjoint* (marked by *ya-*, in the present tense) and the *conjoint* (marked by an empty morpheme, Ø-, in the present tense):[2]

(119)  a. ku-  **Ø/\*ya**-       pheka [ u-      Sipho  ]                                                            (Zulu)

   17S- **CONJ/\*DISJ**- cook     1AUG- 1Sipho

   'Sipho is cooking.'

   b. [ u-      Sipho  ] u-  **ya/\*Ø**-        pheka

    1AUG- 1Sipho    1S- **DISJ/\*CONJ**- cook

   'Sipho is cooking.'                                                                                 [*H12:144–145*]

Despite what a pair like (119a–b) might lead one to believe, it is not the case that the conjoint/disjoint alternation tracks extraction out of the verb phrase (e.g. out of *v*P). Instead, as has been argued by Buell (2005, 2006) and van der Spuy (1993), the alternation is sensitive to whether or not *v*P contains any overt (i.e., non-moved) material. In particular, the following pattern emerges:

(120)  THE DISTRIBUTION OF CONJOINT AND DISJOINT MORPHOLOGY IN ZULU

   **conjoint**: *v*P contains overt postverbal material

   **disjoint**: *v*P contains no overt postverbal material

   [*Buell 2005, 2006, van der Spuy 1993*]

Thus, as one would expect, weather-predicates (which are presumably generated with no arguments whatsoever) require the use of the disjoint, to the exclusion of the conjoint:

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[2]The current discussion abstracts away from several important aspects of these data—for example, the correlation between agreement/non-agreement *in noun-class* with a given argument on the one hand, and the structural position occupied by that argument, on the other. See Halpert (2012:33–68) for details.

(121)   ku- **ya/\*Ø**-      banda

       17S- **DISJ/\*CONJ**- be.cold

       'It's cold.'                                                                     [*H12:144*]

Importantly, the alternation is sensitive not only to arguments, but also to locatives. Compare a GOAL reading of *phandle* ("outside") to a LOCATION reading of the same modifier:

(122)   a.   [ u-      Sipho ] u- Ø-      gijima phandle                   [*Claire Halpert, p.c.*]

                 1AUG- 1Sipho   1S- **CONJ**- run     outside

                 'Sipho is running outside.'                         (✔ *goal reading,* ✗ *location reading*)

        b.   [ u-      Sipho ] u- **ya**-   gijima phandle

                 1AUG- 1Sipho   1S- **DISJ**- run     outside

                 'Sipho is running outside.'                         (✗ *goal reading,* ✔ *location reading*)

On the assumption that a GOAL reading arises when the modifier is attached low (i.e., inside *v*P), while a LOCATION reading arises when the modifier is attached high (i.e., outside of *v*P), the pattern observed in (122a–b) follows from the observation in (120). Concretely, the GOAL reading emerges when *v*P contains the modifier, giving rise to the conjoint (Ø-), whereas the LOCATION reading emerges when *v*P does not contain the modifier—and since this particular *v*P contains no other overt material, this gives rise to the disjoint (*ya-*). The data in (122a–b) is repeated in (123a–b), with the boundaries of *v*P annotated accordingly:

(123)   a.   [ u-      Sipho ] [ u- Ø-      gijima phandle ]$_{v\text{P}}$                 [*≈(122a–b)*]

                 1AUG- 1Sipho     1S- **CONJ**- run     outside

                 'Sipho is running outside.'                         (✔ *goal reading,* ✗ *location reading*)

        b.   [ u-      Sipho ] [ u- **ya**-    gijima ]$_{v\text{P}}$ phandle

                 1AUG- 1Sipho     1S- **DISJ**- run        outside

                 'Sipho is running outside.'                         (✗ *goal reading,* ✔ *location reading*)

As one might expect, locatives that unambiguously denote goals are compatible only with the conjoint (since they must be *v*P-internal):

(124) u- Mfundo u- **Ø/*ya**- gijim- ela **esitolo**

1AUG- 1Mfudno 1S- **CONJ/*DISJ**- run- APPL **LOC.7AUG.7store**

'Mfundo is running to the store.' [*H12:148*]

H12 shows furthermore that the conditions on the appearance of the conjoint and disjoint cannot be subsumed under a prosodic account (H12:156–159). On the one hand, there are instances of phrase-final verbs carrying the conjoint (Ø-)—e.g. in the first conjunct of Right Node Raising constructions. On the other hand, there are instances of phrase-medial verbs carrying the disjoint (*ya-*)—e.g. before certain purpose and rationale clauses (H12:181–182), which can be shown not to induce a right-hand prosodic boundary after the verb.

### 6.1.2. Nominal *augment* morphology

Nominals in Zulu are typically marked with an initial vowel, known as the *augment*, which alternates based on the noun-class of the nominal. Some examples are given in (125a–d):

(125)  a.  **i-** n- cwadi   "book"   (class 9)   [*Claire Halpert, p.c.*]

  b.  **u-** mu- ntu   "person"   (class 1)

  c.  **i-** zim- fingo   "sharks"   (class 10)

  d.  **i-** xoxo    "frog"   (class 5)

Where one can identify a distinct noun-class marker (which is the case for most common nouns, including those in (125a–c)), the augment attaches *outside* of it. Of course, given that the augment alternates based on noun-class, the only way we can tell that the augment is not part of the noun-class marker itself is because there are environments in which the noun-class marker surfaces *without* the augment (Buell 2011, Mzolo 1968, von Staden 1973).

Following H12, the kind of augmentless nominal we will examine is the kind that is interpreted as an NPI (see also Buell 2011). As H12 shows, even when one controls for factors such as definiteness, specificity, and focus, there emerge distinct structural conditions on the distribution of these augmentless nominals. First, they must appear within *v*P:

(126) a.    a-   ngi-   sho- ngo      ukuthi ku- fik-    e     [ **muntu** ]

           NEG- 1st.sg.s- say- NEG.PAST that    17S- arrive- PRFV    **1person**

           'I didn't say that anyone came.'

     b. * a-   ngi-   sho- ngo      ukuthi [ **muntu** ] u- fik-    ile

           NEG- 1st.sg.s- say- NEG.PAST that     **1person**    1S- arrive- PRFV

     <u>cf.:</u>

(127) a-   ngi-    sho- ngo      ukuthi [ **u-**     **muntu** ] u- fik-    ile

       NEG- 1st.sg.s- say- NEG.PAST that    **1AUG-** **1person**    1S- arrive- PRFV

       'I didn't say that a/the person/anyone came.'                [*H12:97–98*]

Second, an augmentless nominal must be the highest nominal in its *v*P:[3]

(128) a.    ✔ VS W/AUGMENTLESS S

           a-    ku- phek- anga      [ **muntu** ]

           NEG- 17S- cook- NEG.PAST    **1person**

           'Nobody cooked.'

     b.     ✔ SVO W/AUGMENTLESS O

           [ u-     muntu ] a-    ka- phek- anga      [ **qanda** ]

            1AUG- 1person    NEG- 1S- cook- NEG.PAST    **5egg**

           'A/the person didn't cook any egg.'

---

[3]See Halpert (2012:103–111), for a discussion of certain complexities that arise once applicativized verb phrases are taken into consideration.

c. ✗ VSO w/AUGMENTLESS S, AUGMENTLESS O

* a- ku- phek- anga     [ **muntu** ] [ **qanda** ]

   NEG- 17S- cook- NEG.PAST    **1person**    **5egg**

d. ✔ VSO w/AUGMENTLESS S, AUGMENTED O

a- ku- phek- anga     [ **muntu** ] [ **i-**    **qanda** ]

   NEG- 17S- cook- NEG.PAST    **1person**    **5aug- 5egg**

'Nobody cooked the/an/any egg.'

e. ✗ VSO w/AUGMENTED S, AUGMENTLESS O

* a- ku- phek- anga     [ **u-**    **muntu** ] [ **qanda** ]

   NEG- 17S- cook- NEG.PAST    **1AUG- 1person**    **5egg**      [*H12:102*]

### 6.1.3. Halpert's (2012) analysis

To account for the structural conditions on the distribution of augmentless nominals (§6.1.2), H12 posits a head $L^0$, which probes into the $v$P:[4]

(129)



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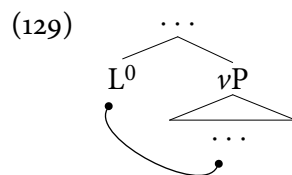
[4]I have argued, in this book (§2.1) and elsewhere (Preminger to appear), for increased skepticism towards the recent rush to reduce nearly all cases of correspondence between two positions in the syntactic structure to the relation underlying $\varphi$-agreement. In that vein, there seems to be no a priori reason why the relation between the syntactic head that Halpert posits ($L^0$) and its target would be a matter of agreement per se. I would endorse such skepticism in this case, too; the argument for treating this empirical domain in terms of agreement comes precisely from the success of Halpert's analysis, which uses exactly the same mechanics put forth in chapter 4 to handle the Kichean Agent-Focus facts, the latter of which *are* self-evidently about $\varphi$-agreement (see the working definitions given in §2.1). Crucially, that is not the case for some of the other reductions-to-agreement listed in §2.1 and in Preminger to appear (to cite one example, Kratzer's 2009 account of 'fake indexicals' invokes an agreement relation which, in addition to having the wrong directionality, respects none of the well-established locality conditions on agreement).

Crucially, H12 assumes that $L^0$ is able to probe into the *v*P even after A-movement out of the *v*P has taken place, a sort of limited counter-cyclicity that has been independently supported in work by Asarina (2011) and Holmberg & Hróarsdóttir (2003) and Sigurðsson & Holmberg (2008).

If $L^0$ finds a target within *v*P, the result is conjoint morphology (Ø-, in the present tense); if it does not, the result is disjoint morphology (*ya-*, in the present tense).[5] These spellout rules are summarized in (130a–b):

(130)    a.    *Ø-*    (the *conjoint*):    spellout of $L^0$ which has found an agreement target

           b.    *ya-*    (the *disjoint*):    spellout of $L^0$ which has not found an agreement target

On the assumption that traces of A-moved phrases are invisible for probing (see, e.g., Holmberg & Hróarsdóttir 2003, as well as §6.1.4, below), this derives the distribution of the conjoint and the disjoint. In particular, the disjoint (*ya-*) only arises no argument remains in the *v*P (including those instances where *v*P was already empty to begin with; see (121), above).

But this is not the end of the story; suppose that while $L^0$ can target augmented and augmentless nominals alike, augmentless nominals *require* agreement with $L^0$. In other words, augmentless nominals in Zulu are like bearers of [participant] in other languages—which obey Béjar & Rezac's 2003 *Person Licensing Condition* (PLC), requiring them to be agreed with by an appropriate probe (see chapter 4, and §4.1 in particular).[6]

As H12 shows, this derives precisely the structural conditions detailed in §6.1.2 on the distribution of augmentless nominals. Since $L^0$ only agrees with a single target, it can license at most one augmentless nominal, deriving the inability of more than one augmentless nominal to co-occur

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[5]This pattern is slightly marked, in that the overt member of the paradigm is the one that corresponds to a *lack* of valuation. But this is also attested elsewhere—cf. agreement in non-past, non-participle main verbs in English (-Ø if the subject carries [participant] or [plural]; /-z/ otherwise). See also fn. 24, in chapter 8.

[6]That augmented nominals do not require such licensing can be derived, as Halpert (2012:225–228) points out, if one takes the augment morpheme to be a licensor in its own right, equivalent to $L^0$ in its licensing capabilities (this recalls the role of the K(ase)$^0$ head in the Kase Phrase analysis; see, among others, Bayer, Bader & Meng 2001, Bittner & Hale 1996, Grosu 1994, Lamontagne & Travis 1987). It is a truism that every augmented nominal contains an augmentless nominal, at least at the level of the phonological string (hence the name, 'augment'); but on this view, the same is true of the syntactic representation—and it is the augment morpheme itself that licenses the enclosed augmentless nominal.

within a single *v*P. On the other hand, since augmented nominals require no licensing, multiple augmented nominals are able to co-occur freely. Finally, since probing by $L^0$ obeys minimality, only the highest target in *v*P can enter into the requisite licensing relation with $L^0$—deriving the fact that an augmentless nominal, if it appears, must be the structurally highest argument in its *v*P (see (128a–e), above).

It is worth pausing to compare this state of affairs to the probing and licensing system of Kichean, detailed in chapter 4. In Kichean, like in the other languages mentioned by Béjar & Rezac, bearers of [participant] require licensing-by-agreement. In Kichean in particular, only bearers of [participant] and/or [plural] can be agreed with—and each is targeted by a dedicated probe (labeled $\pi^0$ and $\#^0$, respectively).

One difference that arises from these distinctions is that in Kichean, the argument licensed by agreement (i.e., the bearer of [participant]) does not have to be the highest argument in *v*P (a phenomenon termed 'omnivorous agreement'; see Nevins 2011, as well as §3.2). That is because in Kichean, the probe involved in the licensing relation, $\pi^0$, is feature-relativized to [participant] (§4.2), so that the only arguments it can target are those that require licensing in the first place. This is why the position of those arguments within the *v*P—in particular, whether they are subjects or objects— does not matter. Zulu illustrates what happens when such relativization is not in place: augmentless nominals are not the only possible targets for $L^0$, and so minimality forces augmentless nominals to be the highest target in *v*P if they are to be licensed. The result is that while 3rd person arguments in Kichean are "skippable" (by $\pi^0$), nothing in Zulu seems "skippable" (by $L^0$).

We might wonder, then, what independent evidence can be adduced (and is available to the learner of Zulu) for the indiscriminate nature of $L^0$. It turns out that we have already seen such evidence: recall that the conjoint/disjoint alternation, which reflects the exponence of $L^0$ itself (130), is sensitive even to locative modifiers. This was demonstrated by examples like (131–132), repeated from earlier:

(131)   a.  [ u-      Sipho  ] [ u-  Ø-     gijima phandle ]$_{vP}$                              *[=(123–124)]*

            1AUG- 1Sipho     1S- **CONJ**- run     outside

            'Sipho is running outside.'                              (✔ *goal reading*, ✗ *location reading*)

        b.  [ u-      Sipho  ] [ u- **ya**-   gijima ]$_{vP}$ phandle

            1AUG- 1Sipho     1S- **DISJ**- run          outside

            'Sipho is running outside.'                              (✗ *goal reading*, ✔ *location reading*)

(132)   u-      Mfundo  u- **Ø/\*ya**-        gijim- ela    **esitolo**

        1AUG- 1Mfudno 1S- **CONJ/\*DISJ**- run-    APPL **LOC.7AUG.7store**

        'Mfundo is running to the store.'                              [*H12:148*]

This contrasts with the selectivity of $\varphi$-probes in Quich—as evinced, for example, by their inability to target obliques (see §4.2.1).

In summary, we have seen how H12's proposal provides a unified analysis of the two empirical domains surveyed in §6.1.1–§6.1.2: the conjoint/disjoint alternation, and the distribution of augmentless nominals. The analysis makes use of precisely the same machinery employed in the analysis of $\varphi$-agreement in Kichean Agent-Focus, differing only in the degree of relativization of the relevant syntactic probe. Importantly, such variation in relativization was already necessary regardless of Zulu—e.g. to capture the difference between $\pi^0$ in Kichean, which is relativized to [participant], and $\pi^0$ in PCC languages, which is not (see §4.1, §4.4 for details).

### 6.1.4.  Tolerated failed agreement in the Zulu verb phrase

H12's analysis presented in §6.1.3 centers around the role of the probe $L^0$, whose exponence is responsible for the conjoint/disjoint alternation in Zulu verbal morphology. A crucial component of the analysis is that disjoint morphology (*ya-*, in the present tense) arises precisely when $L^0$ has failed to find a target within $vP$; this was the case in examples like (133a–c):

(133)  a.  [ u-     Sipho  ] u- **ya/*Ø**-        pheka

      1AUG- 1Sipho   1S- **DISJ/*CONJ**- cook

      'Sipho is cooking.'                                                         *[=(119b)]*

    b.  [ i-      qanda ] [ u-     Sipho  ] u- **ya/*Ø**-        li- pheka

       5AUG- 5egg       1AUG- 1Sipho   1S- **DISJ/*CONJ**- 5O- cook

       'As for the egg, Sipho is cooking it.'                              *[H12:145]*

    c.  ku- **ya/*Ø**-        banda

      17S- **DISJ/*CONJ**- be.cold

      'It's cold.'                                                               *[=(121)]*

Let us now focus in on what it means, exactly, for $L^0$ to fail to find a target. First, observe that $L^0$ cannot engage in *Multiple Agree* relations (Anagnostopoulou 2005, Hiraiwa 2001, 2004, *a.o.*). If it could, we would falsely predict that more than one augmentless nominal could appear (and be licensed) within the same $v$P (cf. (128c), above).

This, in turn, means that a node like $v$P itself cannot be a viable target for $L^0$. If it could, it would unambiguously constitute a closer target than any nominal properly contained within it; and given the unavailability of Multiple Agree for $L^0$, that would mean that no augmentless nominal could ever be licensed (since it would never be the closest agreement target to $L^0$). For similar reasons, traces of A-moved phrases cannot be viable targets for $L^0$. If they could, then augmentless objects in SVO clauses could never be licensed: the A-trace of the moved subject would always be closer to $L^0$; but augmentless objects in SVO clauses are licit (see (128b), above).

Taken together, these results entail that in examples where $v$P has been completely vacated, as in (133a–c), there is literally no available target with which $L^0$ could have entered into an agreement relation.

A theory where there are two variants of $L^0$, one with the features that trigger probing and one without, is ruled out on much the same grounds as the corresponding account of Kichean was (§5.1). On such a theory, the disjoint would be the spellout of the variant of $L^0$ born without these features

(since the disjoint is precisely what one finds when there are no viable targets in $v$P). Having already established that augmented nominals require no licensing, such a theory would predict that as long as the $v$P contained nothing but augmented nominals, one would find the conjoint and the disjoint in free variation. The bare version of $L^0$ could be selected, resulting in the disjoint surfacing; or the non-bare version could be selected, resulting in successful agreement with the closest (augmented) nominal, and the conjoint surfacing. But as demonstrated by (119a), above, such optionality is not what one finds.

We have thus arrived at a similar conclusion to the one reached in chapter 5, concerning the probes $\#^0$ and $\pi^0$ in Kichean Agent-Focus clauses containing only 3rd person singular arguments. Specifically, in Zulu clauses where $v$P is either base-generated empty, or has been completely vacated via A-movement, $L^0$ has engaged in probing and failed to find a suitable target.

Let us now ask the same question asked in chapter 5 with respect to these Kichean probes: what forces $L^0$ in Zulu to probe (and rules out derivations in which it has not done so)? In empirical terms, what rules out the derivation of (134), repeated from earlier, in which $L^0$ has simply not probed and thus not agreed with a $v$P-internal target—resulting in the disjoint (*ya-*)?

(134)    ku- **Ø/\*ya**-      pheka [ u-      Sipho   ]

       17S- **CONJ/\*DISJ**- cook     1AUG- 1Sipho

       'Sipho is cooking.'                                                 *[=(119a)]*

Consider an answer in terms of derivational time-bombs: an 'uninterpretable feature' on $L^0$, which goes unchecked unless $L^0$ successfully agrees with some $v$P-internal target. As argued above, there is only one variant of $L^0$; thus, this same lexical item—with the same featural content—would be inserted into the derivation of examples like (133a–c), above (where the $v$P is empty). This falsely predicts that such examples would be ill-formed, because there are no targets against which the features on $L^0$ could be checked (recall that we have seen that neither the traces of A-movement, nor nodes along the clausal spine, such as $v$P, can be viable agreement targets for $L^0$).

Finally, recall that the obligatoriness of probing by L$^0$ cannot be derived by placing derivational time-bombs on the arguments themselves, either. That is because agreement is obligatory even in *v*Ps consisting exclusively of augmented nominals, and we have already seen that augmented nominals are licit even when they could not possibly have been agreed with by L$^0$.

In summary, much like the Kichean facts in chapters 3–5, these Zulu facts cannot be handled using derivational time-bombs, including Chomsky's (2000, 2001) 'uninterpretable features'. (For a discussion of approaches that may fare better with respect to these kinds of data, see §5.3.)

## 6.2. Basque unergatives

In this section, I review another case study involving failed agreement in grammatical utterances, involving unergative verbs in Basque.[7]

I will argue for an analysis of simplex (i.e., non-periphrastic) unergative verbs in Basque as true intransitives: one-place predicates that select a single, ergative-marked argument. This view contradicts the traditional (generative) analysis of these verbs, which posits an underlying/implicit object in addition to the ergative subject, rendering them equivalent to transitives. I will provide arguments against the implicit object analysis of these verbs and in favor of the intransitive one.

This means that when the main verb is a simplex unergative, the $\varphi$-probe(s) responsible for 'absolutive agreement' will search for, and fail to find, an absolutive agreement target.[8] As in Kichean, the result will be the appearance of what is commonly referred to as '3rd person singular (absolutive) agreement morphology', but is just the spellout of a $\varphi$-probe—or set of probes—that has failed to locate a target bearing [plural], [participant], or [author] features (§4.2).

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[7] The arguments and data in this section, unless otherwise attributed, are taken from two papers that appeared as Preminger 2009, 2012.

[8] The reason for the notation 'probe(s)', here, is that there is evidence internal to Basque in favor of a separation between syntactic probing for person features and for number features (see Preminger 2009, Rezac 2008b, as well as §4.1, §4.3). Thus, it turns out that what is commonly referred to as 'absolutive agreement' in Basque is not an atomic unit. However, this particular detail is not of crucial importance to the present discussion, since the absolutive agreement morphology that arises in all unergative constructions in Basque corresponds to what finds with an overt absolutive nominal that is both 3rd person *and* singular.

This analysis will be shown to achieve better results than the implicit object analysis, in providing a uniform treatment of three types of unergative constructions in Basque: simplex unergatives, periphrastic unergatives (involving a light-verb), and the less commonly discussed iterative/repetitive unergative construction. This last construction, I will show, cannot be easily handled by the traditional account of Basque unergative morphosyntax—but is straightforwardly derived on the failed agreement account.

I begin, in §6.2.1, by reviewing the arguments for the traditional, implicit object analysis of simplex unergatives. We will see that each of these arguments is intrinsically flawed, leaving us with no conclusive argument in favor of the implicit object analysis. In §6.2.2, I offer an alternative analysis of simplex unergatives in terms of failed agreement. I then present a dataset from the iterative/repetitive unergative construction, which favors the failed agreement analysis over the implicit object approach. A summary of this section is given in §6.2.3.

### 6.2.1. The case for the implicit object conjecture

There are two constructions in Basque that are commonly referred to as 'unergative'; these are demonstrated in (135a) and (135b):

(135)   THE BASQUE 'UNERGATIVE ALTERNATION'

    a.   LIGHT-VERB CONSTRUCTION

       Jon-ek   dantza egin d-Ø-u-Ø.                                                    (Basque)

       Jon-ERG dance  do    3.ABS-sg.ABS-√-3sg.ERG

       'Jon danced.'

    b.   SIMPLEX UNERGATIVE

       Jon-ek   dantzatu   d-Ø-u-Ø.

       Jon-ERG dance-PRT 3.ABS-sg.ABS-√-3sg.ERG

       'Jon danced.'

Let us begin by noting that the light-verb construction (135a), is not really 'unergative' in any meaningful sense. The main verb, syntactically speaking, is clearly the light-verb *egin* ("do"), and this verb quite clearly takes a direct object in *dantza* ("dance *(n.)*"). Perhaps the source of this terminological confusion is that the element whose semantic interpretation is responsible for the open-class, encyclopedic content of event predication in (135a) is the nominal *dantza*; or perhaps it is merely the fact that the translation of (135a) into Indo-European languages typically involves an unergative verb. In any case, while (135a) is not *dyadic* (which is a conceptual-semantic category), it is quite plainly *transitive* (which is a morphosyntactic category).

The same is not true of (135b), at least not straightforwardly. Here, the main verb is *dantzatu*, and it appears that this verb selects an ergative argument (*Jon-ek* "Jon-ERG") but no absolutive one. It is examples like (135b) that I will refer to as *simplex unergatives*.

Many authors have attempted to draw parallels between the light-verb construction and the simplex unergative construction—arguing either that one derives from the other, or at least that the light-verb construction reveals something about the underlying nature of simplex unergatives. These authors therefore conclude that there is an *implicit object* of one sort or another in examples like (135b) (Bobaljik 1993, Hale & Keyser 1993, Laka 1993b, Levin 1983, Ortiz de Urbina 1989, Uribe-Etxebarria 1989, *a.o.*).

One source of evidence put forth in support of the implicit object conjecture is the very existence of alternations such as (135a–b). But while pairs like (135a–b) certainly exist, the alternation is far from fully productive: there are several nominals that can appear in the light-verb construction, for which no corresponding simplex unergative exists; and there may also be simplex unergatives for which no corresponding nominal exists, though the status of these is less clear-cut (see Laka 2006, Preminger 2012).

Another source of evidence concerns the form of the auxiliary in examples like (135a–b). First, both the light-verb construction and the simplex unergative construction make use of the so-called 'transitive' auxiliary, constructed from *\*edun(/ukan)* ("have"), rather than *izan* ("be"). There is a

rich tradition, in the linguistic study of Indo-European languages in particular, of deriving auxiliary selection (i.e., the choice between *have*-type and *be*-type auxiliaries) from transitivity in general, and from the presence of an underlying object in particular (see Burzio 1986, and much related work). If the same principles extended to Basque, it would be possible to view the form of the auxiliary verbs in (135a–b) as indicative of transitivity, and thus, the presence of a (possibly implicit) object.

In Basque, however, transitivity turns out to be an inadequate predictor of auxiliary selection. Specifically, it has been shown that a better predictor of which auxiliary root is chosen is the presence of an ergative agreement target in the clause (Laka 1996), or simply the presence of ergative agreement morphology in the auxiliary's morphological domain (Arregi 2004).

As an illustration of where the predictions of such accounts diverge from that of the transitivity-based account, consider instances of *allocutive agreement* (Eguren 1995, Oyharçabal 1993, *a.o.*). In allocutive agreement contexts, the auxiliary exhibits agreement morphology that references the addressee of the speech-act. This "additional" agreement morphology may appear in either the ergative agreement slot, or the dative agreement slot, depending on which slots are and are not already occupied by agreement with regular, thematic arguments. Consequently, one can find instances of ergative allocutive agreement morphology with verbs that are unambiguously intransitive:

(136)  Jon-Ø    eror-i    d-Ø-u-**k**.

Jon(ABS) fall-PRFV 3.ABS-sg.ABS-$\sqrt{}$-**2sg.ERG**

'Jon has fallen. *(2sg allocution)*'                                                    [*Arregi 2004*]

Crucially, due to the presence of allocutive agreement in the ergative slot, the auxiliary in (136) must be built using the *\*edun(/ukan)* ("have") root, rather than the *izan* ("be") root—despite the intransitivity of the verb.[9]

Thus, the presence of an ergative agreement target (or simply ergative agreement morphology) is a better predictor of the choice of *have* vs. *be* in Basque than the transitivity of the verb is. The

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[9]See Arregi (2004) for a similar argument made on the basis of *absolutive displacement*.

choice of *\*edun(/ukan)* ("have") in both the light-verb construction and in simplex unergatives is therefore merely an indication that both contain an ergative agreement target (and/or ergative morphology). But that much was uncontroversial to begin with: the fact that these examples contain an ergative subject, and corresponding ergative agreement morphology, is what led to their classification as 'unergative' in the first place. It therefore does not bear directly on the presence or absence of an implicit object, which is our focus here.

Another property of the auxiliary verbs in (135a–b) that has been taken as evidence for the implicit object conjecture concerns the presence of absolutive agreement morphology in both cases. In particular, the *d-* ("3.ABS-") prefix in the auxiliary *d-Ø-u-Ø* ("3.ABS-sg.ABS-$\sqrt{}$-3sg.ERG") found in both examples has been taken to indicate successful agreement with an implicit object.[10]

As demonstrated in chapter 4, however, the agreement morphology that linguists label '3rd person singular' in a given language may well be nothing but the morphological exponence of probes that have failed to locate a target bearing [plural], [participant], or [author] features in their search domain. Thus, the presence of this agreement morphology is compatible with an analysis of (135b) in terms of successful agreement with a 3rd person singular implicit object, but also with the absence of an absolutive agreement target altogether. In §6.2.2, I will provide arguments in favor of the latter; the point here, though, is that the presence of absolutive agreement morphology on the finite auxiliary does not provide conclusive evidence of one analysis over the other.

Finally, we may consider case-theoretic motivations for the implicit object conjecture. On the surface, simplex unergatives appear to violate the generalization that ergative case can only be assigned in the presence of another, non-oblique noun phrase. This generalization has been formulated in several ways. For some, ergative case is dependent on the prior discharging of absolutive (the *Obligatory Case Parameter* proposal; see Bobaljik 1993, Laka 1993b); for others, it

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[10] Arregi & Nevins (2008, 2012) analyze the same prefixal *d-* as the result of morphological epenthesis, satisfying a requirement that the exponence of tense (i.e., the auxiliary root) never be word-initial in Basque. If one adopts this view, then an example like (135b) lacks any true absolutive agreement morphology, rendering moot this argument for the implicit object conjecture.

is dependent on the presence of another non-oblique (not necessarily absolute) nominal in the local domain (see, e.g., Marantz 1991).

Regardless, there is evidence from Basque that a verb can have an ergative argument without another non-oblique (e.g. absolutive) co-argument, from examples like (137):[11]

(137)   [ [**Harri     horiek**]         altxa-tze-n    ] probatu    [d-**Ø/it**-u-(z)te]$_{aux}$

      **stone(s) those$_{pl}$(ABS)** lift-NMZ-LOC    attempted   3.ABS-**sg/pl.ABS**-$\sqrt{}$-3pl.ERG

      'They have attempted to lift those stones.'

      (subject is *pro* <3pl.ERG>)                                                              [*Etxepare 2006*]

If projecting an ergative subject were contingent on the presence of a non-oblique co-argument, overt or implicit, then the only way the subject of (137) could be ergative is if the matrix verb *probatu* ("attempt") had an implicit direct object.

Crucially, however, absolutive $\varphi$-agreement in Basque is not *omnivorous* (there are no instances where an accessible absolutive agreement target is skipped in favor of another, structurally lower target; cf. Kichean, as discussed in chapters 3–4). Since the absolutive noun phrase in the embedded clause in (137) is unambiguously farther away from the absolutive $\varphi$-probe(s) than an implicit direct object in the matrix clause would be, finite absolutive agreement in the matrix clause would have to target this implicit matrix object. That, in turn, would preclude agreement with the embedded absolutive argument. This is indeed what happens when there is an actual absolutive argument in the matrix clause—as in (138), below, where the matrix subject is absolutive (as the morphology on the matrix auxiliary attests):

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[11]This construction—and in particular, the variant that exhibits long-distance agreement (LDA) with the embedded absolutive argument—is restricted to "substandard" varieties of Basque. Its classification as "substandard" is a matter of both the pervading prescriptive attitude towards these constructions, and of their distribution, which cuts across conventional dialect boundaries; see Etxepare (2006).

(138)  [ **Liburu-a**          irakur-tze-n     ] saiatu [d-**ira(/\*a)**]$_{aux}$

      **book-ART$_{sg}$(ABS)** read-NMZ-LOC   try     3.ABS-**pl.ABS(/\*sg.ABS)**.$\sqrt{}$

      'They have tried to read the book.'

      (subject is ***pro*** <**3pl.ABS**>)                                        [*Etxepare 2006*]

But agreement with the embedded absolutive argument *is* attested in (137); and crucially, even when

agreement with the embedded absolutive in (137) obtains, the matrix subject is still ergative (as can

be diagnosed through the ergative agreement morphology on the matrix auxiliary).[12]

    It is important to note that on Marantz's (1991) *dependent case* analysis (discussed in much

greater detail in chapter 9), co-argumenthood is not the relevant locality condition on cases such as

accusative and ergative. Thus, for example, in an ECM construction, we find the case dependencies

schematized in (139):

(139)  He$^{NOM}$ expects them$^{ACC}$ to invite her$^{ACC}$.

Whether one adopts the *raising-to-object* analysis of ECM (Postal 1974) or not, one of the two

dependencies in (139) does not involve a pair of co-arguments, at the level of representation that

dependent case is computed upon (roughly, after all A-movement and before all A-bar movement;

see Marantz 1991).  One may therefore hypothesize that in the Basque (137), it is precisely the

embedded absolutive argument that serves as a case-competitor for the matrix ergative subject, thus

bringing such examples back into compliance with the aforementioned generalization on ergative

case. The problem with such a hypothesis is examples like (138).  The latter contains the same

non-finite, adpositionally-headed embedded clause as the former, complete with an embedded

absolutive argument.[13]  Yet the embedded absolutive argument in (138) does *not* trigger ergative

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[12]See Etxepare (2006) and Preminger (2009) for a more detailed discussion of this and related constructions.

[13]It is not inconceivable that (138) contains some phonologically null structure that is absent in (137), and that this additional structure renders the embedded clause in (138) a separate domain from the matrix clause, in a way that does not hold of the embedded clause in (137). However, absent any evidence in favor of such structural differences (and I

case on the matrix subject, which is instead absolutive (as can be discerned, again, by examining the morphology borne by the matrix auxiliary).

Thus, taken together, (137) and (138) demonstrate that the presence of another non-oblique argument is not a necessary condition for ergative case assignment in Basque (see Preminger 2012 for further discussion). These data do not pertain directly to failed agreement, of course, since in both examples, the absolutive $\varphi$-probes have established successful agreement relations with appropriate targets. They do, however, constitute an existence proof for ergative case assignment in Basque in the absence of an absolutive co-argument or case-competitor. This, in turn, means that there is no case-theoretic argument to be had in favor of the implicit object conjecture from the fact that the subjects of simplex unergatives are ergative rather than absolutive.

As far as I am aware, this exhausts the list of arguments for simplex unergatives in Basque having an implicit object. As we have seen, none of these arguments holds up to scrutiny, and each can be defeated using only other evidence from within Basque itself.

## 6.2.2. Tolerated failed agreement in Basque unergatives

Given the absence of a conclusive argument in favor of the implicit object conjecture, let us consider an analysis of simplex unergatives as true intransitives: one-place predicates that select a single, ergative marked argument (recall that there is no case-theoretic argument that would rule out a Basque clause where the only nominal argument is ergative; §6.2.1). If this analysis turns out to be correct, then probing for an absolutive agreement target in simplex unergatives would fail to locate a suitable agreement target. At this juncture, let us remind ourselves that we have already seen evidence that such failure to locate an appropriate agreement target does not give rise to ungrammaticality (or a "crash"); the evidence, summarized in §5.1–§5.2, came from Kichean Agent-Focus clauses that lacked any plural or 1st/2nd person arguments:

(140) a. ja   ri   tz'i'  x-Ø-etzel-an          ri   sian
        FOC the dog COM-**3sg.ABS**-hate-AF the cat

        'It was the dog that hated the cat.'

    b. ja   ri   xoq     x-Ø-tz'et-ö          ri   achin
        FOC the woman COM-**3sg.ABS**-see-AF the man

        'It was the woman who saw the man.'                    *[=(105a–b)]*

As detailed in §4.4, the probes $\pi^0$ and $\#^0$ in Kichean are relativized to seek only bearers of [participant] and [plural], respectively. This assumption was necessary in order to explain the *omnivorous agreement* patterns exhibited by these probes. But as detailed in chapter 5, this means that in examples like (140a–b), these probes have failed to find *any* suitable agreement targets. Crucially, the result is not any sort of ill-formedness, but rather the very morphology labeled by traditional Mayan grammarians as '3rd person singular (absolutive) agreement morphology' (which across all of Mayan, is null).

While there is no reason to think that the relevant $\varphi$-probe(s) in Basque are relativized to [participant] or [plural] (recall that there is no omnivorous agreement in Basque), that is a separate issue from whether so-called '3rd person singular' morphology necessarily indicates successful agreement with anything. It could still be the spellout of probes *that have not been valued* with [participant], [plural], and so forth—whether the valuation in question was a result of probing for only marked features, or for any $\varphi$-features.

On this analysis, we expect invariable '3rd person singular' absolutive agreement morphology to arise in simplex unergatives, as well as ergative agreement reflecting the notional subject. Due to the presence of the latter, we also expect an auxiliary built using *\*edun(/ukan)* ("have") (recall that the presence of ergative, not transitivity, is the best predictor of *have* vs. *be* in Basque; see §6.2.1). As already noted, all of these properties are exactly what we find with simplex unergatives (see (141), repeated from earlier). But these do not yet *favor* the intransitive account over the implicit object one.

(141)  Jon-ek   dantzatu   d-Ø-u-Ø.

Jon-ERG dance-PRT 3.ABS-sg.ABS-√-3sg.ERG

'Jon danced.'                                                                          *[=(135b)]*

The evidence that favors the intransitive account comes from data like (142a–e), below. It is the case that many predicates that can appear in the light-verb construction are also able to appear in a variation of this construction in which the complement of the light-verb is a locative or adverbial, rather than a purely nominal projection. This variation results in an iterative reading:

(142)  a.  Dantza(-n)   egin d-Ø-u-te.

dance(-LOC) do   3.ABS-sg.ABS-√-3pl.ERG

'They danced (repeatedly).'

b.  Laster(-ka) egin d-Ø-u-te.         d.  Oihu(-ka)     egin d-Ø-u-te.

run(-ADV) do   AUX                          scream(-ADV) do   AUX

'They ran (repeatedly).'                     'They screamed/yelled (repeatedly).'

c.  Borroka(-n) egin d-Ø-u-te.         e.  Errieta(-n)     egin d-Ø-u-te.

fight(-LOC)  do   AUX                         dispute(-LOC) do   AUX

'They fought (repeatedly).'                  'They disputed (repeatedly).'

[*Etxepare 2003*]

What is important to note, for the current purposes, is that the form of the auxiliary remains the same regardless of whether the complement of the light-verb is nominal or adpositional: it remains an *\*edun(/ukan)*-based ("have") auxiliary, with '3rd person singular' absolutive agreement morphology.

Crucially, adpositional phrases are not viable agreement targets in Basque. The immediate nominal complement of the adposition cannot be agreed with, nor can the entire PP be agreed with (say, as an invariantly 3rd person singular target; cf. §8.3.2). This can be seen by looking again at data like (143), repeated from earlier:

(143)  [ [**Harri    horiek**]        altxa-tze-n   ]<sub>PP</sub> probatu   [d-**Ø/it**-u-(z)te]<sub>aux</sub>

      **stone(s) those<sub>pl</sub>(ABS)** lift-NMZ-LOC    attempted  3.ABS-**sg/pl.ABS**-√-3pl.ERG

      'They have attempted to lift those stones.'

      (subject is *pro* <3pl.ERG>)                                                                              *[=(137)]*

Both the PP headed by *-n*, in its entirety, and the immediate nominal complement of P$^0$ (*altxa-tze-* "lift-NMZ"), are unambiguously closer to the matrix auxiliary than the embedded absolutive argument *harri horiek* ("stone(s) those<sub>pl</sub>(ABS)") is.  Since Basque lacks omnivorous agreement, if either of these two were viable agreement targets, it would rule out agreement with the embedded absolutive argument—contrary to fact.

    Returning to the iterative/repetitive construction (142a–e), one is now forced to admit that absolutive agreement morphology in this construction (as well as the choice of a *have*-type auxiliary) does not arise through agreement with the open-class nominal (e.g. *dantza* "dance *(n.)*", in (142a)), since this nominal is the immediate complement of an adposition.[14]

    The same account given above for simplex unergatives—in which the absolutive $\varphi$-probes have simply failed to find any viable agreement target—accounts straightforwardly for the appearance of '3rd person singular' absolutive agreement morphology in the iterative/repetitive construction.  In the latter, just like in the former, this morphology arises simply as the spellout of probes that have failed to locate accessible, valued instances of [plural], [participant], or [author] features.  In fact, the latter statement applies equally well to the light-verb construction:

(144)  Jon-ek   dantza egin d-Ø-u-Ø.

      Jon-ERG dance  do   3.ABS-sg.ABS-√-3sg.ERG

      'Jon danced.'                                                                              *[=(135a)]*

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[14]Data like (143) are restricted to "substandard" varieties of Basque (see fn. 11); but the behavior of the iterative/repetitive construction in those varieties is no different than in Standard Basque. Thus, data like (142a–e) are attested within the very same varieties of Basque that provide the relevant evidence against PPs in their entirety, as well as the immediate complements of P$^0$, being targeted for absolutive agreement.

In (144), repeated from earlier, there is an accessible absolutive agreement target, *dantza* ("dance *(n.)*") (recall that the absolutive $\varphi$-probes in Basque are not relativized to marked features values, therefore a 3rd person singular nominal constitutes a viable target). Nevertheless, this target does not carry valued instances of [plural], [participant], or [author] features, resulting in the same absolutive exponents, *d-Ø-* ("3.ABS-sg.ABS-"), as in simplex unergatives and iterative/repetitive unergatives.

Compare this analysis with one based on the implicit object conjecture. To account for the behavior of the iterative/repetitive construction (142a–e), the latter analysis would have to posit a second, implicit object *alongside* the overt complement of the adposition (*dantza* "dance *(n.)*", in an example like (145)), to explain why there is absolutive agreement morphology on the finite auxiliary. A closely related alternative would be to posit a phonologically null nominal, perhaps one whose meaning is "a repetition", which takes the PP *dantza-n* ("dance-LOC") as its complement.

(145)  Dantza-n   egin d-Ø-u-te.

dance-LOC do   3.ABS-sg.ABS-$\sqrt{}$-3pl.ERG

'They danced (repeatedly).'                                                                      *[=(142a)]*

But these would be ad hoc maneuvers, whose utility would only be to account for the agreement facts at hand. On neither of these two alternatives would the source of absolutive agreement morphology in the iterative/repetitive construction be the same as its source in the light-verb construction (where it would come from the overt open-class nominal complement of *egin* "do").[15]

This contrasts with the failed agreement analysis, which as detailed above, provides a unified account for the agreement morphology in all three unergative constructions.

### 6.2.3. Summary

We have seen, in this section, an approach to simplex unergatives in Basque that involves the $\varphi$-probe(s) searching for, and failing to find, a viable agreement target. This approach was shown

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[15]Thanks to David Pesetsky for helpful discussion.

to provide a unified account of agreement morphology in all three unergative constructions in Basque: **(i)** the light-verb construction, **(ii)** simplex unergatives, and **(iii)** the iterative/repetitive construction, where the open-class nominal denoting the event predicate is introduced as the complement of an adposition (and thus, is inaccessible for $\varphi$-agreement) .

Of course, simplex unergatives are grammatical, and thus the success of this account furnishes another argument for failed agreement being tolerated—and leading merely to a lack of valuation of the relevant features on the probe(s), rather than in ungrammaticality (or "crashes"). This, in turn, provides further support for the conclusions of chapter 5.

# Chapter 7

# On 'salience' hierarchies and scales

In chapter 4, I offered a comprehensive account of $\varphi$-agreement in the Kichean Agent-Focus (AF) construction. This account was able to derive the *AF person restriction* (§3.3), and the morpho-phonological distinctions between 1st/2nd person agreement markers and 3rd person ones (§3.4). But perhaps most importantly, it derived the apparent 'salience' effects found in this construction. As noted in §3.2, agreement in Kichean AF appears to obey a 'salience' hierarchy or scale, as given in (146):

(146)  1st/2nd person ≫ 3rd person plural ≫ 3rd person singular                    *[=(23)]*

If the AF clause contains a 1st/2nd person argument, that argument will control the agreement morphology on the verb; if not, the presence or absence of a 3rd person plural argument will determine the agreement morphology.

In earlier analyses of Kichean AF, (146)—or something very close to it—was considered part of the grammatical apparatus (Dayley 1978, Mondloch 1981, Norman & Campbell 1978, Smith-Stark 1978; see also Stiebels 2006). The grammar, on such accounts, makes explicit reference to this hierarchy/scale when computing agreement in a Kichean AF clause.

The account in chapter 4, in contrast, made no appeal to a grammatical device like (146). Instead, it derived these effects from independently motivated assumptions concerning the way $\varphi$-features are probed for in the clause—in particular, Béjar & Rezac's (2003) argument that person features are probed for separately from, and prior to, number features (see also Anagnostopoulou 2003, Béjar 2003, Laka 1993a, Shlonsky 1989, Sigurðsson 1996, Taraldsen 1995). Important to note, in this context, is that the arguments for such separation were based on an empirical domain distinct from the one that (146) was put forth to account for (in Béjar & Rezac's case, the explicanda were PCC effects in Romance, Greek, Basque, etc.; see §4.1).

In this chapter, I will present a number of arguments against a direct appeal to hierarchies/scales like (146) in the account of Kichean AF, and in favor of an account of the sort given in chapter 4. I begin, in §7.1, by presenting four such arguments, all from Kichean. In §7.2, I present an argument

against a 'salience'-based account that arises from the juxtaposition of these Kichean facts with the Zulu facts discussed in §6.1 (as analyzed by Halpert 2012). A summary is given in §7.3.

## 7.1. Against 'salience' hierarchies/scales in the account of Kichean AF

In this section, I present four arguments against the use of a 'salience' hierarchy or scale, like (146), above, in the account of $\varphi$-agreement in the Kichean Agent-Focus (AF) construction. The first two of these arguments pertain only to accounts that take a hierarchy/scale like (146) to reflect actual cognitive salience. There is, however, a weaker position that one might take, which is that (146) is a grammatical primitive, perhaps related to but not synchronically reflective of cognitive salience. This is a weaker position because it relinquishes what might be seen as the "naturalistic" (i.e., domain-general) motivations for (146), which then must be explicitly stipulated as part of the grammar. Regardless, though, the force of the final two arguments in this section extends even to this weaker version of the hierarchy/scale approach.

The first argument concerns the restrictedness of these 'salience' effects to the AF construction. If *cognitive salience* is truly what is at issue (e.g. the fact that as speech-act participants, 1st/2nd person arguments are more cognitively salient than their 3rd person counterparts), why would these effects surface nowhere else in the language but in the AF construction? This is particularly problematic in light of the fact that the AF construction is characterized by a very specific, and very rigid, information structure—as its name, *Agent-Focus*, makes clear.

The 'salience'-based account, then, has the curious property that it is exactly in this information-structurally rigid construction that agreement suddenly becomes flexible, and either the subject or object can be agreed with depending on their rank along the hierarchy/scale. If cognitive salience is at issue, surely regular transitives should afford *more* flexibility for salience to affect agreement than the AF construction does; but in normal transitives, no such flexibility exists (see §3.1).

The second argument comes from the formal addressee pronoun in K'ichee', one of the four Kichean languages.[1] Quoting from Stiebels (2006:526, fn. 13):

> "[K'ichee'] has developed a 2nd person formal pronoun *['la'; O.P.]*, which does not behave as a 2nd person with respect to the salience hierarchy, i.e. it does not outrank 3rd person."

If determining which argument is targeted for agreement in Kichean AF were a matter of cognitive salience, then the prediction would be that expressions referring to speech-act addressees would all pattern alike, but that seems not to be the case. Importantly, the claim here is not that there is no possible explanation one could offer which would assimilate even the cognitive salience of this 2nd person formal pronoun to that of 3rd person arguments. The point is that in the one case where the 'cognitive' and morphosyntactic properties of an expression seem to diverge, its behavior with respect to the AF construction aligns with the morphosyntactic ones (i.e., it behaves as if it were a 3rd person expression).

As noted earlier, the previous two arguments only pertain to accounts that take a hierarchy/scale like (146) to reflect actual cognitive salience. The weaker approach would take (146) to be a grammatical primitive, perhaps related to cognitive salience but not synchronically derived from it. Such an approach may already be suspect, due to its stipulative nature; but the force of the remaining two arguments extends to this type of approach, as well.

The third argument, already touched upon in chapter 4, concerns the *AF person restriction* (§3.3):

(147)  THE AF PERSON RESTRICTION

In the Kichean AF construction, at most one of the two core arguments can be
1st/2nd person.                                                                                     *[=(25)]*

Clearly, there is nothing about a hierarchy or scale like (146) that predicts that in Kichean AF, two 1st/2nd person arguments would not be able to co-occur, while two 3rd person plurals for example

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[1]While most of the Kichean data in this book comes from Kaqchikel, the behavior of agreement in AF is essentially the same in K'ichee' as it is in Kaqchikel.

would be able to do so.[2] It is of course not self-evident that any account of $\varphi$-agreement in Kichean AF should also be expected to account for the AF person restriction. But insofar as an account is available that achieves both, its existence is an argument against those accounts that do not; and in §4.4.2, we saw that the probe-goal account of Kichean AF was able to derive the AF person restriction, as well.

Finally, the fourth and perhaps strongest argument against hierarchies/scales in the account of Kichean AF comes from the forms of the actual agreement markers that arise in this construction. As noted in §3.4, a hierarchy/scale like (146) is designed, by its very nature, to factor out the choice of agreement target from the agreement process itself. It can be viewed as an algorithmic component that takes, as its input, the inventory of core arguments in a given clause; and returns, as its output, which one will be targeted for $\varphi$-agreement.

Crucially, however, it is *not* the case that $\varphi$-agreement in Kichean AF is a uniform process but for the choice of agreement target. As detailed in §3.4, the 1st/2nd person agreement markers found in this construction are essentially reduced versions of the corresponding strong pronouns, while this is not the case for the 3rd person agreement markers:

(148)

| | 1sg | 1pl | 2sg | 2pl | 3sg | 3pl | (Kaqchikel) |
|---|---|---|---|---|---|---|---|
| strong pronoun | yïn | röj | rat | rïx | rja' | rje' | |
| ABS agr.-marker | i(n)- | oj- | a(t)- | ix- | Ø- | e- | |

**NOTE:** the segment [j] is a voiceless fricative, not a glide

As can be seen in (148), the correspondence in (149), below, holds of the 1st/2nd person markers, but fails for the 3rd person ones:

(149)  *<agreement marker> = <strong pronoun> – <initial approximant>*

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[2]It may be interesting to note, in this regard, that some languages/constructions, which exhibit behavior that is superficially very similar to what (146) seeks to capture, have no restriction like (147) (for example, main verb agreement in Algonquian; see Béjar & Rezac 2009, Lochbihler 2011, Valentine 2001, *a.o.*).

As with the previous argument, it is not clear a priori that this difference between 1st/2nd person markers and 3rd person ones cannot, or should not, be derived separately from the so-called 'salience' effects in Kichean AF. This seems especially plausible, at first glance, since the same markers (with the same morpho-phonological properties, of course) are found even outside of the AF construction, in normal transitives and intransitives in Kichean, where they are invariably controlled by the absolutive argument. But as before, there turns out to be a single account, presented in §4.4, that derives the morpho-phonological distinctions in question while simultaneously accounting for the so-called 'salience' effects that (146) was put forth to capture, and furthermore, can account for the use of these same markers in regular transitives and intransitives in Kichean. The existence of such an account is therefore a strike against an account based directly on a hierarchy/scale like (146) (since the latter has nothing to say about these morpho-phonological distinctions).

To summarize, we have seen four arguments against the use of 'salience' hierarchies/scales like (146) in the account of Kichean AF. The first two, from the distribution of these 'salience' effects within the language, and from the behavior of the K'ichee' formal addressee pronoun *la*, were only relevant to an approach that views (146) as an actual synchronic reflection of cognitive salience. The last two, from the AF person restriction, and from the morpho-phonological distinctions between 1st/2nd person agreement markers and 3rd person ones, apply more generally to any account in which the grammar makes direct reference to a device like (146).

## 7.2.  An argument from Zulu against 'salience' in Kichean AF

In §6.1, we saw Halpert's (2012) analysis that unifies two morphosyntactic phenomena in the Zulu verb phrase: the *conjoint/disjoint* alternation, and the distribution of nominals without an *augment* morpheme. Importantly, as Halpert (2012:169) herself observes,[3] this analysis of Zulu uses the same

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[3] Halpert (2012) was comparing her analysis of Zulu with an earlier version of the analysis in chapter 4, which appeared in Preminger 2011a.

machinery employed in the analysis of Kichean presented in chapter 4. The behavior of augmentless nominals in Zulu is the behavior of [participant]-bearing arguments in Kichean (they can be targeted for agreement, and must be agreed with to be licensed); and the behavior of augmented nominals in Zulu is the behavior of [plural]-bearing arguments in Kichean (they can be targeted for agreement, but do not require agreement to be licensed).

The juxtaposition of Kichean and Zulu shows the same logic operating in two different languages—but in each language, it operates over categories whose substantive content is quite different (1st/2nd/3rd person and singular/plural in Kichean; augmented/augmentless in Zulu).[4] That the substantive content of the relevant categories can vary so radically casts further doubt on the idea that the phenomena in question have anything to do with *salience*, in the first place. After all, Zulu of course has 1st/2nd/3rd person distinctions, but they play no role in the system that Halpert has identified; and there is little reason to think that the distinction between augmentless and augmented has any plausible grounding in cognitive salience, given its sensitivity to purely structural relations, such as *c-command* (see §6.1.3–§6.1.4).

## 7.3. Summary

In this chapter, we have seen five arguments against the use of 'salience' hierarchies or scales (like (146), above) in the account of Kichean AF. Four of these, presented in §7.1, come from Kichean itself. Of these, two (from the AF person restriction, and from the morpho-phonological properties of the agreement markers; §3.3–§3.4) were applicable even to a weakened version of the hierarchy/scale-based approach, that eschewed the link to cognitive salience and stipulated the relevant ranking as part of the grammar directly. The fifth argument, presented in §7.2, comes from the juxtaposition of this Kichean pattern with the Zulu pattern discussed in §6.1, showing that the same behavior can obtain with respect to a set of categories (augmented, augmentless) whose substantive content is entirely different, and much less likely to have anything to do with 'salience'.

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[4]This recalls the results of Ritter & Wiltschko (2009), concerning the variable substantive content of Infl[0] across different languages, though I will not pursue the parallelism further here.

Before concluding this chapter, I would like to address an apparent (though ultimately, spurious) similarity between the constraint-based model discussed in §2.2.2 and in §5.3, and this hierarchy/salience-based approach to $\varphi$-agreement in Kichean AF. One may notice that a scale like (146) bears at least superficial similarity to the ranked constraints of a *violable constraints* model. Indeed, one could recast the same scale as a series of ranked constraints:

(150)  HaveAgrWith1/2 ≫ HaveAgrWithPl ≫ HaveAgr

> *where –*
>
> HaveAgrWith1/2:   Assign one violation mark for every failure to represent the
> $\varphi$-features of a 1st/2nd-person argument on the finite verb.
>
> HaveAgrWithPl:   Assign one violation mark for every failure to represent the
> $\varphi$-features of a plural argument on the finite verb.
>
> HaveAgr:   Assign one violation mark for every failure to represent the
> $\varphi$-features of the designated argument on a finite verb. *[=(118)]*

A proposal very close to this is advanced, for example, by Stiebels (2006).

However, as with approaches based directly on hierarchies or scales, this account separates the choice of agreement target from $\varphi$-agreement itself. As discussed in §7.1, here too we have a mechanism whose input is the inventory of arguments in an AF clause, and whose output is the one chosen to govern the agreement morphology on the verb. Thus, an account like (150) cannot derive the morpho-phonological distinctions between the resulting 1st/2nd person markers and their 3rd person counterparts. It should therefore be dispreferred compared to an account that derives both these morpho-phonological distinctions *and* the very explicandum that (150) was meant to derive (i.e., which argument's $\varphi$-features will be reflect on the AF verb) from a single mechanism—which is exactly what the account given in chapter 4 achieves.

Importantly, these considerations do not extend to an account based *only* on a single agreement-enforcing constraint (e.g. HaveAgr), as in §2.2.2, §5.3. That is because, on the latter view, the

$\varphi$-agreement process itself can still be non-uniform, such that the choice of agreement target interacts with the nature of the resulting agreement morphology. In particular, it is compatible with 1st/2nd person agreement markers arising via clitic doubling, but 3rd person (plural) ones arising by direct exponence (as argued in §4.4)—and can therefore handle the fact that the former markers resemble the corresponding Kichean pronouns, but the latter markers do not. This version of the *violable constraints* model is therefore still in contention, as noted in §5.3. To distinguish between this and the *obligatory operations* model, we will have to examine instances of dative intervention, which are the topic of chapter 8.

# Chapter 8

# Datives, defective intervention, and case-discrimination

In this chapter, we turn to another phenomenon that bears the hallmarks of failed agreement—one that actually features much more prominently in the literature on $\varphi$-agreement than the patterns discussed so far—namely, *dative intervention*.[1]

Descriptively, this term refers to instances where a particular phrase—in most of the cases discussed, a dative nominal or PP—is able to block agreement from targeting a structurally lower noun phrase, but is nevertheless unable to transfer its *own* $\varphi$-features to the agreement host. Whether such examples constitute a true failure of agreement is a matter of analysis, of course, and this analysis is the topic of the current chapter.

I will highlight a particular point of variation in the behavior of dative intervention: when movement is involved, dative intervention gives rise to ungrammaticality, whereas when the putative agreement target remains in situ, the result is simply 'default' (i.e., 3rd person singular) agreement morphology. This property, I will argue, is best captured if dative intervention is an instances of *failed agreement* (§2.1) proper: a scenario where $\varphi$-agreement (or the operation responsible for it) is triggered, but fails to culminate successfully—just as in the Kichean cases discussed in chapters 4–5, as well as the Zulu and Basque cases discussed in chapter 6.

The proposal will revive a common intuition in the analyses of movement and agreement, that movement to canonical subject position is somehow parasitic on $\varphi$-agreement (see, for example, Chomsky 1995:283). But on the current proposal, this dependency is parameterized: it is a property only of non-quirky-subject languages (e.g. English), and crucially not of quirky-subject languages (e.g. Icelandic). I will show that this independently-observable parameterization correctly predicts the distribution of ungrammaticality vs. 'default' agreement in dative intervention contexts.

I begin with a discussion of the phenomenon of dative intervention itself (§8.1–§8.2), followed by a survey of the different theoretical approaches that have been taken to explain this phenomenon (§8.3). In §8.3.3, I highlight recent work by Bobaljik (2008) which demonstrates—

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[1]The term 'defective intervention' is often used in lieu of 'dative intervention'. However, as I will discuss in §8.2–§8.3, this term reflects but one particular analysis of the phenomenon—an analysis that I will argue against, in §8.3.1.

independently of dative intervention—the *case-discrimination* property of $\varphi$-agreement: that $\varphi$-agreement (on any theory) must allow agreement to discriminate among its putative targets based on their case marking.[2] The particular extensions to case-discrimination that Bobaljik offers in order to handle dative intervention will be shown to fall short (§8.3.3.2). But in §8.4, I show that the same property he argues for—coupled with the results of chapter 5, involving the tolerated failure of agreement in perfectly grammatical utterances—furnishes a theory of dative intervention that correctly predicts the distribution of ungrammaticality and 'default' agreement.

Finally, in §8.5, I argue that this behavior of dative intervention can distinguish between the *obligatory operations* and *violable constraints* models (§2.2.2–§2.2.3), both of which were compatible with the results of chapters 4–6 (crucially, to the exclusion of the derivational time-bombs model, including Chomsky's 2000, 2001 'interpretability'-based proposal; see §5.1). I show that those instances in which dative intervention gives rise to outright ungrammaticality favor the obligatory operations model over the violable constraints one.

Section §8.6 provides a summary.

## 8.1. The inability of datives to value features on a $\varphi$-probe

It is very common for dative nominals to be unable to transfer their own $\varphi$-features to an agreement probe (e.g. a finite verb). Icelandic provides a particularly clear illustration of this (Bobaljik 2008, Holmberg & Hróarsdóttir 2003, Sigurðsson 1993, 1996, *a.o.*).[3] Consider the following example:

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[2] This *case-discrimination* property requires a theory in which case can be assigned independently of (and prior to) $\varphi$-agreement. Importantly, the need for such a theory of case has already been demonstrated by Marantz (1991) and Zaenen, Maling & Thráinsson (1985), *a.o.*, who show that nominative case in a language like Icelandic can arise on noun phrases that $\varphi$-agreement has demonstrably failed to reach. See also §5.3, where a similar finding is demonstrated—independently of dative intervention—with respect to arguments that have not been agreed with in the Kichean Agent-Focus construction.

[3] This inability of dative nominals to transfer their own $\varphi$-features is not universal; see Rezac 2008a, as well as §8.3.2 below, for further discussion.

(151)   Morgum studentum        **liki/\*lika**        verkið                                              (Icelandic)

        many      students.PL.DAT like.**3sg/\*3pl** the.job.NOM

        'Many students like the job.'                                        [*Harley 1995*]

It can be shown that examples like (151) are not a matter of a mere 'preference' for agreement with a nominative, when possible; the same effect occurs in the absence of a nominative noun phrase altogether:

(152)   Strákunum        **leiddist/\*leiddust**

        the.boys.PL.DAT be.bored.**3sg/\*3pl**

        'The boys were bored.'                                              [*Sigurðsson 1996*]

Sigurðsson's (1996) choice of the verb *leiddist* ("be.bored") in (152) is particularly useful, since as he shows, the same stem has a second use in which it takes a nominative argument, and means "walk hand in hand"; and in this second use, the verb obligatorily agrees with its single nominative argument:

(153)   Strákarnir        **leiddust/\*leiddist**

        the.boys.PL.NOM walked.hand.in.hand.**3pl/\*3sg**

        'The boys walked hand in hand.'                                    [*Sigurðsson 1996*]

This pattern has received a range of treatments in the literature. For some, it is taken to be a result of the *Activity Condition* (Chomsky 2001): the $\varphi$-features on the dative nominal are hypothesize to enter into a checking relation with a silent preposition, or its structural equivalent. This renders them *inactive*, and unable to enter a $\varphi$-agreement relation with the finite verb. This approach is discussed further in §8.3.1.

For others, it is a matter of locality: datives are PPs, and PPs constitute locality domains (Abels 2003, Baltin 1978, van Riemsdijk 1978, *a.o.*). This prevents the features of the enclosed nominal projection from being accessed from outside the PP (see, for example, Rezac 2008a). This approach is discussed further in §8.3.2.

For others still, it has been taken as part of the body of evidence that $\varphi$-agreement discriminates among its potential targets based on their (morphological) case (Bobaljik 2008, revising and extending the cross-linguistic typology of agreement targets originally due to Moravcsik 1974, 1978). This approach is discussed further in §8.3.3.

Interestingly, while each of these approaches offers a different explanation for why the features of the dative nominal cannot be accessed by probes outside the dative projection, they underdetermine what will happen if such access is attempted. An attempt to establish a $\varphi$-agreement relation with a dative target could conceivably result in **(i)** ungrammaticality; **(ii)** 'default' (3rd person singular) agreement morphology; or **(iii)** agreement with the next-closest potential agreement target other than the dative (e.g. a nominative noun phrase that is the target structurally closest to the agreement host other than the dative nominal). Teasing apart these different possibilities is the topic of the next section.

## 8.2.  The Dative Paradox: datives as 'defective' interveners

While we have seen that at least some dative nominals cannot transfer their own $\varphi$-feature values to the finite agreement probe (§8.1), they do count as potential targets for the calculus of *Relativized Minimality* (Rizzi 1990, Frampton 1991), and its contemporary counterparts (e.g. Chomsky's 1995 *Minimal Link Condition*). In other words, the very same datives that appear to be inert for the purposes of $\varphi$-feature valuation, are simultaneously able to prevent the probe from searching further for a non-inert agreement target.

Consider the Icelandic *transitive-expletive* construction, in which the subject position of the finite clause is occupied by the expletive *það*. In this construction, just as in (151–153), the dative

cannot value the features on the finite verb.[4] The following examples are taken from Holmberg &

Hróarsdóttir (2003) (henceforth, H&H):

(154)  það   finnst(/*finnast) [mörgum stúdentum]$_{DAT}$  [$_{SC}$ tölvan              ljótar ].

       EXPL  find.SG/*find.PL  many     students.PL.DAT      the.computer.SG.NOM ugly

       'Many students find the computer ugly.'                                    [*H&H:1000*]

While it cannot transfer its own (in (154), [plural]) features to the probe, this dative nominal also

prevents the probe from searching any further, and accessing the $\varphi$-feature values on the lower

nominative:

(155)  það   finnst(/*finnast) [einhverjum stúdent]$_{DAT}$      [$_{SC}$ tölvurnar              ljótar ].

       EXPL  find.SG/*find.PL  some       student.SG.DAT          the.computers.PL.NOM ugly

       'Some student finds the computers ugly.'                                  [*H&H:1000*]

Crucially, it is not that agreement of the kind shown in (155) is generally out of the question; when

the dative is moved to subject position, agreement with this low nominative goes through:

(156)  [Einhverjum stúdent]$_1$        finnast  t$_1$ [$_{SC}$ tölvurnar              ljótar ].

        some        student.SG.DAT  find.PL      the.computers.PL.NOM ugly

       'Some student finds the computers ugly.'                                  [*H&H:1000*]

This state of affairs differs crucially from the *relativized probing* patterns discussed in chapter 4.

Setting aside $\varphi$-agreement for the moment, recall the behavior of *wh*-probing, as outlined in §4.2.1:

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[4]There is one possible exception to this generalization, involving 'dative harmony': plural agreement on the finite verb is judged as marginally acceptable by some speakers, provided that *both* the dative intervener and the putative nominative target are plural (Holmberg & Hróarsdóttir 2003:fn. 6). A very similar effect is attested in Basque (see Etxepare 2006, which is also where the term '[case] harmony' is coined). The fact that this is the only part of the grammar where plural agreement on the finite verb depends on the plurality of two arguments simultaneously, suggests that this might be more of a production/processing effect.

(157)   a.  $[C^0 \text{ [who]}_{<+wh>} \text{ gave [this dish] to [Bob]]}$

          $\longrightarrow$  **$[C^0 \text{ [who]}_{<+wh>} \text{ gave [this dish] to [Bob]]}$**

                $\longrightarrow$  Who gave this dish to Bob?

    b.  $[C^0 \text{ [John] gave [what]}_{<+wh>} \text{ to [Bob]]}$

          $\longrightarrow$  **$[C^0 \text{ [John] gave [what]}_{<+wh>} \text{ to [Bob]]}$**

                $\longrightarrow$  What did John give to Bob?

    c.  $[C^0 \text{ [John] gave [this dish] to [who]}_{<+wh>}]$

          $\longrightarrow$  **$[C^0 \text{ [John] gave [this dish] to [who]}_{<+wh>}]$**

                $\longrightarrow$  Who did John give this dish to?                    *[=(47a–c)]*

In (157a–c), we see that nodes that lack the feature the probe is looking for (e.g. *John* in (47b)) are ignored by the probe outright, and do not prevent it from continuing to scan its search domain for a suitable target. The same was observed, in chapter 4, for the behavior of [participant]- and [plural]-probes in Kichean, with respect to 3rd person and singular targets, respectively.

If datives were truly bereft of the feature(s) that the Icelandic finite agreement probe seeks, we would expect the same behavior: datives being ignored by the $\varphi$-probe outright. That this is not the observed behavior (cf. (154–155)) means that datives bear $\varphi$-features. This might seem trivially true in the sense that dative noun phrases can be singular or plural, 1st/2nd/3rd-person, etc.; but that is not the sense that is relevant here. The question here is whether datives, when viewed "from the outside" by a probe searching for an agreement target, behave like a node that carries $\varphi$-features. Recall from the discussion in §4.2.2 that if projections that completely lacked $\varphi$-features were relevant for $\varphi$-probing, then $\varphi$-probes would not even be able to look past nodes like VP, intransitive $v$P, etc., along the clausal spine. We must therefore conclude that projections that lack $\varphi$-features entirely do not interact with $\varphi$-probing, and concomitantly, that this cannot be the status of the outermost projection of a dative argument.

This is essentially the reason for the term 'defective' in *defective intervention*: datives cannot be thought of as non-bearers of $\varphi$-features, because they interact with $\varphi$-probing; but they cannot be thought of as normal bearers of $\varphi$-features, either, since they quite plainly do not behave as such (§8.1).[5] This leads to an apparent paradox: how can a node simultaneously bear $\varphi$-features and not bear them? In what follows, I will refer to this as the ***dative paradox***.

In §8.4, I will argue that the existence of failed agreement in grammatical utterances—argued for independently of dative intervention, in chapter 5—holds the key to a cross-linguistically viable account of the dative paradox, as well. First, in §8.3, I turn to a survey of several existing treatments of the dative paradox.

## 8.3. Existing treatments of the dative paradox

One finds various treatments of the dative paradox (§8.2) in current syntactic literature. In this section, I survey and critique several of these approaches.

### 8.3.1. The Activity Condition

As noted in §8.1, one approach to the dative paradox appeals to Chomsky's (2001) *Activity Condition*. The basic idea is that arguments that have entered into full-fledged agreement relations (i.e., agreement relations involving their full set of $\varphi$-features) are rendered *inactive*, and are therefore unable to enter into subsequent $\varphi$-agreement relations. With respect to datives, one could assume that the $\varphi$-features on the dative nominal enter into an agreement relation with a null preposition (McGinnis 1998), or with the K(ase)$^0$ head of a dative Kase Phrase (Bayer, Bader & Meng 2001, Bittner & Hale 1996), rendering them inactive for further agreement relations.

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[5] Just like the *relativized probing* patterns in (157a–c), intervention by datives is sensitive to structural prominence, rather than to the linear sequence of elements. For one illustration of this, see Preminger 2009, where dative arguments that are linearly clause-peripheral nevertheless intervene in $\varphi$-agreement relations targeting absolutives that are structurally lower, but are linearly closer to the $\varphi$-probe than their dative counterparts.

For this to serve as a solution to the dative paradox, though, having inactive $\varphi$-features must be syntactically distinguishable from having no $\varphi$-features at all (cf. having no *wh*-features at all, as in (157a–c)). This means that *activity* is essentially a diacritic: $\varphi$-features begin the derivation with this diacritic set to 'on', and the first agreement relation they enter into switches it to 'off'. Coupled with the assumption that valuation can only occur when the diacritic on the target is set to 'on', we get the effect demonstrated in (154), above (i.e., the inability of dative nominals to transfer their $\varphi$-feature values to the finite verb). On Chomsky's (2001) original conception of the Activity Condition, this diacritic was unified with the 'uninterpretable' case feature borne by the nominal. But given the existence of nominals that are successfully case-marked without having been agreed with, such a unification is untenable. For examples of case marking where agreement has demonstrably failed, see Marantz (1991) and Zaenen, Maling & Thráinsson (1985) (as well as the nominative phrases in (154–155), above); see the discussion in §5.1 regarding why licensing-by-agreement is untenable for Quich; and see Preminger 2011b for a similar argument regarding embedded absolutive arguments in Basque.

The fact that this account resorts to a diacritic should not be taken as a fatal flaw in the account; as we will see below, other approaches to the dative paradox require similarly stipulative moves. It is highlighted here only to emphasize that the Activity Condition approach, too, is rooted in a stipulation; and that consequently, the choice between this approach and its competitors will have to be based on other factors.

This is where empirical considerations come into play. It turns out that the Activity Condition is empirically problematic for reasons that are independent of the dative paradox. I will demonstrate this using data from Tsez, based on the work of Polinsky & Potsdam (2001). Tsez is not unique in providing the relevant kind of evidence; instances of so-called *hyper-raising*, depending on their precise analysis, may furnish a similar argument (see, e.g., Ferreira 2000 and Rodrigues 2004 on Brazilian Portuguese). But Tsez provides one of the clearest such arguments.

As shown in (158a–b), the verb in Tsez agrees in noun-class with the absolutive argument (the object of transitives and the sole argument of intransitives):

(158) a. **ziya**      **b**-ik'i-s                                              (Tsez)

cow.III.ABS III-go-PAST.EVID

'The cow left.'

b. eniy-ā      **ziya**      **b**-išer-si

mother-ERG cow.III.ABS III-feed–PAST.EVID

'The mother fed the cow.'                        [*Polinsky & Potsdam 2001:586*]

Crucially, as Polinsky & Potsdam demonstrate, absolutive arguments in Tsez can trigger overt $\varphi$-agreement on more than one lexical verb. In particular, embedded topics trigger agreement on the subordinating verb, as well:

(159) a. eni-r      [**uži**      **ø**-āy-ru-łi]            **ø**-iy-xo

mother-DAT  boy.I.ABS I-arrive-PAST.PRT-NMZ I-know-PRES

'The mother knows that as for the boy, he arrived.'

b. eni-r      [už-ā   **magalu**   **b**-āc'-ru-łi]      **b**-iy-xo

mother-DAT   boy-ERG **bread.III.ABS** III-eat-PAST.PRT-NMZ III-know-PRES

'The mother knows that as for the bread, the boy ate it.'      [*Polinsky & Potsdam 2001:606*]

A few comment are in order regarding these data. First, note that agreement on the subordinating verb does not *replace* agreement on the embedded verb; in (159b), for example, both the embedded verb *b-āc'-ru-łi* ("III-eat-PAST.PRT-NMZ") and the subordinating verb *b-iy-xo* ("III-know-PRES") exhibit overt $\varphi$-agreement with the embedded absolutive argument, *magalu* ("bread.III.ABS"). Second, while such agreement on the subordinating verb is not generally obligatory in Tsez, it *is* obligatory—alongside agreement on the embedded verb, of course—if one forces the topichood of the embedded absolutive argument (see Polinsky & Potsdam 2001 for details).

If one examines the English translations given in (159a–b), another possibility suggests itself: that there is a separate, phonologically null argument in the matrix clause which is anaphorically (or cataphorically) related to the embedded absolutive argument; this is what Baker & Vinokurova (2010) refer to as a 'proleptic object' analysis. Polinsky & Potsdam explicitly address this possibility, and provide numerous arguments that it is not a viable analysis of data like (159a–b).[6]

These data do not involve datives, of course, and in fact datives cannot be agreed with in Tsez, just as in Icelandic and other languages; this therefore sheds no particular light on the dative paradox. It does, however, show that $\varphi$-features that have entered into an agreement relation with the embedded verb are not *inactivated*, but rather active and available to be agreed with by subsequent agreement hosts. Note that verbs in Tsez only ever agree with their arguments in noun-class; thus, in examples like (159a–b), the sets of features that enter into agreement with the embedded verb and with the subordinating verb are the same set. Therefore, drawing a distinction between the two instances of agreement found each example in (159a–b) (e.g. positing that one is 'defective' or 'partial', while the other is 'complete') would be entirely ad hoc. It would amount to little more than a restatement of the facts—namely, that arguments in Tsez can enter into agreement relations more than once.

I therefore take these data to show that the Activity Condition is incorrect. Regarding whatever residual empirical coverage the Activity Condition may seem to have, I refer the reader to Nevins 2004, for an illustration that the same facts can be derived from other, better motivated principles.

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[6] The evidence adduced by Polinsky & Potsdam (2001) against a 'proleptic object' analysis includes: the availability of agreement on the subordinating verb in the presence of a coreferential matrix subject, even though Tsez does not allow null reflexives; the impossibility of an overt proleptic object; the strict locality of this kind of long-distance agreement (which is unexpected, if the transmission mechanism is anaphoric binding); the unavailability of matrix scope for the embedded absolutive argument; and the unavailability of overt matrix reflexives bound by the hypothesized proleptic null object.

### 8.3.2. Functional Shells

A potentially more promising approach, also noted in §8.1, involves the idea that dative nominals come enclosed in additional functional structure, which in other DPs (e.g. nominatives, accusatives) is either absent, or at least has different properties than it has when datives are involved.[7]

In what follows, I discuss an implementation in which datives are enclosed in a dedicated PP layer (following Rezac 2008a); but nothing significant would change if we opted instead for a Kase Phrase approach (Bayer, Bader & Meng 2001, Bittner & Hale 1996), where the particular type of $K(ase)^0$ head associated with dative case would replace $P^0_{DAT}$, below, in all the relevant respects.

Suppose that datives have the internal structure shown in (160):

(160) FUNCTIONAL STRUCTURE OF THE DATIVE NOUN PHRASE
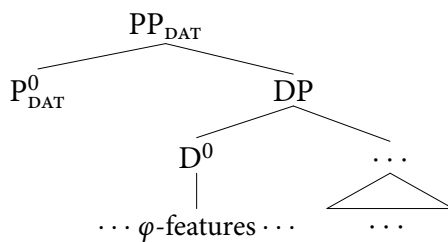


I assume the null hypothesis, which is that the DP enclosed in $PP_{DAT}$ is like any other DP, and so its full set of $\varphi$-features is visible at the DP level (i.e., on $D^0$). This abstracts away from the question of which of these features (if any) were base-generated on $D^0$, and which of them arrived there derivationally (see Ritter 1991, 1992, and much subsequent work). Whichever mechanisms are responsible for transmitting features to $D^0$ in other DPs (e.g. nominatives) will presumably operate here, as well.

If PPs constitute a locality domain (e.g. a *phase*)—as argued by Abels (2003), Baltin (1978), van Riemsdijk (1978), and others—then the features on $D^0$ will not be visible to probes outside $PP_{DAT}$. If $P^0_{DAT}$ has no $\varphi$-feature of its own, then $PP_{DAT}$ in its entirety should be invisible to $\varphi$-probing (like

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[7]The ideas in this sub-section are adapted from Rezac (2008a), who in turn draws on Richards (2004).

a non-*wh* phrase is for *wh*-probing; see §8.2, above). Given that this is not the behavior of datives vis-à-vis agreement, we must conclude that $P^0_{DAT}$ has some $\varphi$-featural content.

A similar conclusion, though, obtains if PPs do *not* constitute a locality domain. If a probe outside of $PP_{DAT}$ can see into the complement of $P^0_{DAT}$, then in the absence of intervening $\varphi$-featural content on $P^0_{DAT}$, the $\varphi$-features on $D^0$ can and will be probed. Given that this is not the behavior of datives vis-à-vis agreement, either, we must again conclude that $P^0_{DAT}$ has $\varphi$-featural content of its own.

The $\varphi$-features borne by $P^0_{DAT}$ could initially (when $P^0_{DAT}$ enters the derivation) be valued or unvalued.[8] There seems to be some support for both possibilities. In the usual case, intervention by dative nominals triggers 'default' (i.e., 3rd person singular) agreement on the finite verb, as in the Icelandic cases in §8.1–§8.2. As discussed in §4.2, within a feature-geometric approach to $\varphi$-features (Harley & Ritter 2002, McGinnis 2005, *a.o.*), 3rd person singular corresponds to the root of the $\varphi$-geometry, which I have annotated as '$[\varphi]$'. Thus, if we stipulate that $P^0_{DAT}$ carries valued $[\varphi]$, we can derive both sides of the dative paradox. On the one hand, datives count for $\varphi$-probing (contra non-*wh* phrases in *wh*-probing), because their head ($P^0_{DAT}$) carries a valued $\varphi$-feature. On the other hand, the enclosed nominal cannot transfer its own features to the finite verb, because the $\varphi$-features on $P^0_{DAT}$ will be closer, in structural terms, to any probe located outside $PP_{DAT}$ than the features on the enclosed nominal are.

On this view, the reason 'default' agreement morphology (3rd person singular) is found in dative intervention contexts is that $P^0_{DAT}$ is valued for $[\varphi]$, not for some more-specified point along the $\varphi$-feature geometry. This is schematized below:

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[8] See §4.2.3, for an explicit proposal regarding the feature-geometrical equivalents of 'valued' and 'unvalued'.

(161)   FUNCTIONAL STRUCTURE OF THE DATIVE NOUN PHRASE: THE USUAL CASE          *[≈(154–155)]*
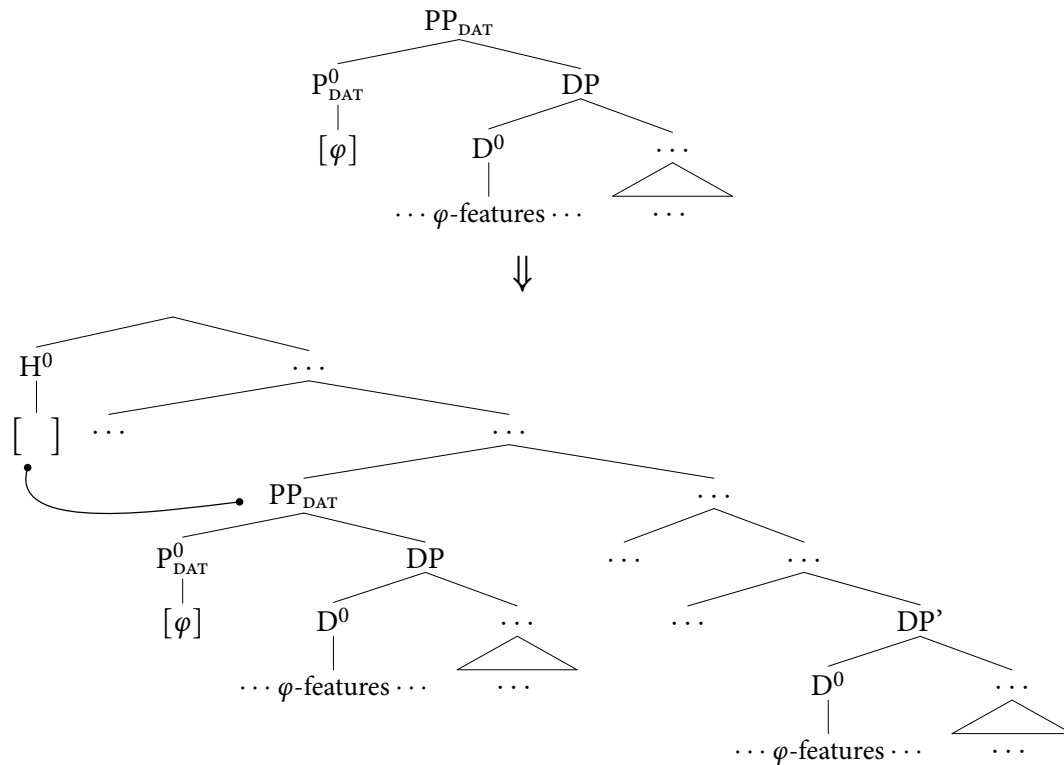
An important property of this approach is that it takes dative intervention to be an instance of *successful* $\varphi$-agreement: the $\varphi$-probe in (161) enters into a successful agreement relation with the structurally closest agreement target, $PP_{DAT}$ (which carries valued $[\varphi]$, and therefore acts like any other 3rd person singular agreement target).

In the alternative scenario, $P^0_{DAT}$ starts the derivation with unvalued $\varphi$-features (or the feature-geometric equivalent thereof; see fn. 8). This would result in $P^0_{DAT}$ acting as a $\varphi$-probe in its own right. Given that its complement is a DP like any other, there is no obstacle to $P^0_{DAT}$ valuing its own features using the $\varphi$-feature values found on this DP. This would render the $PP_{DAT}$ layer effectively "transparent": it would reflect the same set of $\varphi$-feature values found on the enclosed DP. The prediction is that a dative of this sort would behave for agreement purpose exactly as, e.g., a nominative DP would.

Something like this seems to be going on in the languages that Dryer (1986) calls 'primary-/secondary-subject' languages. In these languages, the agreement morphology that is controlled by the Patient in monotransitives, is obligatorily controlled by the applicative argument in ditransitives and other applicative constructions.[9] Such languages are sometimes thought of as having only a *double-object* construction, but no *prepositional dative* construction. An example of such a language is Chol (Mayan):

(162) AGREEMENT WITH APPLICATIVE ARGUMENT IN LIEU OF PATIENT

    a. tyi    aw-ilä-**yoñ**                                            (Chol)

        PRFV 2.ERG-see-**1.ABS**

        'You saw me.'

    b. tyi    i-ch'äx-be-**yoñ**       ja'    x-'ixik

        PRFV 3.ABS-boil-APPL-**1.ABS** water CLF-woman

        'The woman boiled me water.'           [*Coon 2010:34, 199; glosses simplified slightly*]

Following Rezac (2008a), let us refer to behavior of this sort, where the applicative argument controls agreement morphology normally controlled by the Patient, as *agreement displacement*.

Suppose applicative arguments are generated in the specifier of a dedicated ApplP projection (Anagnostopoulou 2003, Collins 1997, Marantz 1993, McGinnis 1998, Pylkkänen 2002, Ura 1996, *a.o.*). Such arguments would therefore be closer to the $\varphi$-probe than the Patient is. A dative $PP_{DAT}$ whose $P^0_{DAT}$ head bears $\varphi$-feature values that it copied from the enclosed DP will thus appear to have subsumed the duties of 'direct object agreement' (as in (162a–b)):

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[9]In primary-/secondary-subject languages, the Patient in applicative constructions controls either no agreement morphology whatsoever, or a distinct series of agreement morphology not found in monotransitives.

(163)    agreement with applicative argument in lieu of Patient – derivation
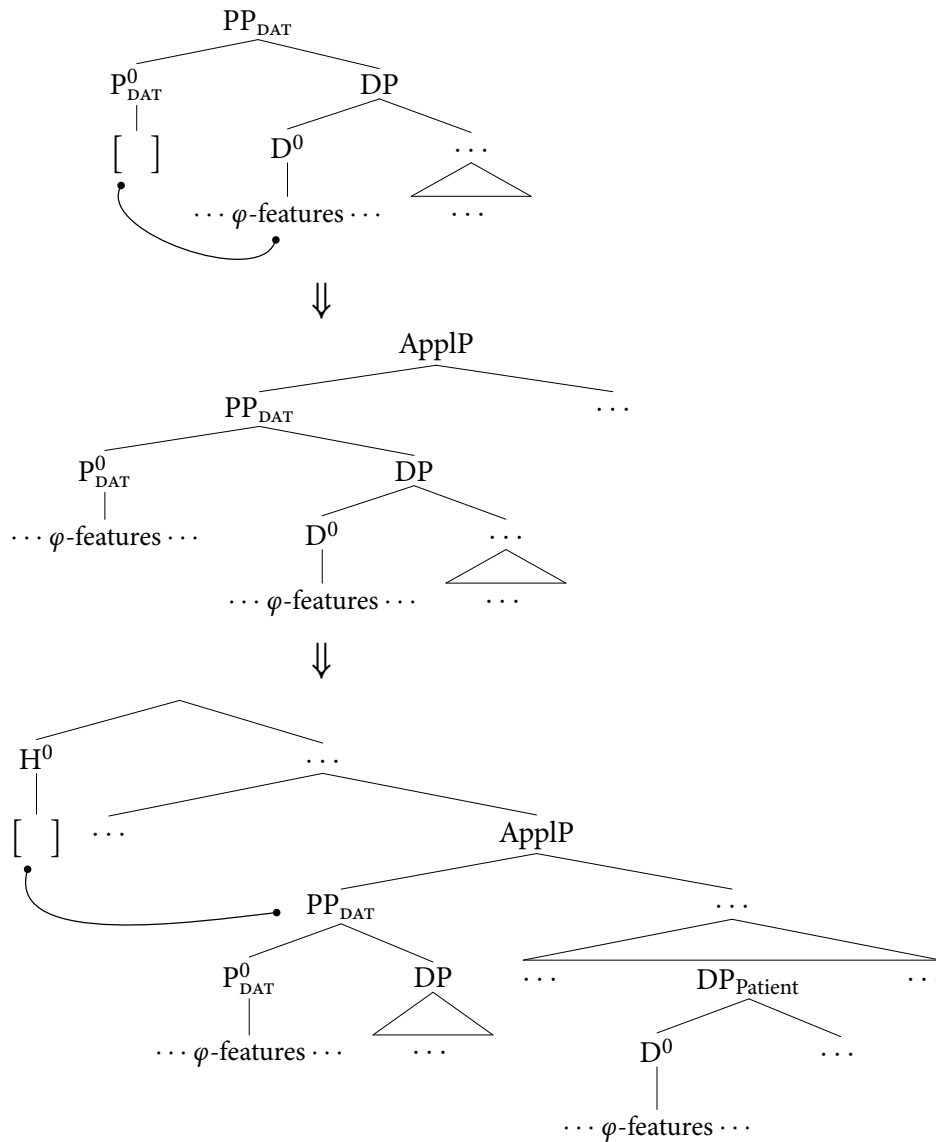
In (163), $PP_{DAT}$ asymmetrically c-commands the Patient DP. Since $PP_{DAT}$ bears $\varphi$-features, minimality dictates that the $\varphi$-probe must agree with it, rather than with the Patient, yielding agreement displacement (i.e., the $\varphi$-features of the dative nominal controlling the agreement morphology that, in monotransitives, is controlled by the Patient).

There also exist more complicated patterns, where certain $\varphi$-feature combinations on the dative nominal trigger agreement displacement, but other feature combinations do not. These are handled

by Rezac (2008a), within a system similar to the one outlined here, by positing a $P^0_{DAT}$ probe that searches not for [$\varphi$] (the root of the $\varphi$-geometry), but for some other node, such as [participant] or [author]. This is essentially a PP-internal counterpart of relativized probing (§4.2).

Unfortunately, this approach, as a solution to the dative paradox, runs into several problems. I will examine these in rising order of severity. First, to handle languages in which no agreement displacement occurs and all datives cause intervention—e.g. in Icelandic (151–152)—we had to stipulate a $P^0_{DAT}$ head that comes from the lexicon bearing valued [$\varphi$] (in contrast to $P^0_{DAT}$ with unvalued [$\varphi$], which resulted in agreement displacement). The problem is not the stipulation itself; as noted in §8.3.1, it seems that any approach to the dative paradox will have to make some stipulation or other. The point is that this particular stipulation leads to a problematic prediction. If $P^0_{DAT}$ in Icelandic is simply a lexical item that happens to bear valued [$\varphi$], the expectation is that in some other language, the corresponding lexical item would bear some other set of valued $\varphi$-features. Thus, we would expect to find a language where $P^0_{DAT}$ comes from the lexicon bearing not [$\varphi$], but say [$\varphi$, participant, plural]. In such a language, dative intervention would result not in invariant 3rd person singular agreement morphology, but rather invariant 2nd person plural agreement morphology. I know of no such language.

While this concern could potentially be handled by appealing to *markedness*—in particular, singling out [$\varphi$] as the least marked $\varphi$-feature value—similar solutions are not available, it seems to me, for the problems that follow.

The next problem is a morphological one. On the approach sketched above, agreement displacement (where the dative subsumes the agreement duties normally associated with the Patient) is a matter of $P^0_{DAT}$ entering into its own PP-internal agreement relation with its nominal complement. It is therefore surprising that by and large, the languages that show complete agreement displacement with datives—Dryer's (1986) 'primary-/secondary-subject' languages—have no dative morphology to speak of (as is the case, for example, in Chol; see (162), above). If agreement displacement were truly the result of a featurally-rich $PP_{DAT}$-internal $\varphi$-probe, one
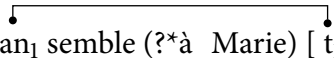
would expect such languages to generally exhibit richer dative morphology. But in fact the opposite is true: Icelandic, for example, has overt dative morphology, and unlike Chol, exhibits standard dative intervention (and not agreement displacement).

Finally, perhaps the most significant problem with this approach is that it predicts that intervention by a dative should never lead to ungrammaticality, because—as noted earlier—dative intervention is taken to be an instance of formally successful agreement with a $P^0_{DAT}$ bearing its own valued $\varphi$-features (namely, $[\varphi]$, the feature-geometric representation of 3rd person singular). This seems consistent with what we have seen so far, but crucially, there are instances of dative intervention that do lead to ungrammaticality:

(164) a. Il    semble (à  Marie) [ que Jean a    du talent ].                           (French)

      Jean seems    to Marie    that Jean has of  talent

      'It seems (to Marie) that Jean has talent.'

  b. Jean$_1$ semble (?*à  Marie) [ t$_1$ avoir    du talent ].

      Jean  seems    to Marie    have.INF of  talent

      'Jean seems (to Marie) to have talent.'                    [*McGinnis 1998:90–91*]

While the verb *semble* ("seem") in French optionally allows a dative experiencer in the general case, the same dative experiencer causes ungrammaticality if used in (164b). These French data are taken from McGinnis 1998, but similar patterns have been observed in Spanish (Torrego 1996), Greek (Anagnostopoulou 2003), Italian (Rizzi 1986), and even in English (Hartman 2011, to appear).

Of course, these data differ from the examples we have examined until now in another important respect: (164b) involves not only $\varphi$-agreement across a dative intervener, but also *movement* across that dative. We can therefore explore the possibility that it is movement itself, rather than $\varphi$-agreement, whose disruption is responsible for the ungrammatical status of an example like (164b).

Crucially, if we continue to pursue the hypothesis that datives are interveners by virtue of the featural content of their outermost head ($P^0_{DAT}$, on the current implementation), then we are faced with a familiar choice: either $P^0_{DAT}$ bears the kind of features that the movement attractor seeks, or it does not. (The latter option would make sense, for example, on the assumption that the EPP amounts to a $D^0$ feature on $Infl^0$; see, e.g., Chomsky 1995.) If it does not bear the relevant features, we predict that the intervener will simply be skipped; but on that approach, (164b) should be grammatical, contrary to fact. We must therefore conclude that $P^0_{DAT}$ does bear the features relevant to the attractor. But this predicts that in French (as well as in the other languages that pattern alike, including Spanish, Italian, and Greek), datives could move to canonical subject position. In other words, we predict that these languages would be quirky-subject languages, just like Icelandic. Of course, this is not the case, either: the corresponding derivations where the dative has moved to subject position, in lieu of the non-dative argument, are no better—as shown in (165).

(165) * [À Marie]$_1$ semble t$_1$ [ Jean avoir   du talent ]

      to Marie   seem     Jean have.INF of talent                    [*McGinnis 1998:90*]

As demonstrated by McGinnis (1998), the ungrammaticality of (165) is not a matter of failure to license the embedded subject, *Jean*. This much is already suggested by a comparison with a language that *does* allow quirky-subjects, where the corresponding derivation is just fine:

(166) [Einhverjum stúdent]$_1$       finnast **t$_1$** [$_{SC}$ tölvurnar         ljótar ].

      some       student.SG.DAT find.PL     the.computers.PL.NOM ugly

      'Some student finds the computers ugly.'                    *[=(156)]*

But even within French, the concerns regarding the licensing of the embedded subject can be assuaged, by changing the embedded clause into a finite CP. Crucially, this does not improve the status of a derivation in which the dative experiencer has moved to canonical subject position:

(167)  *  [À Marie]₁ semble t₁ [ que Jean a    du talent ].

      to Marie   seem        that Jean has of  talent

     *Intended*: 'It seems to Marie that Jean has talent.'                    [*McGinnis 1998:91*]

We are therefore forced to conclude, on the approach pursued in this sub-section, that there is a second kind of dative intervention, which cannot be handled in terms of the featural content of the outermost head of the dative argument. Manipulating the featural content can only lead to two kinds of behavior—being ignored by the attractor, or being targeted by the attractor—neither of which yields the correct result for data like (164–165, 167). Instead, this second kind of intervention causes what looks like a breakdown of the probing process itself, leading to the ungrammaticality of the dative experiencer variant of (164b).

The obvious question, then, is the following: given that this second kind of intervention is independently necessary, is there a way to subsume the first kind of intervention (which gives rise to what looks like 'default', 3rd person singular agreement morphology) under the latter kind (which appears to cause the breakdown of the probing process). In §8.4, I propose a way of doing exactly that, building on recent observations by Bobaljik (2008), as well as the results of chapters 4–6. I begin, however, by discussing Bobaljik's proposal itself, which is the topic of the next sub-section.

### 8.3.3. Case-discrimination

As noted in §8.1, a recent proposal by Bobaljik (2008) (henceforth, B08) offers an alternative explanation for why it is that dative nominals—as in the Icelandic data in (154–155), for example—cannot transfer their own $\varphi$-feature values to the finite verb. The proposal revises and extends observations that were originally made by Moravcsik (1974, 1978).

### 8.3.3.1. Bobaljik's (2008) proposal

The point of departure for this proposal is the *Moravcsik Hierarchy*, a set of proposed implicational universals concerning which targets can and cannot be targeted for $\varphi$-agreement in a given language (Moravcsik 1974):

(168)  THE MORAVCSIK HIERARCHY

Subject $\gg$ Direct Object $\gg$ Indirect Object $\gg$ Adverbs

The way to read (168) is as follows: no language has agreement with the direct object without also having sentences in which the subject is agreed with; no language has agreement with the indirect object without also having sentences in which the subject is agreed with, and sentences in which the direct object is agreed with; and so forth.

These universals are largely confirmed by typological surveys, with two important caveats identified by B08. The first concerns languages with quirky case. Notice that (168) is stated over *grammatical function* (subject, direct object, etc.), rather than over case markings (nominative, accusative, etc.). In many languages, this distinction is immaterial—at least in finite clauses, which are the ones that typically exhibit robust, overt $\varphi$-agreement, in the first place. In other words, in a language without quirky-subjects, finite subjects are always nominative and nominatives are always finite subjects. Therefore, reformulating (168) as (169) would not alter its predictions:

(169)  THE MORAVCSIK HIERARCHY (first revision; *B08*)

nominative $\gg$ accusative $\gg$ dative $\gg$ (other) obliques

However, we have already seen data from Icelandic, which has quirky-subjects—and where, as a result, the equivalence between finite subjects and nominative case does not go through:

(170)  Morgum studentum      liki     verkið

many    students.PL.DAT like.3sg the.job.NOM

'Many students like the job.'                                    *[=(151)]*

I will not review here the evidence showing that phrases such as the dative *morgum studentum* ("many students.PL.DAT") in (170) are indeed grammatical subjects in Icelandic. The reader is referred to the literature on quirky-subjects in Icelandic, beginning with Andrews (1976) and Sigurðsson (1989) and Thráinsson (1979) and Zaenen, Maling & Thráinsson (1985), for extensive evidence in support of this (for a recent review, see Thráinsson 2007). What is crucial for our present purposes—and has already been demonstrated in §8.1—is that these non-nominative subjects never control agreement in Icelandic. Moreover, when the clause has a quirky-subject of this sort, a nominative non-subject (if present) *will* control agreement:

(171)  Jóni      líkuðu  [þessir sokkar ]
       Jon.DAT liked.PL [these  socks   ].NOM
       'Jon liked these socks.'                                          [*Jónsson 1996:149*]

See Harley (1995) and Jónsson (1996), for arguments that the nominative noun phrase in an example like (171) is indeed a direct object.

This does not falsify the original formulation of the Moravcsik Hierarchy outright. The example in (171) exhibits agreement with the direct object; and it is clearly the case that Icelandic also has sentences in which agreement targets the subject:

(172)  þeir          seldu   bókina
       they.PL.NOM sold.PL the.book.SG.ACC
       'They sold the book.'                                            [*Thráinsson 2007:134*]

Data like (171) are therefore technically in compliance with the original formulation of the Moravcsik Hierarchy (168) (the one based on grammatical function). However, as argued by B08, this way of characterizing the facts misses an important generalization: in every instance where *grammatical function* and *morphological case* diverge, $\varphi$-agreement tracks the latter and disregards the former.

Through the prism of the Revised Moravcsik Hierarchy in (169), Icelandic is a language in which only nominatives can be targeted for $\varphi$-agreement. In that sense, it is no different from English (a fact

that has been observed in the literature on Icelandic going back at least to Sigurðsson 1993). Since both examples like (171) and examples like (172) fit within this more restrictive characterization, the case-based formulation of the hierarchy is a better fit for the data (cf. a description of Icelandic as *a language that allows agreement with both subjects and objects*).

The second way in which the original formulation of the Moravcsik Hierarchy is imprecise concerns ergative languages. In ergative languages, the notion 'subject' conflates two case markings: absolutive (in intransitives) and ergative (in transitives). Once again, this pattern does not *falsify* the original formulation, based on grammatical function, but the latter misses a more precise, case-based generalization. Consider a language that exhibits agreement with only the absolutive argument, as is the case in Tsez (examples repeated from §8.3.1):

(173)   a.  **ziya**         **b**-ik'i-s

        **COW.III.ABS III**-go-PAST.EVID

        'The cow left.'

    b.  eniy-ā        **ziya**         **b**-išer-si

        mother-ERG **COW.III.ABS III**-feed–PAST.EVID

        'The mother fed the cow.'                       *[=(158a–b)]*

If we were to classify an example like (173b) as agreement with a direct object, then Tsez is technically compliant with the formulation based on grammatical functions, since it also has sentences where agreement targets the subject (e.g. (173a)).

But as B08 notes, there are no languages that exhibit agreement with ergative arguments but never with absolutive ones (see also Woolford 2000). This possibility should be allowed given the original formulation, since it is a sub-case of agreement with subjects only. B08's observation is that the implicational universal in (174) (stated here both in terms of grammatical function and in terms of case) has a counterpart on the ergative side, as shown in (175):

(174)  IMPLICATIONAL UNIVERSAL: NOM-ACC LANGUAGES

    a.  ∃ *agreement with objects* ⇒ ∃ *agreement with subjects*

    b.  ∃ *agreement with accusatives* ⇒ ∃ *agreement with nominatives*

(175)  IMPLICATIONAL UNIVERSAL: ERG-ABS LANGUAGES

    ∃ *agreement with ergatives* ⇒ ∃ *agreement with absolutives*

B08's proposal is then that (174b) and (175) be unified under a single, case-based formulation, using Marantz's (1991) *disjunctive case hierarchy*:

(176)  DISJUNCTIVE CASE HIERARCHY                                              [*Marantz 1991*]

    lexical/oblique case → dependent case → unmarked case

Regarding the motivations behind this hierarchy, the reader is referred to Marantz 1991, as well as §9.1; I will summarize only the results of that discussion here. The term *lexical/oblique case* refers to any case marking whose appearance is associated with a specific lexical item (rather than, say, an entire lexical category). Among these are cases assigned by prepositions (cf. a language like German, where different prepositions govern different case markings on their nominal complements), as well as quirky-case verbs such as the Icelandic *líka* ("like"; see (170)). Lexically-determined case of the kind often found on the complement of a verb like *help*, for example—which cross-linguistically, tends to take a dative complement—also belongs in this category.

The term *dependent case* refers to case marking whose appearance is contingent, roughly speaking, on the appearance of two non-*lexical/oblique*-marked nominals in a single locality domain. This is the category to which accusative and ergative belong.

Finally, *unmarked case* refers to case marking that does not fall under either of the previous two categories, and whose appearance is not contingent on the presence of any other particular lexical item or noun phrase. This is the category to which nominative and absolutive belong. While sometimes confused with 'default case' or 'citation form', this is not what the term refers to (see also

Schütze 2001b). In English, for example, fragment answers and other free-standing forms appear in accusative (or 'objective') case:

(177)  *Who came to the party first?*

Him/*He.

But the unmarked case in English is not accusative (or 'objective'); it is nominative.

Returning to the Moravcsik Hierarchy, B08 shows that (174b) and (175) can be unified under a formulation that references the categories of Marantz's *disjunctive case hierarchy*:

(178)  THE MORAVCSIK HIERARCHY (second and final revision; *B08*)

unmarked case ≫ dependent case ≫ lexical/oblique case

As we have seen, the virtues of this reformulation are twofold. First, it correctly captures the behavior of $\varphi$-agreement in instances where *grammatical function* and *morphological case* diverge, as in Icelandic (since in those instances, agreement is sensitive to morphological case, and that is what (178) refers to). Second, it allows us to capture the implicational universals regarding agreement in nominative-accusative languages/constructions and in ergative-absolutive languages/constructions in a unified manner.

Importantly, as B08 notes, the formalism in (178) is *not* meant to replace notions of structural prominence or minimality. There will be situations where more than one argument in the domain of a single agreement host will be deemed by (178) to be accessible for agreement; and in these situations, it will be the structurally highest one that will control agreement on the host.

B08 provides an example of just such an interaction, from Nepali. In terms of (178), Nepali makes the accessibility cutoff between the second and third members of the hierarchy, meaning finite $\varphi$-agreement can target nominals bearing either unmarked case (glossed as "NOM", below), or dependent case (glossed as "ERG", below). Crucially, when both are present in a single local domain, structural height determines which of the two will control agreement on the finite verb. This is demonstrated in (181a–b):

(179)  AGREEMENT ACCESSIBILITY: ENGLISH, ICELANDIC

  <u>unmarked case</u> ≫ dependent case ≫ lexical/oblique case
  *accessible for*
  *φ-agreement*

(180)  AGREEMENT ACCESSIBILITY: NEPALI

  <u>unmarked case ≫ dependent case</u> ≫ lexical/oblique case
          *accessible for*
          *φ-agreement*

(181)  a. **ma**      [ yas        pasal-mā ] patrikā        kin-ch-**u**                    (Nepali)

       **1sg.NOM**   DEM.OBL store-LOC   newspaper.NOM buy-NONPAST-**1sg**

       'I buy the newspaper in this store.'

    b. **maile**   [ yas        pasal-mā ] patrikā        kin-**ē/\*yo**

       **1sg.ERG**   DEM.OBL store-LOC   newspaper.NOM buy.PAST-**1sg/\*3sg.M**

       'I bought the newspaper in this store.'                [*Bickel & Yādava 2000:348, via B08*]

Both in (181a) and in (181b), agreement is controlled by the subject, even though the subject is in the unmarked case ("NOM") in the former, and in the dependent case ("ERG") in the latter. At the same time, it would be a mistake to characterize Nepali in terms of agreement with the grammatical function 'subject'—because when the subject bears lexical/oblique case, it is inaccessible for agreement, and agreement is controlled by the object:

(182)  **malāī   timī**           man   par-ch-**au/\*u**

       **lsg.DAT 2sg.M.HON.NOM** liking occur-NPST-**2sg.M.HON/\*1sg**

       'I like you.'                                          [*Bickel & Yādava 2000:348, via B08*]

Thus, agreement in Nepali is best characterized as agreement with the structurally highest argument bearing unmarked or dependent case.

The same interaction of case accessibility with structural height is shown, by B08, to derive yet another fact, concerning the possibilities for the alignments of case and agreement within a single language. While there are languages whose alignments for case marking and for agreement differ, there is a gap in the typology (Anderson 1977, Comrie 1978, Dixon 1979/1994):

(183) A TYPOLOGICAL GAP IN CASE VS. AGREEMENT ALIGNMENTS

| | | agreement alignment | |
|---|---|---|---|
| | | NOM-ACC | ERG-ABS |
| case alignment | NOM-ACC | ✔ (English, Icelandic) | ✗ |
| | ERG-ABS | ✔ (Warlpiri, Chukchi) | ✔ (Basque, Tsez) |

Warlpiri, for example, has an ergative-absolutive case marking alignment, but morphemes in its agreement system exhibit a nominative-accusative alignment (i.e., there is a morpheme that co-indexes the subject, regardless of whether it is the subject of a transitive or an intransitive, and a morpheme that co-indexes the transitive object if present; see Legate 2002). Crucially, however, the converse is unattested: no language has a nominative-accusative alignment in its case marking, while having an ergative-absolutive alignment in its agreement system.[10]

Importantly, B08's approach derives this typological gap. Suppose a language has an ergative-absolutive alignment in its case marking system. If this language makes the cutoff between the first and second members of the Revised Moravcsik Hierarchy (179), only the unmarked noun phrase will be able to serve as an agreement target. This means we will see agreement with the absolutive noun

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[10]One potential counterexample to this generalization is Kutchi Gujarati; however, there is evidence that this apparent exception might involve a different mechanism altogether. The reason is that the relevant configurations in Kutchi Gujarati exhibit so-called 'semantic' agreement, ignoring grammatical gender and tracking real-world gender instead (Patel 2008). The proper analysis of these examples is beyond the scope of the current work, but this property of the Kutchi Gujarati agreement system suggests that it may be driven by a different mechanism altogether (e.g. anaphoric dependence, rather than true morphosyntactic agreement; cf. Jelinek 1984).

phrase only (as in Tsez), resulting in an ergative-absolutive agreement alignment. If the language makes the cutoff between the second and third members of the Revised Moravcsik Hierarchy (180), both ergative and absolutive noun phrases will be accessible, as far as their case marking is concerned. But on the assumption that the ergative argument is structurally higher than the absolutive one, the result will be agreement with the subject of a transitive clause, as well as with the sole, absolutive argument of an intransitive clause, as is the case in Warlpiri and Chukchi. In other words, the agreement system in such a language will exhibit a nominative-accusative alignment.

On the other hand, suppose a language has a nominative-accusative case alignment. If the cutoff is between the first and second members of the Revised Moravcsik Hierarchy (179), agreement will only be able to target the nominative argument, resulting in a nominative-accusative alignment in the agreement system as well. If the cutoff is between the second and third members (180), both nominative and accusative arguments will in principle be accessible, in terms of their case marking. But since the nominative is structurally higher than the accusative, structural prominence still dictates that the nominative argument will control agreement on the finite verb. Thus, if the case alignment is nominative-accusative, agreement system will *always* be nominative-accusative, regardless of how the language is parameterized with respect to the Revised Moravcsik Hierarchy.

B08's proposal thus derives the typological gap shown in (183).

Taken together, these results point to the conclusion that **agreement is *case-discriminating***: the case marking borne by potential agreement targets plays a role in determining whether or not they will actually be targeted for $\varphi$-agreement. This was already made clear, to some extent, by the dative paradox itself; what is highlighted by B08's results is that it is case-related properties in particular—rather than, say, thematic or argument-structural properties—that are responsible for these effects.[11]

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[11]David Pesetsky (p.c.) points out that strictly speaking, it does not follow from Bobaljik's (2008) argument that the determining factor in the calculus of $\varphi$-agreement is morphological case per se; it is possible that there is some third property, internal to the syntactic computation, which **(a)** uniquely determines morphological case, once morphological spellout is reached, and **(b)** serves as the conditioning property for $\varphi$-agreement, following a logic similar to (178). Note, however, that positing a third property of this sort would only be meaningful if morphological case is indeed

This view would be incoherent in a system where the assignment of case is contingent on, or caused by, $\varphi$-agreement (as in Chomsky 2000, 2001, for example). But Icelandic data of the kind discussed earlier demonstrate quite clearly that such a view is untenable, for reasons that are independent of dative intervention or the dative paradox (an observation that goes back to Zaenen, Maling & Thráinsson 1985). We have seen that nominative noun phrases can exist in Icelandic in positions where $\varphi$-agreement has failed to reach them (154–155). We also saw, in §5.1, that non-oblique noun phrases are found in Kichean in positions where agreement has failed to reach them.[12] There is therefore an established need for a theory where case-assignment does not depend on $\varphi$-agreement (at least any kind of $\varphi$-agreement that is overtly detectable, which is the kind of $\varphi$-agreement that B08 addresses). Marantz (1991) provides a theory of exactly this sort, and an adaptation of that theory will be discussed and defended in chapter 9.

This view regarding the interplay of case and $\varphi$-agreement would also appear to have implications for the modular locus of $\varphi$-agreement; indeed, the thrust of B08 proposal as it is originally written concerns this very point. If morphological case is computed post-syntactically, then any operation that relies on morphological case as its input must be post-syntactic, as well (and note that what Icelandic quirky-subject examples demonstrate is that *abstract case* cannot be the notion of case relevant to $\varphi$-agreement). However, I will argue, in §9.2, that the premise—that morphological case is computed post-syntactically—is flawed. I therefore set aside this modularity issue for the remainder of this chapter.

### 8.3.3.2. Prospects for solving the dative paradox

Turning to the dative paradox itself, B08's proposal clearly accounts for one half of it: why datives (at least in some languages) are unable to value the $\varphi$-features on the finite verb. If the set of

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computed outside of syntax (as claimed by Marantz 1991); if it is computed within syntax, there is no need for a separate property of this sort, and it would in fact constitute an unwarranted duplication. Given that this is exactly what I will argue in chapter 9 regarding the modular locus of so-called 'morphological' case, this third property would indeed be redundant here.

[12] The same point is made in Preminger 2011b regarding absolutive noun phrases in Basque, though the argument in that case is not independent of dative intervention.

possible agreement targets in a given language is determined according to the Revised Moravcsik Hierarchy (178), then in any language that makes the cutoff before the third member of the hierarchy (*lexical/oblique case*), $\varphi$-agreement will not be able to target datives.[13]

The converse behavior, which I referred to in §8.3.2 (following Rezac 2008a) as *agreement displacement*, involves the dative argument obligatorily controlling the agreement morphology that in monotransitives is controlled by the Patient. As noted in §8.3.2, this behavior tends to arise in languages that lack overt dative morphology per se. On B08's proposal, we can make sense of this: in such a language, dative case would be indistinguishable from dependent or even unmarked case. This is certainly so in Chol, which lacks any overt case morphology on its non-oblique nominals. In a language like this, the absence of any dative case to speak of results in the case-discrimination mechanism being unable to distinguish the applicative argument from the Patient. This is quite similar to the state of affairs in Warlpiri and in Chukchi (as discussed in §8.3.3): there too, we saw that two arguments were accessible for $\varphi$-agreement, as far as their case marking was concerned. But instead of these two arguments being the subject and the object—as in Warlpiri and in Chukchi—here, the two arguments in question would be the two internal arguments of a ditransitive/applicative construction.

If applicative arguments are introduced in a higher position than the Patient, then the applicative argument would necessarily be the higher of these two case-accessible nominals, resulting in agreement displacement:

(184) AGREEMENT WITH APPLICATIVE ARGUMENT IN LIEU OF PATIENT

     a. tyi    aw-ilä-**yoñ**                                      (Chol)

         PRFV 2.ERG-see-**1.ABS**

         'You saw me.'

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[13] It has been claimed that at least some instances of dative may actually constitute a type of *dependent case*—one that arises when two noun phrases co-occur inside VP (or ApplP); see Baker & Vinokurova (2010). If this is so, then in a language where dative is this type of case, the statement in the text would only apply if the language made the cutoff before the *second* member of the Revised Moravcsik Hierarchy (178).

b. tyi    i-ch'äx-be-**yoñ**         ja'    x-'ixik

PRFV 3.ABS-boil-APPL-**1.ABS** water CLF-woman

'The woman boiled me water.'                                    *[=(184)]*

Alternatively, agreement displacement could be handled as an instance of a language making the cutoff after the third member of the Revised Moravcsik Hierarchy (178). This would probably require further articulating the hierarchy itself, since other oblique phrases (e.g. PPs headed by semantically 'heavy' prepositions) in these languages still cannot be targeted for $\varphi$-agreement. That would correspond to the intuition that the dative is, in some sense, the "least oblique" among oblique cases. This alternative, of course, would not capture the correlation (§8.3.2) between the lack of overt dative case marking and agreement displacement; but it is perhaps exactly what is going on in languages that *do* have overt dative case and still exhibit some degree of agreement displacement (e.g. Basque; see Rezac 2008a). It is especially suggestive that this is where more complicated patterns of agreement displacement arise (i.e., where some $\varphi$-featural combinations on the dative nominal trigger agreement displacement, while others do not; Rezac 2008a). It is in these instances that there might still be a PP or Kase Phrase layer that syntactically distinguishes datives from nominals bearing unmarked/dependent case, and which plays a role in "filtering" different $\varphi$-featural combinations on the enclosed nominal (see §8.3.2). I will not speculate on this matter further.

What is less clear, under this approach, is how the other half of the dative paradox is to be handled: why do datives, in a language where they are not viable agreement targets, interact with $\varphi$-probing at all? B08 does not offer a conclusive view on this issue, instead entertaining two possible solutions. Below, I will argue that both possibilities fall short of accounting for the cross-linguistic patterns associated with dative intervention—in particular, the fact that intervention gives rise to outright ungrammaticality in some instances, and to 'default' (3rd person singular) agreement morphology in others. In §8.4, I will propose that dative intervention actually arises as an interaction

between *case-discrimination*, which rules out agreement with a dative argument, and minimality, which rules out agreement with anything else, ultimately resulting in *failed agreement* (as defined in §2.1, and argued for in chapters 5–6).

Let us now review the alternatives proposed by B08, for why datives interact with $\varphi$-agreement at all (when they are not viable targets for $\varphi$-agreement, themselves). The first alternative involves a reinterpretation of long-distance agreement as phrasal movement where both PF and LF interpret the lower copy in the movement chain. This idea is situated within a *single-output* model of syntax, and builds on Bobaljik's earlier work (Bobaljik 1995, and in particular, the 'lower right corner' proposal in Bobaljik 2002). I think we can safely dismiss this approach to dative intervention, here, due to the same considerations discussed towards the end of §8.3.2: if agreement is nothing but phrasal movement, the prospects of accounting for the difference between examples like the French (185), where intervention results in outright ungrammaticality, and the Icelandic (186), where intervention results in 'default' agreement morphology, seem particularly bleak.

(185)  * Jean$_1$ semble [à  Marie]$_{DAT}$ [ t$_1$ avoir     du talent ].

       Jean  seems    to Marie        have.INF of talent

       'Jean seems to Marie to have talent.'                                        *[≈(164b)]*

(186)  það   finnst(/*finnast) [einhverjum stúdent]$_{DAT}$    [$_{SC}$ tölvurnar]        ljótar ].

       EXPL  find.SG/*find.PL   some        student.SG.DAT   the.computers.PL.NOM ugly

       'Some student finds the computers ugly.'                                     *[≈(155)]*

The second alternative that B08 discusses is a domains-based approach: the idea is that agreement may not be able to cross *any* clausal boundaries, finite or non-finite; and thus, instances where agreement seems to target an argument in an embedded clause must involve restructuring/clause-union (this builds on work by Bobaljik & Wurmbrand 2005, Polinsky 2003, and Wurmbrand 2001). As B08 points out, this crucially relies on the view that a single embedding

verb may be a restructuring verb in some instances, and a non-restructuring verb in others, without this alternation (necessarily) being overtly expressed in the verbal morphology (Wurmbrand 2001).

On this view, *semble* ("seem") in French can be a restructuring verb *in some cases*, and it is in these cases that agreement with, and raising of, the embedded subject *Jean* is possible:

(187)  Jean$_1$ [$_{RD}$ semble [ t$_1$ avoir    du talent ]].         (*RD=restructuring domain*)

Jean       seems     have.INF of talent

'Jean seems to Marie to have talent.'                              *[≈(164b)]*

Compare this with an example like (185), above: there, *semble* takes a dative experiencer argument, and ungrammaticality arises. The restructuring analysis shown in (187) is assumed to be impossible in the presence of a dative experiencer. On the assumption that agreement cannot cross clausal boundaries, the impossibility of restructuring entails that agreement with the embedded subject *Jean* cannot obtain—resulting in the ungrammaticality of the utterance in question.

In support of this domains-based approach, B08 points out that dative intervention in Icelandic seems to disappear in true mono-clausal configurations (i.e., when the dative and nominative nominals are co-arguments):

(188) a. það  voru    konungi gefnar ambáttir     í  vettur

EXPL were.PL king.DAT given  slaves.PL.NOM in winter

'A king was given maidservants this winter.'     [*Zaenen, Maling & Thráinsson 1985:112–113*]

b. það  voru    einhverjum   gefnir   þessir sokkar

EXPL were.PL someone.DAT given.PL these  socks

'Someone was given these socks.'                              [*Jónsson 1996:153*]

The domains-based approach thus assimilates examples like the French (187), which is assumed to be an instance of restructuring/clause-union, to mono-clausal Icelandic examples such as (188a–b).

However, it is imprecise to say that mono-clausal Icelandic constructions of the sort shown in (188a–b) do not show dative intervention at all. As was observed by Sigurðsson (1996) and

Taraldsen (1995), *a.o.*, when the higher of two co-arguments in Icelandic is dative, the other, nominative argument cannot be 1st/2nd person:

(189)   * það   hafið    einhverjum    alltaf   líkað  þið

EXPL have.2pl some.DAT.SG/PL always liked you.NOM.PL

*Intended*: 'Someone likes y'all.'                     [*Sigurðsson & Holmberg 2008:257*]

This is certainly reminiscent of the PCC effects discussed in §4.1, which were analyzed, following Anagnostopoulou (2003), Béjar & Rezac (2003), and others, as an instance of dative intervention. Sigurðsson & Holmberg (2008), though, take issue with the claim that these are PCC effects per se (cf. Boeckx 2000, for example). One difference between these and canonical PCC effects is that here, an A-movement trace of the dative argument appears to have the same effect as an in situ dative would, preventing successful agreement in person features with a lower 1st/2nd person nominative:[14]

(190)   * **Einhverjum₁**    hafið    **t₁** alltaf  líkað  þið

**some.DAT.SG/PL** have.2pl    always liked you.NOM.PL

*Intended*: 'Someone likes y'all.'         [*Sigurðsson & Holmberg 2008:257,* annotations added]

This contrasts also with the bi-clausal counterpart of (190), where A-movement of the dative was shown to ameliorate intervention in number agreement with the embedded nominative subject:

(191)   það   finnst(/*finnast) [einhverjum stúdent]_DAT   [_sc tölvurnar]        ljótar ].

EXPL find.SG/*find.PL   some        student.SG.DAT   the.computers.PL.NOM ugly

'Some student finds the computers ugly.'                           *[=(155)]*

---

[14]Recall that a critical component of analyses of the PCC such as Anagnostopoulou's (2003) and Béjar & Rezac's (2003) is that the full dative DP ceases to intervene when clitic-doubled, precisely because it behaves on a par with an A-movement trace.

(192)  **[Einhverjum stúdent]₁**  finnast t₁ [_sc tölvurnar ]  ljótar ].

  **some**  **student.SG.DAT** find.PL  the.computers.PL.NOM ugly

  'Some student finds the computers ugly.'  *[=(156)]*

Nevertheless, given that the effects in (189–190) *are* restricted to configurations where the dative is the higher of two co-arguments, it is quite clear that they too are ultimately instances of dative intervention. It would thus be a mistake to characterize the difference between bi-clausal Icelandic examples like (191), and their mono-clausal counterparts in (188a–b), in terms of dative intervention vs. a lack thereof. The difference seems instead to have to do with a distinction between person agreement and number agreement, both of which are subject to dative intervention, but each under slightly different conditions (see Sigurðsson & Holmberg 2008 and Preminger 2011b for two possible accounts of such person-number asymmetries). Crucially, the domains-based approach is too coarse to account for these facts, because it predicts the complete absence of intervention effects in mono-clausal environments.

Data like (192) pose a second problem for the domains-based approach. The argument structure of a verb like *finnast* ("find") in (192) (much like the argument structure of *semble* "seem", in the French (185)) obviously includes a dative experiencer argument. Thus, by hypothesis, this instance of *finnast* should not allow restructuring—falsely predicting that agreement with the embedded nominative subject would be impossible.

One might hypothesize that restructuring becomes possible once again, if the derivation involves movement of the dative to subject position. But even that would not be sufficient; consider (193):

(193)  Hverjum₁ hafa  strákanir₂  virst  t₁ [ t₂ vera gáfaðir  ] ?

  who.DAT  have.PL the.boys.NOM seemed  be  intelligent

  'To whom have the boys seemed (to be) intelligent?'

  *[H&H:1010, attributed to Halldór Ármann Sigurðsson, p.c.]*

This example involves *Stylistic Fronting* of the embedded nominative to the matrix subject position (H&H:1010). Crucially, then, the dative has *not* moved to the subject position in this example; but agreement with the nominative still goes through (note the plural agreement on *hafa* "have.PL").

It is obvious that more needs to be said about examples like (192) and (193), under any approach to dative intervention, to explain why the trace of a moved dative argument does not intervene in the same way that an in situ dative argument does (cf. (191)), and the way an A-trace does in mono-clausal configurations (cf. (190)). The point here is merely that the domains-based approach seems particularly ill-suited to model these effects, since it makes the cut between intervention and non-intervention according to argument structure—whereas the actual distinctions seem sensitive to issues of finer derivational timing (see, once again, Sigurðsson & Holmberg 2008 and Preminger 2011b).

In summary, B08's proposal provides a novel answer for one half of the dative paradox: it explains why dative nominals fail to transmit their own $\varphi$-feature values to the finite verb. These effects can be seen as an instance of a more general, and independently motivated, property of $\varphi$-agreement; as B08 has shown, the set of viable $\varphi$-agreement targets in a given language is best characterized in terms of morphological case, and tracks the implicational hierarchy repeated in (194).

(194)  THE MORAVCSIK HIERARCHY (second and final revision; *B08*)

      unmarked case ≫ dependent case ≫ lexical/oblique case                          *[=(178)]*

I have termed this the *case-discrimination* property of $\varphi$-agreement. On this view, the fact that datives fail to transmit their $\varphi$-feature values to the finite verb in a language like Icelandic, English, or French is a consequence of case-discrimination allowing only agreement with noun phrases bearing unmarked case in these languages.

The same view has so far failed, however, to provide a satisfactory explanation for the second half of the dative paradox: why nodes that cannot be targeted for $\varphi$-agreement interact with $\varphi$-probing

at all. As discussed here, neither the approach that assimilates agreement to 'lower right corner' phrasal movement (Bobaljik 2002), nor the restructuring/domains-based approach, can provide a viable answer to this question.

Crucially, it turns out that once we allow for the possibility of *failed agreement* in grammatical utterances (as independently argued for in chapters 5–6), case-discrimination can provide an explanation for the second half of the dative paradox, as well. This is the topic of the next section.

## 8.4. Intervention as failed agreement

In chapter 5, I argued that the behavior of $\varphi$-agreement in the Agent-Focus construction of Kichean forces us to concede the existence of *failed agreement* (§2.1): instances in which $\varphi$-agreement has not culminated successfully, and yet the resulting utterance is nonetheless grammatical. This, despite the fact that agreement in Kichean is generally obligatory, even in the Agent-Focus construction itself. Converging evidence for the same conclusion, from Zulu and from Basque, was presented in chapter 6.

Once we are forced to admit the possibility of failed agreement in grammatical utterances, a previously unavailable analytical possibility presents itself with respect to dative intervention—especially within a feature-geometric approach to $\varphi$-agreement, as pursued in §4.2.[15] This analytical possibility stems from the fact that '3rd person singular' agreement morphology (i.e., the agreement morphology that arises upon successful agreement with a node that happens to be 3rd person and singular) may not always be distinguishable from the morphology that arises when the probes in question fail to agree with any target whatsoever.

Recall the $\varphi$-feature geometry used in §4.2, adapted from Harley & Ritter (2002) and McGinnis (2005):

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[15]The same holds, in fact, under any approach in which $\varphi$-features are privative rather than bivalent.

(195)  a simplified $\varphi$-feature geometry

$$[\varphi]$$ *[=(55)]*

$$\big([\text{person}]\big) \qquad \big([\text{number}]\big)$$

$$[\text{participant}] \qquad\quad [\text{plural}]$$

$$[\text{author}]$$

In this geometry, [plural] is the feature that distinguishes plural noun phrases from singular ones; [participant] distinguishes 1st/2nd person pronouns from 3rd person pronouns and other noun phrases; and [author] further distinguishes 1st person pronouns from 2nd person ones. Within such a system, notions like '3rd person' and 'singular' amount to the absence of privative features like [participant] and [plural], respectively.

The valuation that occurs when a $\varphi$-probe has successfully agreed with a 3rd person singular noun phrase therefore consists, at most, of copying the root node [$\varphi$]—and possibly, the 'meta-nodes' [person] and [number]—and may consist of less, depending on feature relativization (see §4.2.3).[16] However, even if these parent nodes are copied when agreement obtains, they may not receive exponence of their own. The agreement morphology identified as '3rd person singular' in a given language may be nothing more than the exponence given to a probe that lacks [plural] and [participant] (and by extension, [author]).

In fact, in Preminger 2009, I argued that it was a general property of $\varphi$-agreement that when it has failed to locate an appropriate target, the result is the appearance of a morpheme expressing this kind of 'default' (i.e., 3rd person singular) feature setting. This was contrasted with clitic doubling, whose failure was shown to result in the disappearance of the relevant morphological element from the agreement host. In languages where, e.g., 3rd person singular agreement is non-null, this furnishes a possible diagnostic for clitic doubling vs. "pure" agreement:

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[16] As in §4.2.3, I abstract away here from whether agreement results in the actual copying of values, or merely in the *sharing* of feature-value slots (Frampton & Gutmann 2000, 2006, Pesetsky & Torrego 2007).

(196)  DIAGNOSTIC FOR "PURE" AGREEMENT VS. CLITIC DOUBLING        [*Preminger 2009:623*]

>   Given a scenario where the relation $\mathcal{R}$ between an agreement-morpheme $\mathcal{M}$ and the
>   corresponding full noun phrase $\mathcal{F}$ is broken, but the result is still a grammatical utterance:
>
>   a. $\mathcal{M}$ shows up expressing "default" $\varphi$-features $\Rightarrow$ $\mathcal{R}$ is *"pure" agreement*
>
>   b. $\mathcal{M}$ disappears entirely $\Rightarrow$ $\mathcal{R}$ is *clitic doubling*

The diagnostic in (196) was argued for in Preminger 2009 on the basis of interactions between finite agreement morphology in Basque and the syntax of certain long-distance agreement constructions (Etxepare 2006). To the extent that it proves to be cross-linguistically stable (see, for example, Kramer to appear, on Amharic), the property expressed by (196) suggests a cross-linguistic tendency for the root of the $\varphi$-geometry, $[\varphi]$—as well as the 'meta-nodes' [PERSON] and [NUMBER]—to receive no overt exponence of their own. This would result in a complete lack of valuation being morphologically indistinguishable from a lack of [plural], [participant], and [author] features.

Whether this is a cross-linguistic universal or not, however, it is clearly *possible* that in a given language, there would be no overt exponence associated with $[\varphi]$/[PERSON]/[NUMBER], and the aforementioned morphological identity would hold. The analytical possibility made possible by the results of chapters 5–6 is therefore that dative intervention, which triggers what looks like 3rd person singular agreement on the finite verb, is really an instance of failed agreement altogether—a $\varphi$-probe that has literally failed to agree with *any* viable target.

Let us consider the *obligatory operations* approach to $\varphi$-agreement, detailed in §5.3—and formalized using the operation FIND($f$), repeated here:[17]

(197)  FIND($f$): given an unvalued feature $f$ on a head $H^0$, look for an XP bearing a valued
                 instance of $f$, and assign that value to $H^0$                      *[=(112)]*

---

[17] Regarding a *violable constraints* alternative, see §8.5, below.

The case-discrimination property of $\varphi$-agreement was motivated by B08 independently of dative intervention (for example, by the behavior of $\varphi$-agreement in quirky-subject languages, as well as by the absence of languages with an ergative-absolutive agreement alignment but a nominative-accusative case alignment; see §8.3.3). I will therefore assume it is correct, and attempt to integrate it into the definition in (112). It cannot be built into (112) by further constraining the XPs that (112) operates upon, since that would cause datives and other discriminated-against XPs to simply be ignored by the probe—like non-*wh* phrases in *wh*-probing—which is not the attested behavior. Instead, case-discrimination will cause the FIND operation to simply abort:

(198)   $\text{FIND}_\varphi(f)$: given an unvalued feature $f$ on a head $H^0$, look for an XP bearing a valued instance of $f$. Upon finding such an XP, check if its case is acceptable with respect to *case-discrimination* —

    a.  **yes** $\rightarrow$ assign the value of $f$ found on XP to $H^0$

    b.  **no** $\rightarrow$ abort $\text{FIND}_\varphi(f)$                                   *(and continue with derivation)*

As in any other scenario in which FIND has failed (such as those configurations discussed in chapter 5, where the derivation simply does not contain a target bearing the relevant feature $f$), the only impact that aborting $\text{FIND}_\varphi$ (198b) has on the derivation is that the feature(s) on $H^0$ that would have been valued as the result of its successful culmination (198a) will remain unvalued. The derivation is otherwise unaffected, and proceeds unhindered.

    This is, admittedly, a stipulative addition to (197). But as noted in §8.3.1, it seems that any approach that would successfully handle dative intervention would have to make some stipulation or other.[18] The question is just which of these actually derives the correct array of facts.

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[18] Here, I build the *case-discrimination* clause into a version of $\text{FIND}(f)$ that is only relevant to $\varphi$-features ($\text{FIND}_\varphi(f)$). It is not clear to me what the counterpart of this clause would be for other kinds of features. Again, while it is stipulative to include this proviso only in the $\varphi$-version of FIND, this stipulation is motivated independently of dative intervention: as shown in §8.3.3, the cross-linguistic typology of noun phrases that can and cannot be targeted for $\varphi$-agreement is what leads to the formulation of case-discrimination; and this typology has no self-evident correlates outside of $\varphi$-agreement.

Let us therefore explore the consequences of (198) as formulated. Consider first the case of Icelandic; as discussed in detail in §8.1 and §8.3.3, only nominative noun phrases are ever targeted for $\varphi$-agreement in Icelandic. Thus, Icelandic makes the case-discrimination cutoff between the first and second members of the Revised Moravcsik Hierarchy:

(199) AGREEMENT ACCESSIBILITY: ICELANDIC

$$\underbrace{\text{unmarked case}}_{\substack{\textit{accessible for} \\ \textit{$\varphi$-agreement}}} \gg \text{dependent case} \gg \text{lexical/oblique case} \qquad \textit{[=(179)]}$$

In an example like (200), below, the $\varphi$-probe will search for an XP bearing $\varphi$-features:[19]

(200) það    finnst(/*finnast) [einhverjum stúdent]$_{\text{DAT}}$    [$_{\text{SC}}$ tölvurnar            ljótar ].

EXPL find.SG/*find.PL   some       student.SG.DAT    the.computers.PL.NOM ugly

'Some student finds the computers ugly.'                          *[=(155)]*

The dative noun phrase *einhverjum stúdent* ("some student.SG.DAT") is the closest XP bearing $\varphi$-features in the domain of the finite $\varphi$-probe. Therefore, it will necessarily be this XP that is targeted by FIND$_\varphi$. The targeted XP will then be evaluated with respect to case-discrimination—which in Icelandic is set in the manner shown in (199), ruling out datives. The formulation of (198) then dictates that FIND$_\varphi$ will be aborted, meaning no $\varphi$-feature values will be transmitted to the probe.

I will assume, as discussed earlier, that '3rd person singular' agreement morphology in Icelandic is simply the spellout of a $\varphi$-probe that lacks [plural] and [participant] values. The result of aborting FIND$_\varphi$ in (200) will therefore be morphologically indistinguishable from successful agreement with a 3rd person singular target. As shown above, this is the correct result.

Where previously surveyed approaches (§8.3) ran into trouble was in cases of dative intervention that lead to outright ungrammaticality, as in the French examples discussed in §8.3.2–§8.3.3 (and their counterparts in languages like Spanish, Italian, and Greek):

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[19] I abstract away, for the purposes of the current discussion, from the possibility that in Icelandic—like in Kichean—person and number probe separately from one another; see Sigurðsson & Holmberg (2008).

(201) * Jean₁ semble [à  Marie]_DAT [ t₁ avoir     du talent ].

Jean  seems   to Marie       have.INF of  talent

'Jean seems to Marie to have talent.'                                      *[=(185)]*

As noted earlier, these patterns (of dative intervention leading to ungrammaticality) seem to be associated, cross-linguistically, with *movement* (compare (201) with (200), for example).

I propose that ungrammaticality of this sort arises precisely at the juncture of $\varphi$-agreement and movement. To see this, let us first consider languages that do not have quirky subjects, such as English or French.[20] It is important to note that for the purposes of this discussion (and in fact, throughout this book), I am using the term *quirky-subject* to refer specifically to instances of non-nominative noun phrases that pass the full battery of subjecthood tests (see Sigurðsson 1989, Zaenen, Maling & Thráinsson 1985, for example, on quirky-subjects in Icelandic). This is not to be confused with non-nominative noun phrases that merely come to c-command other noun phrases in the clause (as is the case for certain datives in German, for example; see Haider & Rosengren 2003, Wurmbrand 2006).

What it means for a language not to have quirky-subjects is that a noun phrase occupying the canonical subject position (in finite clauses) will always be nominative. But correlation is not causation, of course; and even if causation does exist, correlation alone does not dictate the direction of causation. Traditionally, movement to canonical subject position (henceforth, MtoCSP) was seen as the *cause* of this nominatives-only property—either because canonical subject position was the locus of nominative case assignment (Chomsky 1981), or because the syntactic element responsible for MtoCSP (e.g. Infl⁰) was also the assigner of nominative case (as in later analyses).

However, once the empirical base is broadened to include a language like Icelandic, such approaches become untenable—insofar as one wishes to maintain a notion of 'nominative' that has

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[20]As both languages are well into the process of losing their overt case morphology, this is of course not directly observable on the basis of the forms of full noun phrases. In both languages, the familiar move of examining the pronoun/clitic system, where the relevant distinctions are still morphologically observable, reveals the lack of quirky-subjects, and the restriction of all finite subjects to nominative.

anything to do with morphologically-observable distinctions (see Marantz 1991, Zaenen, Maling & Thráinsson 1985). In lieu of assuming that the aforementioned correlation (between MtoCSP and nominative in languages like French/English) is a coincidence—or is perhaps caused by some third factor, which is neither the movement or the case marking itself—one could entertain the possibility that it is nominative case that makes a noun phrase in English or French *eligible* for MtoCSP in the first place.

While such a view would be incoherent in a system where nominative case is assigned as part of, or as the result of, MtoCSP, there are theories of case where the assignment of *not* associated with MtoCSP; and crucially, these theories are not only able to account for case in Icelandic, but generalize to languages like English and French as well (see Bittner & Hale 1996, Marantz 1991, Yip, Maling & Jackendoff 1987; see also chapter 9). It is therefore possible to discuss nominative case as a precursor to—and potentially, a precondition for—the application of MtoCSP.

If nominative case is a precondition for MtoCSP in French/English, then a parallelism can be observed between MtoCSP and $\varphi$-agreement—namely, that *both* are case-discriminating; and since we have abandoned a theory where $\varphi$-agreement, MtoCSP, and nominative case are all bi-conditionally related to one another, it is no longer trivial that this parallelism between MtoCSP and $\varphi$-agreement exists.

In §8.3.3, I reviewed B08's arguments that $\varphi$-agreement is case-discriminating. Importantly, at least some of the arguments were independent of MtoCSP (for example, the argument from the typological gap in combinations of case- and agreement-alignments). There are therefore three logical possibilities regarding the source of case-discrimination in MtoCSP: **(i)** MtoCSP is independently case-discriminating (i.e., the case-discrimination found with $\varphi$-agreement is duplicated as part of MtoCSP); **(ii)** there is an independent mechanism of case-discrimination, and both $\varphi$-agreement and MtoCSP make use of it; or **(iii)** MtoCSP is case-discriminating derivatively, because it can only see noun phrases through the prism of $\varphi$-agreement .

Naturally, considerations of simplicity already favor (ii–iii) over (i). But there is an additional, empirical argument that favors (iii) over the other two. The argument has to do with the typology of case-discrimination. At issue is the relation between the set of case markings that render a noun phrase eligible for MtoCSP in a given language, and the set of case markings that can be targeted by the finite $\varphi$-probe in that same language.

Before detailing the relevant typological observation, it is necessary to stress that this discussion involves, on the $\varphi$-agreement side, the set of case markings that can be targeted for $\varphi$-agreement *by a single $\varphi$-probe* (in B08's terms, 'single agreement'). Thus, examples like the Basque (202), below— where each slot in the finite auxiliary agrees with arguments of a particular case marking[21]—are not directly relevant, here.

(202)  Guraso-e-k                niri      belarritako ederr-ak              erosi  **d-**    i-   **zki-**
       parent(s)-ART$_{pl}$-ERG me.DAT earring(s)   beautiful-ART$_{pl}$(ABS) bought **3.ABS-** $\sqrt{}$- **pl.ABS-**

       **da-**       **te**.

       **1sg.DAT-** **3pl.ERG**

       '(My) parents have bought me beautiful earrings.'                                        *[=(63)]*

Instead, an example of a single $\varphi$-probe being able to target noun phrases with varying case markings would be Nepali (as shown in §8.3.3, following B08). Recall that on B08's case-discrimination analysis, Nepali is a language that makes the accessibility cutoff between the second and third members of the Revised Moravcsik Hierarchy:

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[21]Exceptions to this statement involve *agreement displacement* (see Rezac 2006, 2008a, as well as §8.3.2–§8.3.3). Importantly, agreement displacement arises in Basque only under well-defined circumstances (see Rezac 2008a for details); we can therefore safely abstract away from it here. Also worth noting are arguments by Arregi & Nevins (2008, 2012), and in Preminger 2009, that the ergative and dative exponents on the Basque auxiliary do not arise by way of agreement per se, but rather by clitic doubling of (potentially *pro*-dropped) full DPs.

(203) AGREEMENT ACCESSIBILITY: NEPALI

unmarked case ≫ dependent case ≫ lexical/oblique case          *[=(180)]*

        *accessible for*
        *φ-agreement*

Thus, in Nepali, a *single φ-agreement host*—the finite verb—is able to target noun phrases bearing either unmarked case ("NOM") or dependent case ("ERG"), though not noun phrases bearing lexical/oblique case ("DAT"):

(204) a. **ma**    [ yas    pasal-mā ] patrikā    kin-ch-**u**        (Nepali)

      1SG.NOM  DEM.OBL store-LOC  newspaper.NOM buy-NONPAST-**1SG**

      'I buy the newspaper in this store.'

    b. **maile**   [ yas    pasal-mā ] patrikā    kin-**ē/*yo**

      1SG.ERG  DEM.OBL store-LOC  newspaper.NOM buy.PAST-**1SG/*3SG.M**

      'I bought the newspaper in this store.'

    c. **malāī**   **timī**          man  par-ch-**au/*u**

      1sg.DAT 2sg.M.HON.NOM liking occur-NPST-**2sg.M.HON/*1sg**

      'I like you.'                           *[=(181a–b, 182)]*

Having elucidated this distinction, we can now turn to the typological observation in question. We have seen a language, Icelandic, where the set of case markings that are eligible for MtoCSP is a superset of the set of case markings that are eligible for φ-agreement. In Icelandic, nominatives, accusatives, datives, and genitives can undergo MtoCSP (i.e., move to canonical subject position); but only nominatives can be agreed with (see, e.g., Sigurðsson 1993, 1996). We have also seen languages where both sets are identical: in English and French, only nominatives can undergo MtoCSP, and only nominatives can be targeted by the finite φ-probe. I know of no language, however, where the set of case markings that are eligible for MtoCSP is a proper subset of the set of case markings that are eligible for φ-agreement. This typology is summarized in (205):

(205) A TYPOLOGICAL GAP IN CASE-DISCRIMINATION PATTERNS

|   |   | candidates for MtoCSP: | | candidates for finite $\varphi$-agreement: |
|---|---|---|---|---|
| a. | Icelandic: | {NOM, ACC, DAT, ...} | $\not\supseteq$ | {NOM} |
| b. | English, French: | {NOM} | $=$ | {NOM} |
| c. | *UNATTESTED: | **candidates for MtoCSP:** {**NOM/ABS**} | $\not\subseteq$ | **candidates for finite $\varphi$-agreement:** {**NOM/ABS, ACC/ERG, ...**} |

In Nepali, for example, where $\varphi$-agreement can target noun phrases bearing unmarked or dependent case, there is crucially no MtoCSP operation that can target only nominals in the unmarked case (cf. (204a–b), above), which is the kind of hypothetical language that would fall under (205c).

Another hypothetical example of a (205c)-type language would be an 'inverse' version of Icelandic, where the $\varphi$-probe could target nominatives, accusatives, datives or genitives, but only nominatives could move to canonical subject position. With an infinitival-embedding verb like *finnast* ("find"), above, the dative experiencer would control agreement on the finite verb, but nothing could move to subject position (since the closer dative would bear the wrong case marking, and the embedded nominative subject would violate minimality with respect to the closer dative). Thus, the expletive-associate version of this construction would be felicitous, but no variant would be possible in which a referential noun phrase has moved to subject position. Again, this seems to be unattested.

The capacity of MtoCSP (in a non-quirky-subject language) for case-discrimination thus seems derivative of the corresponding capacity of $\varphi$-agreement (as articulated in (iii), above). If MtoCSP operates upon XPs that have been successfully targeted by FIND$_\varphi$, it follows that MtoCSP will exhibit the same case-discrimination properties that $\varphi$-agreement itself exhibits. This idea, that MtoCSP relies on FIND$_\varphi$ to identify the operand that will serve as its input, recalls an intuition reflecting in various existing proposals, that MtoCSP is in some sense 'parasitic' on $\varphi$-agreement (e.g. Chomsky 1995:283).

Of course, what we have seen is that MtoCSP is not case-discriminating in *every* language. This was the reason for abandoning a theory that took MtoCSP, finite $\varphi$-agreement, and nominative case to be intrinsically linked to one another (as in [Chomsky 2000, 2001], for example). But even in Icelandic, where both nominative case and finite $\varphi$-agreement are dissociable from MtoCSP, the former two remain inexorably linked (B08, [Sigurðsson 1993], [Zaenen, Maling & Thráinsson 1985]; §8.1–§8.3). MtoCSP, on the other hand, appears to operate independently, targeting what is simply the closest nominal (modulo certain complications that arise when the closest nominal node is the trace of a moved noun phrase; see the discussion of (193), above).

There is therefore a way of thinking of the difference between quirky-subject languages and non-quirky-subject languages, which goes at least one step beyond simply naming the two—tracing the difference to whether or not MtoCSP operates upon XPs that have been successfully targeted by $\text{FIND}_\varphi$:

(206) MOVEMENT TO CANONICAL SUBJECT POSITION (MtoCSP):

TWO TYPOLOGICAL VARIATIONS[22]

    a.  IN A QUIRKY-SUBJECT LANGUAGE                                     *(e.g. Icelandic)*

         $\text{MtoCSP}_{\text{QSL}}$   = *Move* (closest DP)

    b.  IN A NON-QUIRKY-SUBJECT LANGUAGE                      *(e.g. English, French)*

         $\text{MtoCSP}_{\text{NQSL}}$   = *Move* (XP successfully targeted by $\text{FIND}_\varphi$)

It may seem, at first glance, that there is a duplication problem lurking here, with respect to the term 'closest'—since minimality is part of $\text{FIND}_\varphi$, but now also a part of (206a), which does not involve $\text{FIND}_\varphi$. But just like in the discussion of *c-command* with respect to $\text{FIND}(f)$ (§5.3), minimality can be viewed not as an explicit condition or rule, but as a result of the way hierarchical structure is built and scanned (see also §2.2.3). Since both $\text{FIND}_\varphi$ and $\text{MtoCSP}_{\text{QSL}}$ involve scanning the already-built

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[22]This account relies on the idea that one operation can be specified to operate on the output of another—in this case, $\text{MtoCSP}_{\text{NQSL}}$, which must operate on an XP that $\text{FIND}_\varphi$ has successfully targeted. This recalls the mathematical notion of *functional composition*: $(f \circ g)(x) = f(g(x))$, where the composition operator is represented by '$\circ$'. I assume here that in the grammar, too, operations can in principle operate on the output of other operations.

hierarchical structure for a target of a particular kind, both will necessarily obey c-command as well as minimality, by definition (this way of thinking of c-command and minimality follows Chomsky 1995).

A more parsimonious formulation of (206a–b) would therefore remove 'closest' from the definition of MtoCSP$_{QSL}$ altogether:

(207) MOVEMENT TO CANONICAL SUBJECT POSITION (MtoCSP):

TWO TYPOLOGICAL VARIATIONS (revised version)

    a.  IN A QUIRKY-SUBJECT LANGUAGE                                *(e.g. Icelandic)*

        MtoCSP$_{QSL}$   = *Move*(DP)

    b.  IN A NON-QUIRKY-SUBJECT LANGUAGE                      *(e.g. English, French)*

        MtoCSP$_{NQSL}$ = *Move*(XP successfully targeted by FIND$_\varphi$)

To reiterate: while (206b)/(207b) comes close to existing proposals in which movement is contingent on agreement (e.g. Chomsky 2000, 2001), several important differences exist: **(i)** on the current view, the contingency of movement on agreement only holds in non-quirky-subject languages, but crucially not in quirky-subject languages; **(ii)** the kind of agreement implicated in (207b) is morphologically detectable, predicate-argument agreement in $\varphi$-features (rather than an abstract formal relation that might involve features like [EPP], etc.); and perhaps most importantly, **(iii)** the agreement operation referenced in (207b) is FIND$_\varphi$, which as we have already seen in chapter 5, can sometimes be triggered but fail to culminate successfully—even within a derivation that is ultimately well-formed (contra Chomsky's 2000, 2001 *Agree*).

Let us now illustrate how the model in (207) derives the typology of dative intervention, and in particular, the conditions under which dative intervention gives rise to actual ungrammaticality, as opposed to a morphological 'default' form.

The treatment of an example like (208) (repeated from earlier) is exactly as previously described: the XP targeted by FIND$_\varphi$ is the dative nominal, due to minimality; this nominal is ruled out by the

case-discrimination setting of Icelandic (199); this causes FIND$_\varphi$ to abort. Consequently, no [plural], [participant], or [author] values are copied to the finite $\varphi$-probe, resulting in the morphology normally referred to as '3rd person singular' appearing on the finite verb.

(208) það finnst(/*finnast) [einhverjum stúdent]$_{\text{DAT}}$ [$_{\text{SC}}$ tölvurnar ljótar ].

EXPL find.SG/*find.PL some student.SG.DAT the.computers.PL.NOM ugly

'Some student finds the computers ugly.' *[=(200)]*

Now consider an example of dative intervention that leads to ungrammaticality, as in the French (209), repeated from earlier:

(209) * Jean$_1$ semble [à Marie]$_{\text{DAT}}$ [ t$_1$ avoir du talent ].

Jean seems to Marie have.INF of talent

'Jean seems to Marie to have talent.' *[=(201)]*

As in the Icelandic (208), the finite $\varphi$-probe will seek a $\varphi$-bearing XP; and once again—since $\varphi$-probing is faced with both arguments in their respective base positions—the closest such XP will be the dative nominal. The case-discrimination component of FIND$_\varphi$ will, however, rule out agreement with this dative, causing FIND$_\varphi$ to abort. Thus, taking only $\varphi$-agreement into consideration, we would expect (209) to be well-formed, exhibiting some sort of 'default' agreement morphology on the finite verb.

This is where examples like (208) and (209) diverge. Given the string in (209), its derivation must have involved the application of MtoCSP (since the subject is to the left of the finite verb). This is not the case in the Icelandic (208): there, only an expletive (*það*) precedes the finite verb (and Icelandic being a quirky-subject language, MtoCSP in (208) would yield movement of the dative experiencer, rather than the nominative target of $\varphi$-agreement; cf. (192)).

There is now an explanation at hand for the ungrammaticality of (209). The derivation of this string requires the instantiation of an operation, MtoCSP$_{\text{NQSL}}$, in a derivation where the necessary input to that operation is not available. Specifically, given the formulation of MtoCSP$_{\text{NQSL}}$ in (207b),

it takes as its input an XP successfully targeted by FIND$_\varphi$; but in (209), no such XP exists, since FIND$_\varphi$ was aborted due to case-discrimination.

The fate of an example like (209) is therefore similar, in a sense, to examples that violate minimality (§2.2.3), or even the "gratuitous non-agreement" examples of §5.3: there is simply no derivation made available by the grammar that leads to this particular surface string. As discussed in §2.2.3, ruling out certain structures on the grounds that there is no available derivation that generates them (as opposed to a featural ill-formedness of the structures in question) is unavoidable, even in more canonical implementations of minimalist syntax. On the current view, the ungrammaticality of (209) is just another instance of the same logic at work.

If true, it means that the reason datives intervene in MtoCSP$_{\text{NQSL}}$ just as they do in $\varphi$-agreement is because MtoCSP$_{\text{NQSL}}$ can only target *those XPs which have been successfully targeted by* FIND$_\varphi$.

Since the account proposed here crucially implicates *movement* in the ungrammaticality of an example like (209), it generates the prediction that a variant of (209) in which the nominative has remained in situ would be grammatical. According to Bošković (2002, 2007), this is indeed the case. One cannot test this with a proper name like *Jean* as that nominative, due to the *Definiteness Effect* (see Milsark 1974, and much subsequent work, as well as §10.1.2). But with an indefinite noun phrase in that role, such examples are apparently possible:

(210) a. Il   semble   au   général être  arrivé  deux soldats  en ville.

EXPL seem(sg) to.the general to.be arrived two   soldiers in  town

'There seem to the general to have arrived two soldiers in town.'

b. Il   semble   au   général y avoir deux soldats  manquants à  la  caserne.

EXPL seem(sg) to.the general to.have two   soldiers missing      at the barracks

'There seem to the general to be two soldiers missing from the barracks.'

[*Bošković 2007:603*]

In other words, when the nominative remains in situ, French is no different from Icelandic: dative intervention does not result in ungrammaticality, but rather in 'default' (3rd person singular) agreement morphology on the finite verb. It is only when the surface string forces a parse where MtoCSP$_{\text{NQSL}}$ has applied (i.e., when the nominative noun phrase occurs to the left of the finite verb)—but the subject could not have been targeted by FIND$_\varphi$—that ungrammaticality arises. This is exactly what the proposal formulated in (207) predicts.

So far, I have discussed MtoCSP$_{\text{NQSL}}$ with respect to French, but not with respect to English. As is well known, English differs from both French and Icelandic in allowing agreement across an intervening dative experiencer (211), as well as raising across such datives (212):

(211)  a.  There **seems/??seem** [to every attorney$_i$] to be [some client of his$_i$ who is innocent].

     b.  There **seem/%seems** [to every attorney$_i$] to be [several clients of his$_i$ who are innocent].[23]

(212)  [Some client]$_1$ seems [to every attorney] [to t$_1$ be innocent].

Recent work by Hartman (2011, to appear) suggests that this is a particular property of the English verbs *seem* and *appear*, and does not extend—even in English—to other instances of intervention.

Regardless, it is worth noting that even the pattern in (211–212) does not actually counter-exemplify the proposal involving MtoCSP$_{\text{NQSL}}$. The prediction of the current proposal is that movement to canonical subject position, in a non-quirky-subject language like English, will be restricted to operate only upon noun phrases that have been successfully targeted for $\varphi$-agreement. As (211) makes very clear, the subject of the infinitival complement of English *seem* can indeed be targeted successfully for $\varphi$-agreement. Regardless of what the particular explanation of this is (see Anagnostopoulou 2003, Collins 2005a, and Hartman 2011, for possible accounts), the formulation

of MtoCSP$_{\text{NQSL}}$ given in (207) *predicts* that this embedded subject will be able to undergo movement to the finite subject position—exactly as shown in (212).[24]

Note that I make no new claims here regarding the question of when MtoCSP is or is not triggered, in a particular language. (As an example of MtoCSP not applying, suppose that expletive subjects are inserted directly in their surface position;[25] in that case, in sentences like (211a–b), MtoCSP would not have applied.) What (207) regulates is not when MtoCSP is or is not triggered, but rather, which phrase it will operate upon when it *is* triggered. Because MtoCSP$_{\text{NQSL}}$ can only apply to a noun phrase if that noun phrase has been successfully targeted for $\varphi$-agreement, it follows that in (212)—the non-expletive variant of (211a)—it is the noun phrase *some client* (rather than, say, *(to) every attorney*) that will move to canonical subject position.

In contrast, because MtoCSP$_{\text{QSL}}$ operates on the closest DP regardless of $\varphi$-agreement, the state of affairs will be different in Icelandic. In a comparable construction, it will be the dative experiencer—rather than the embedded nominative subject—that stands to move to canonical subject position:

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[24]Another way in which English is exceptional involves the overt $\varphi$-agreement found on non-past, non-participle main verbs. The age-old observation regarding this paradigm (going back at least to Chomsky 1957, but likely much further) is that the $/-z/$ (orthographic *-s*) marker corresponding to 3rd person singular reflects a misalignment of phonological overtness with morphosyntactic markedness. The least marked feature structure (3rd person singular) is the only cell in the paradigm whose exponence is not null. Here, too, we have an instance of exceptionality that is localizable to exactly one property—rather than a true counter-example to the current proposal. In the terms used in §5.3, (i.b) below is an instance of "gratuitous agreement" (in particular, plural agreement in a derivation where the structurally closest noun phrase is singular). Conversely, (ii.b) is an instance of "gratuitous non-agreement" (in particular, singular agreement morphology in a derivation where the structurally closest noun phrase is both case-accessible and plural).

(i)   a.     This boy enjoys cartoons.
      b.  *  This boy enjoy cartoons.
(ii)  a.     These boys enjoy cartoons.
      b.  *  These boys enjoys cartoons.

See §5.3 for further discussion of "gratuitous agreement" and "gratuitous non-agreement", and how each is ruled out in the current system.

[25]This assumption concerning expletives is far from uncontroversial, and is presented here only in order to explain the relevant property of the proposal in (207). See fn. 9 in chapter 4 for some discussion, as well as relevant references. Thanks to Stephanie Harves for helpful discussion.

(213) <sup></sup> **það** virtist **[bara tveim af dómurunum]**<sub>DAT</sub> [konan]<sub>NOM</sub> hafa skrifað

      **EXPL** seemed **just two of judges.the.DAT** woman.the.NOM have.INF written

      bókina

      book.the.ACC

      'It seemed to only two of the judges that the woman had written the book.'

(214) **[Dómurunum₁]**<sub>DAT</sub> virtist **t₁** [konan]<sub>NOM</sub> hafa skrifað bókina

      **judges.the.DAT** seemed woman.the.NOM have.INF written book.the.ACC

      'It seemed to the judges that the woman had written the book.'

                                               [*Halldór Ármann Sigurðsson, p.c.*]

There is more to be said about examples like (213–214), especially concerning the *Definiteness Effect*; this issue is taken up in §10.1.2.

To summarize this section, we have explored an approach that takes B08's *case-discrimination* property (as I have termed it) to result in the outright failure of the agreement operation. We have seen that such an approach—coupled with the results of chapters 5–6, showing that failed agreement, unto itself, does not result in ungrammaticality—is able to derive which instances of dative intervention would indeed lead to ungrammaticality, and which would lead only to 'default' morphology. This sets the current proposal apart from its competitors, surveyed in §8.3.

More generally, the account is able to provide an explanation for both sides of the dative paradox (§8.2). The reason datives cannot transfer their own features to the finite verb (in the relevant languages) is because of case-discrimination, a mechanism needed independently of datives (for example, to capture the absence of languages with an ergative-absolutive agreement alignment but a nominative-accusative case alignment; see §8.3.3). The reasons datives interact with $\varphi$-probing even when they are *not* viable agreement targets unto themselves is because of how case-discrimination is implemented in the grammar: as a failure-condition that causes the $\varphi$-agreement operation (labeled here as FIND$_\varphi$) to abort.

Such a failure is not, in and of itself, fatal to the derivation; as shown in chapters 5–6, failed agreement is tolerated by the grammar, resulting only in the lack of valuation. But it can lead to the ill-formedness of those derivations which involve an operation that relies on successful $\varphi$-agreement for its input. On the current proposal, MtoCSP$_{\text{NQSL}}$ (movement to canonical subject position in a non-quirky-subject language) is precisely such an operation. Thus, a surface string that forces a parse in which MtoCSP$_{\text{NQSL}}$ has applied, but where the structure is one that would cause $\varphi$-agreement to have failed, is (correctly) predicted to be ungrammatical.

## 8.5.  Against a *violable constraints* alternative

The discussion in §8.4 has been phrased in terms of the *obligatory operations* proposal put forth in §5.3 (based on the FIND($f$) operation). At the end of chapter 5, though, it was noted that there are two models still in contention: alongside this obligatory operations approach, there was an approach based on *violable constraints* (§2.2.2).

The account developed in §8.4, however, has relied crucially on the notion that actual failure to agree is implicated in the derivation of intervention by dative nominals. In this section, I demonstrate why this state of affairs is incompatible with the violable constraints model.

Let us begin with the Icelandic (208), above, where the presence of an in situ dative experiencer prevents agreement of the finite verb with the embedded nominative subject (which in that example, is plural). Suppose there is a constraint militating against agreement across a dative intervener— or more generally, across any bearer of valued $\varphi$-features:

(215)    *CrossPhi: Assign one violation mark for each noun phrase $\beta$ located between $x$ and a
           noun phrase $\alpha$, if $x$ bears agreement morphology that co-indexes $\alpha$.
           (i.e., $*x\,[\varphi_i] \gg \beta\,[\varphi_k] \gg \alpha\,[\varphi_i]$, where '$\gg$' indicates *c-command*)

We could then account for (208) as follows (for the formulation of HaveAgr, see §2.2.2, §5.3):

(216)

| … FiniteVerb datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | *CrossPhi | HaveAgr |
|---|---|---|
| a. ☞ … FiniteVerb$[\emptyset]$ datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | | ⋆ |
| b. … FiniteVerb$[\varphi_i]$ datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | *! | |

We must also prevent $\varphi$-agreement from targeting the dative itself (cf. (154))—a sub-case of case-discrimination (§8.3.3). We could add a constraint militating against agreement with oblique nominals:

(217)  *OblTarget: Assign one violation mark for each oblique noun phrase (including datives) targeted for $\varphi$-agreement.

In fact, it is quite straightforward to recast the entire Revised Moravcsik Hierarchy (194) as a series of constraints, militating against: **(i)** agreement with nominals bearing lexical/oblique case, *OblTarget, above; **(ii)** agreement with nominals marked with dependent case, *DepTarget; and perhaps even **(iii)** agreement with nominals with unmarked case, *UnmrTarget. In a language like Icelandic, only *UnmrTarget would be ranked below HaveAgr, yielding the attested pattern of case-discrimination. But note that the constraints in the set {*OblTarget, *DepTarget, *UnmrTarget} would have to be extrinsically ranked with respect to one another, to yield the correct implicational universals (B08); this constraint-based approach to the Revised Moravcsik Hierarchy therefore provides no particular insight into the nature of case-discrimination itself. I will therefore leave it aside for now, focusing instead on *OblTarget specifically.

If *OblTarget and *CrossPhi are both ranked above HaveAgr, we derive the correct behavior for dative intervention in Icelandic:

(218)

| … FiniteVerb datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | *OblTarget | *CrossPhi | HaveAgr |
|---|---|---|---|
| a. ☞ … FiniteVerb$[\emptyset]$ datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | | | ⋆ |
| b. … FiniteVerb$[\varphi_i]$ datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | | *! | |
| c. … FiniteVerb$[\varphi_k]$ datDP$[\varphi_k]$ nomDP$[\varphi_i]$ … | *! | | |

Let us now turn to the French example in (219), repeated from earlier:

(219)  *  Jean₁ semble [à  Marie]_DAT [ t₁ avoir      du talent ].

          Jean  seems    to Marie        have.INF of  talent

          'Jean seems to Marie to have talent.'                                                *[=(209)]*

As demonstrated in §8.2, the ungrammaticality of (219) is crucially tied to the presence of a dative experiencer; corresponding examples that lack a dative experiencer altogether are grammatical, as are examples where the dative experiencer is a pronominal clitic (see Anagnostopoulou 2003, McGinnis 1998). Thus, treating (219) as unrelated to other cases of intervention by datives would miss an important generalization.

Initially, the prospects for a constraint-based account of (219), along the lines of (218), seem promising: *OblTarget and *CrossPhi would militate against agreement with the dative itself, and against agreement with the nominative *Jean* across the dative, just as in the Icelandic example. We could perhaps even generalize *OblTarget and *CrossPhi so that they apply to agreement and movement equally, thus ruling out the raising of the dative or the nominative in (219) in the same manner that agreement with each of the two is ruled out.

The problem here has to do with the very logic of violable constraints: in this kind of framework, no candidate is 'well-formed' or 'ill-formed' independently of the other candidates; the candidate that is comparatively better than all of its competitors is predicted to be a viable surface form. Therefore, the only way a given string can be ungrammatical is if it is sub-optimal, dispreferred to another realization of the same input. Crucially, however, there is no realization involving the main verb *semble*, a full lexical noun phrase (rather than a pronominal clitic) as an experiencer argument, and an embedded non-finite clause [*<Jean> avoir du talent*], that results in a grammatical string in French.

As discussed in §8.3.2, the variant of (219) in which the embedded clause is finite is grammatical (see (164a)). One might therefore entertain the possibility that it is this finite variant that competes with and outperforms (219), resulting in the ungrammaticality of the latter. However, there are

interpretive differences between the finite and non-finite versions of this construction; this can be discerned by looking at cases where there is no dative experiencer, or the experiencer is cliticized to verb—in which case both the finite and non-finite variants are grammatical (Anagnostopoulou 2003, McGinnis 1998). The finite and non-finite variants differ, for example, in their temporal interpretation (as in *It seems that Stewie will be a maladjusted adult* vs. *Stewie seems to be a maladjusted adult*)—as one would expect, when dealing with a distinction between a finite embedded clause and a raising infinitive. Thus, attempting to derive the finiteness of the embedded clause using the violable constraints system (as opposed to stipulating it as part of the input) means involving this system in the speaker's choice of which meaning to convey, a choice that clearly falls outside the domain of grammar.[26]

It is also worth noting here that in French, a definite nominative like *Jean* cannot remain in situ with the expletive *il* filling the matrix subject position in its stead; but this cannot be the cause of ungrammaticality, in a violable constraints model. First, note that an expletive is not part of the apparent input in an example like (219); but even if we assume that an expletive can be inserted by GEN (the component that generates the set of competing candidates for a given input form), the inability of definites to serve as associates in French simply means there is an undominated constraint like *DEFINASSOC, preventing the an expletive from being inserted (and

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[26]A reviewer suggests the following output candidate as the possible competitor that outperforms (219) and renders it sub-optimal:

(i) ___ Jean$_1$ lui$_i$-semble [ t$_1$ avoir    du talent ] à  Marie$_i$
       Jean  CL-seems      have.INF of talent   to Marie
       'Jean seems to her, Marie, to have talent.'

All native speakers of French that I have checked with judge (i) to be unacceptable.

It is worth noting, though, that even were it grammatical, generating this candidate from the input noted in the text would require GEN—when constructing possible output candidates—to be able to add or not add CLRD (clitic right-dislocation) to a given input structure. The problem here, as in the finiteness-related example above, is that CLRD is not meaning-neutral. In instances where, unlike in (i), both CLRD and non-CLRD structures are available for an otherwise identical sentence, the CLRD version has different information-structural properties than its non-CLRD counterpart. In particular, CLRD of a constituent strongly implies that the referent is discourse-old (see López 2009:38–55, and references therein). This means that as with finiteness, allowing the violable constraint system to manipulate whether or not CLRD applies in a given structure amounts to involving this system in determining the meaning that the speaker intends to convey, which is clearly undesirable.

the definite nominative from remaining in situ). If so, some other candidate should still outperform the expletive-associate candidate, emerging as the optimal one.

The conclusion is that the formalism used to model $\varphi$-agreement must be capable of predicting actual ungrammaticality, whether this arises at the juncture of $\varphi$-agreement and MtoCSP (as in the account proposed in §8.4), or as part of MtoCSP itself. This might technically be possible within a violable constraints approach—for example, by introducing *<ungrammaticality>* as a candidate in its own right (cf. the so-called 'null parse'; Prince & Smolensky 1993), and allowing it to compete with the other, contentful candidates. But this idea would be anathema to very core of the violable constraints model (at least as a theory of syntax), in which the ungrammaticality of a given output is supposed to result from the existence of another output candidate, generated from the same input, which outperforms it.

Insofar as a violable constraints approach constitutes a falsifiable hypothesis (rather than merely an alternative descriptive vocabulary), what we have seen here is precisely what a falsification of it would look like.

## 8.6. Summary

In this chapter, I have extended the analysis of $\varphi$-agreement proposed in chapter 5 to account for intervention by dative nominals, and for what I have called the *dative paradox* (§8.2): the fact that datives interact with $\varphi$-probing in the first place, given their inability to transfer their own $\varphi$-feature values to the finite verb (§8.1).

The proposal was crucially based on Bobaljik's (2008) observation that $\varphi$-agreement is, in the terms used here, *case-discriminating*: the set of noun phrases that agreement can and cannot target in a given language is best characterized in terms of case (and in particular, morphological case, rather than grammatical function). This, Bobaljik shows, predicts the behavior of $\varphi$-agreement with quirky-subject verbs in Icelandic, as well as the absence of languages that exhibit a nominative-

accusative alignment in their case marking system, but an ergative-absolutive alignment in their agreement system.

Importantly, it was shown that existing proposals fail to account for the fact that dative intervention sometimes gives rise to 'default' (3rd person singular) agreement morphology, and sometimes to outright ungrammaticality. The proposals surveyed included: the *Activity Condition* (Chomsky 2001) (§8.3.1); the idea that datives are inclosed in a dedicated layer of functional structure (e.g. Rezac 2008a) (§8.3.2); and even Bobaljik's own restructuring/domains-based approach (§8.3.3).

The fact that dative intervention can produce actual ungrammaticality also proved crucial in ruling out a *violable constraints* account of $\varphi$-agreement (§8.5). Simply put, ungrammaticality caused by dative intervention furnishes a case of *the best not being good enough* (cf. Barbosa et al. 1998): no possible output in the pool of candidates that can reasonably correspond to a given input turns out to be grammatical. This runs counter to the very logic that a violable constraints model is built upon—namely, that grammaticality is simply a matter of incurring the least costly set of violations among the set of competing output candidates.

In §8.4, I presented an account of dative intervention based on the idea that case-discrimination causes the operation responsible for $\varphi$-agreement (which I have labeled 'FIND$_\varphi$') to actually fail. Like the other instances of failed agreement (see chapters 5–6), this failure does not "crash" the derivation, or induce ungrammaticality; it merely results in the relevant features on the $\varphi$-probe remaining unvalued. However, it was argued that in non-quirky-subject languages in particular, movement to canonical subject position (MtoCSP$_{NQSL}$) depends on $\varphi$-agreement to identify the noun phrase that will be moved—an idea for which there is typological support (see (205), above). Thus, in a non-quirky-subject language, if a given string forces a parse in which MtoCSP has applied, but the structure in question would result in $\varphi$-agreement failing, the result will be ungrammatical. This kind of ungrammaticality is the same kind discussed in §2.2.3 and §5.3: because MtoCSP$_{NQSL}$ requires successful $\varphi$-agreement to identify its input, there is simply no derivation generated by the grammar that would produce the output in question.

The essential components of the account are repeated here:

(220)  FIND$_\varphi(f)$: given an unvalued feature $f$ on a head H$^0$, look for an XP bearing a valued

instance of $f$. Upon finding such an XP, check if its case is acceptable with

respect to *case-discrimination* —                                                        *[=(198)]*

a.  **yes** → assign the value of $f$ found on XP to H$^0$

b.  **no** → abort FIND$_\varphi(f)$                                    *(and continue with derivation)*

(221)  THE MORAVCSIK HIERARCHY (second and final revision; *Bobaljik 2008*)

unmarked case ≫ dependent case ≫ lexical/oblique case                            *[=(178)]*

(222)  MOVEMENT TO CANONICAL SUBJECT POSITION (MtoCSP):

TWO TYPOLOGICAL VARIATIONS (revised version)                                        *[=(207)]*

a.  IN A QUIRKY-SUBJECT LANGUAGE                                              *(e.g. Icelandic)*

MtoCSP$_{QSL}$  = *Move*(DP)

b.  IN A NON-QUIRKY-SUBJECT LANGUAGE                                  *(e.g. English, French)*

MtoCSP$_{NQSL}$ = *Move*(XP successfully targeted by FIND$_\varphi$)

As noted earlier, the fact that MtoCSP$_{NQSL}$ (222b) is computed on the basis of FIND$_\varphi$—which in turn, makes reference to case-discrimination, which is sensitive to morphological case (Bobaljik 2008, Marantz 1991)—has consequences for the modular locus of the relevant processes. In particular, since MtoCSP is obviously syntactic, it requires a case calculus capable of producing the results in (221) while operating entirely within syntax. This issue is taken up in the next chapter.

# Chapter 9

# Where's $\varphi$? In syntax.

In this chapter, I will argue that $\varphi$-agreement is part of syntax. While this may seem like an obvious point from certain perspectives, recall that $\varphi$-agreement was shown by Bobaljik (2008) to operate on the basis of 'morphological case'—which I have termed the *case-discrimination* property of $\varphi$-agreement (§8.3.3). The latter has been argued to be post-syntactic, computed within the morphological component of grammar (Marantz 1991). This, in turn, has been used by Bobaljik to argue that $\varphi$-agreement itself is post-syntactic.

The significance of this issue in the current context is in how the results of chapters 5–8 are to be interpreted. If $\varphi$-agreement is part of syntax, then these results demonstrate the existence of syntactic phenomena whose obligatoriness cannot be captured in terms of *derivational time-bombs* (§2.2.1) (such as Chomsky's 2000, 2001 'uninterpretable features') or *violable constraints* (§2.2.2). Instead, they require an *obligatory operations* approach (§2.2.3), as implemented in chapter 8 in the form of the $\textsc{find}_\varphi(f)$ operation. If $\varphi$-agreement is not part of syntax, however, then these conclusion pertain to a different computational module entirely (and would, a fortiori, be irrelevant to 'uninterpretable features', for example).

I will demonstrate that the argument for 'morphological case' being post-syntactic is based on the false premise that there are no instances where morphological case itself (as opposed to, say, the syntactic factors that affect it) is implicated in the computation of an inescapably syntactic property or process. The results of chapter 8 furnish precisely such a situation: in a quirky-subject language, morphological case feeds $\varphi$-agreement (the case-discrimination property of $\varphi$-agreement; see above); but following §8.4, $\varphi$-agreement in non-quirky-subject languages feeds movement to canonical subject position, which is clearly syntactic (since it creates new binding configurations, for example). Thus, insofar as $\varphi$-agreement is to be treated in a cross-linguistically consistent manner, both $\varphi$-agreement and what we have come to call 'morphological case' must be part of syntax itself.

These results necessitate a re-envisioning of the calculus that leads to morphological case—in particular, case-competition, and the *disjunctive case hierarchy* (Marantz 1991)—in a way that could be computed within syntax. As a further demonstration of this need, I review Baker &

Vinokurova's (2010) argument that case in Sakha (Turkic), a non-quirky-subject language, cannot be properly accounted for without recourse to case-competition, either. This shows that case-competition is not some morphological peculiarity of quirky-subject languages alone, but a necessary part of the calculus of case more generally.

The particular syntactic reimplementation I propose for Marantz's case assignment algorithm has the potential advantage of deriving the disjunctive case hierarchy itself (i.e., the ordering of the different categories of case within the algorithm) from independently established principles of syntactic structure-building.

I begin, in §9.1, by reviewing the arguments put forth in favor of morphological case and φ-agreement being post-syntactic phenomena. Next, in §9.2, I demonstrate that the premise these arguments were based on, that these properties never feed syntactic processes, is falsified by the results of chapter 8, concerning the interaction of φ-agreement and movement to canonical subject position in certain languages.

In §9.3.1, I review Baker & Vinokurova's (2010) analysis of Sakha, and in particular, the argument from Sakha that case-competition is necessary even in a non-quirky-subject language. I also review Levin & Preminger's (to appear) argument that contra Baker & Vinokurova's more general claim, the case facts of Sakha can be captured *entirely* within a configurational approach of this sort. I then present, in §9.3.2, a syntactic implementation of Marantz's case assignment algorithm, and show how the disjunctive case hierarchy may be derivable from this implementation. A summary is given in §9.4.

In the APPENDIX to this chapter (§9.A), I re-examine the results of chapters 4–5—regarding φ-agreement in the Kichean Agent-Focus (AF) construction—in light of the results of this chapter and of chapter 8, concerning case assignment and the case-discrimination property of φ-agreement.

## 9.1. The argument for morphological case and phi-agreement as post-syntactic operations

As noted in §8.3.3, Bobaljik's (2008) argument for the *case-discrimination* property of $\varphi$-agreement was originally presented as an argument for $\varphi$-agreement being post-syntactic—part of the morphological computation, not the syntactic one. I will review this argument here.

Consider first the issue of case morphology in Icelandic. As shown by Marantz (1991)—who builds on Zaenen, Maling & Thráinsson (1985), Sigurðsson (1991), and others—Icelandic exhibits all the properties that in classical Case Theory (Chomsky 1981, *et seq.*) were attributed to *abstract case*. This includes A-movement under passives/raising, for example. But crucially, these properties in Icelandic are all dissociable from the morphological case actually borne by the nominals in question.

That is not to say that the two systems are entirely disjoint, of course. Subjects of finite clauses, for example, will be nominative in Icelandic *unless a different case marking is licensed by a particular lexical item in the clause*. However, these deviations from the canonical pattern are crucial: as these authors show, there is no combinatorial mapping in Icelandic from the abstract case that classical Case Theory would ascribe to a given nominal, to the morphological case that the nominal actually bears (independent of other nominals in the local domain, and/or the identity of various lexical heads in that domain; see below).

As an example of this dissociation, consider a case like (223):

(223)  **Fiskinum**$_1$  er talið    [ (t$_1$) hafa    verið **hent**    t$_1$ ].                    (Icelandic)

      **fish.the.DAT** is  believed      have.INF been **discarded**

      'The fish is believed to have been discarded.'                    [*Thráinsson 2007:184*]

It is an idiosyncratic property of the predicate *henda* ("throw, discard") in Icelandic that its Patient must bear dative case (this is the type of idiosyncratic case requirement that has been termed 'quirky-case'). But as shown in (223), when this predicate is passivized, the Patient undergoes the same kind of A-movement familiar from English; it even continues its A-movement when embedded under

the passivized ECM predicate *telja* ("believe"), just as it would in English. Crucially, the nominal undergoing this movement (*fiskinum* "fish.the.DAT") bears no sign of nominative case, even after having undergone this movement; it is morphologically indistinguishable from other datives. (For further details, see the references cited above; and for a recent review, see Thráinsson 2007.)

It is due to patterns of this sort that the distribution of morphologically-observable cases in Icelandic requires a departure from the tenets of classical Case Theory. To account for this distribution, Marantz (1991) proposes the *disjunctive case hierarchy* (see also Bittner & Hale 1996, Yip, Maling & Jackendoff 1987):

(224) DISJUNCTIVE CASE HIERARCHY                                                    [*Marantz 1991*]

    lexical/oblique case → dependent case → unmarked case                          *[=(176)]*

Let us briefly sketch how (224) works. First, all noun phrases that are selected by lexical items which idiosyncratically specify a particular case marking for their arguments (prepositions, quirky-case predicates like *henda* "throw, discard" in (223), etc.) are assigned the idiosyncratic cases in question.

Next, all remaining noun phrases are evaluated. Every pair of as-of-yet-caseless noun phrases within a local domain that stand in an asymmetric c-command relation enter into what is sometimes called a 'case-competition' relation—resulting in the assignment of *dependent case* (see also Bittner & Hale 1996). Normally, case-competition is itself an asymmetric relation, parameterized in one of two ways. In an ergative language/construction, the higher of the two noun phrases will receive dependent case, and it is this case that we have come to call 'ergative'. In a non-ergative language/construction, the lower of the two will receive dependent case, and it is this case that we have come to call 'accusative'. This is schematized in (225a–b):

(225)  CASE-COMPETITION → DEPENDENT CASE

    a.    NP … NP$^{\text{“ACC”}}$        *dependent case*: 'downward' ⇒ nominative-accusative alignment

    b.    $^{\text{“ERG”}}$NP … NP        *dependent case*: 'upward' ⇒ ergative-absolutive alignment

If, however, we also allow case-competition to be a reciprocal relation, the prediction is that both ergative and accusative can be assigned simultaneously to the two noun phrases entering into such a relation. Deal (to appear) proposes that 'tri-partite' case systems like the one in Nez Perce, where accusative and ergative can co-occur, arise in this fashion. This suggests a third possible parameter setting for the dependent case relation: 'reciprocal', alongside 'upward' and 'downward'. Finally, Baker (2012) argues that languages with neither overt accusative nor overt ergative might arise when neither (225a) nor (225b) are available, suggesting a four-way typology where (225a–b) can each be parameterized as 'on' or 'off', independently of one another.

In the final step of (224), every noun phrase that has not been assigned lexical/oblique case or dependent case in the preceding steps will be assigned *unmarked case*. We can informally call such case marking 'nominative' or 'absolutive'—or in the nominal domain, 'genitive' (Marantz 1991). The actual form given to a noun phrase bearing unmarked case can be sensitive to identity of the spellout domain (e.g. whether it is CP, or DP); therefore, there is no requirement that nominative/absolutive have the same form as genitive in a given language, for this account to apply.

As noted in §8.3.3, the term 'unmarked case' is not to be confused with 'default case' or 'citation form': in English, for example, fragment answers and other free-standing forms bear accusative(/objective), the dependent case (e.g. *Who came to the party?* **Him/*He**). Instead, the term unmarked case refers to case marking whose appearance is neither idiosyncratically conditioned, nor dependent on the appearance of other noun phrases in the clause. What its name *is* meant to

suggest is a cross-linguistic tendency to be phonologically empty, or phonologically lighter than dependent case and lexical/oblique cases.[1]

Thus, a quirky-subject verb such as *líka* ("like") in (226) will assign lexically-specified dative case to its experiencer argument, leaving the other argument to receive unmarked case (see the authors cited in §8.3.3 for evidence that (226) is not an inversion structure of some sort; that is, that the dative *henni* is a bona fide subject):

(226)  Henni   líkuðu   hestarnir                                                    (Icelandic)

       her.DAT liked.PL horses.NOM

       'She liked the horses.'                                                [*Thráinsson 2007:172*]

However, if the verb is not a quirky-case assigner, then neither the subject nor the object will be assigned lexical/oblique case, leaving both core arguments caseless after the first stage of the disjunctive case hierarchy algorithm. Given that Icelandic is a nominative-accusative language, it is the lower of the two (the object) that will receive dependent(='accusative') case at the next stage of the algorithm, leaving the remaining argument (the subject) to receive unmarked(='nominative') case at the last stage:

(227)  Hún      las    bókina

       she.NOM read book-the.ACC

       'She read the book.'                                                  [*Thráinsson 2007:171*]

See Marantz (1991) and McFadden (2004) and Yip, Maling & Jackendoff (1987) and Zaenen, Maling & Thráinsson (1985), *a.o.*, for related examples and further discussion.

As shown by Bobaljik (2008) and detailed in §8.3.3, φ-agreement is sensitive to the morphological case borne by putative agreement targets, not to their conjectured abstract case. Thus,

---

[1]This is a tendency, not a universal. In Harar Oromo (Cushitic), for example, accusative nominals receive no overt case marking, while nominative ones do (Owens 1985; see also Polinsky & Preminger to appear).

in examples like (223) and (226), the dative subjects behave—for the purposes of $\varphi$-agreement—exactly as non-subject datives would: they are inaccessible for $\varphi$-agreement (see §8.1).

Marantz (1991) claims that the disjunctive case hierarchy applies post-syntactically, as part of the morphological computation. The argument for this is based on the absence of a certain type of evidence (as most arguments for modularity are wont to be): the claim is that while morphological case is computed *on the basis of* syntactic structure, it does not *feed* syntax. In other words, Marantz contends that there are no known instances of an operation or process that is necessarily syntactic and depends on morphological case for its proper computation (in a way that cannot be subsumed by referring to the syntax-internal properties that inform morphological case).

Bobaljik points out that if this is correct, it furnishes an order-of-operations argument for $\varphi$-agreement being post-syntactic, as well. This argument goes as follows: given that it is morphological case per se (rather than, say, grammatical function) that $\varphi$-agreement is sensitive to, $\varphi$-agreement must be computed at a stage in the derivation where the results of the morphological case computation are already available (though see fn. 11, in chapter 8). Thus, if morphological case is computed post-syntactically, $\varphi$-agreement must be computed at least as late in the derivation cycle; and therefore, $\varphi$-agreement is post-syntactic as well.

Below, I will argue that this argument, while logically sound, is based on a false premise—that morphological case is post-syntactic, in the first place. As noted earlier, if this argument were correct, it would have profound implications for the results of previous chapters. The central argument in this book concerns the logic that relates $\varphi$-agreement to grammaticality/ungrammaticality, and the inadequacy of certain approaches (including Chomsky's 2000, 2001 'interpretability'-based proposal) in capturing the relevant empirical patterns. If Bobaljik's extension of Marantz's argument were correct, then the conclusions of chapters 5–6, for example—that failed agreement is systematically tolerated by the grammar—would be applicable not to the syntactic computation itself, but rather to the morphological component.

It is therefore rather crucial to determine in which module of the grammar $\varphi$-agreement occurs, and thus, to which module of the grammar the aforementioned conclusions apply.

## 9.2. The missing evidence: Non-quirky-subject languages

As mentioned above, Marantz's (1991) argument that morphological case is computed post-syntactically was based on the absence of a certain kind of evidence: grammatical processes that must crucially refer to morphological case (rather than, e.g., grammatical function, or structural prominence alone), and which inform processes or properties that must be thought of as part of syntax itself.

Recall now the results of chapter 8, concerning how movement to canonical subject position proceeds in quirky-subject and non-quirky-subject languages:

(228)  MOVEMENT TO CANONICAL SUBJECT POSITION (MtoCSP):

TWO TYPOLOGICAL VARIATIONS (revised version) *[=(207)]*

    a.  IN A QUIRKY-SUBJECT LANGUAGE *(e.g. Icelandic)*

        $\text{MtoCSP}_{\text{QSL}}$ = $Move(\text{DP})$

    b.  IN A NON-QUIRKY-SUBJECT LANGUAGE *(e.g. English, French)*

        $\text{MtoCSP}_{\text{NQSL}}$ = $Move(\text{XP successfully targeted by } \text{FIND}_\varphi)$

As shown in §8.4, this way of conceiving of movement to canonical subject position captures the cross-linguistic typology of dative intervention effects; in particular, it predicts when intervention will result in ungrammaticality, and when it will simply result in a morphological 'default' (e.g. 3rd person singular agreement morphology).

Now consider (228b), which represents how movement to canonical subject position proceeds in a non-quirky-subject language like English or French. $\text{MtoCSP}_{\text{NQSL}}$ is fed by $\varphi$-agreement (implemented as $\text{FIND}_\varphi$, but this detail is not crucial here). That $\varphi$-agreement feeds $\text{MtoCSP}_{\text{NQSL}}$ was crucial to derive the following facts: **(i)** movement to canonical subject position, in a non-quirky-

subject language, exhibits the same case-discrimination property demonstrated with respect to $\varphi$-agreement: it can only apply to noun phrases bearing unmarked case; **(ii)** there are no non-quirky-subject languages where $\varphi$-agreement is nonetheless 'quirky' (i.e., where only one case marking renders a nominal eligible for MtoCSP, but $\varphi$-agreement can apply to noun phrases bearing a variety of cases; see (205), in chapter 8); and most importantly, **(iii)** it is exactly when $\varphi$-agreement has been intervened with but MtoCSP$_{NQSL}$ has still been instantiated that dative intervention yields outright ungrammaticality (see, for example, the discussion of (209), in §8.4).

Movement to canonical subject position is clearly a syntactic process. If MtoCSP$_{NQSL}$ is fed by $\varphi$-agreement (chapter 8), and $\varphi$-agreement is sensitive to morphological case (Bobaljik 2008), then what we have is a syntactic process proper whose computation refers to morphological case— precisely the kind of evidence that Marantz claimed was missing.

At this juncture, it is might be instructive to sort out which of these arguments comes from which type of language. The argument for a notion of *morphological case* that is distinct from *abstract case* or *grammatical function* comes from a quirky-subject language (namely, Icelandic; see Marantz 1991 and references therein). On the other hand, the arguments presented in chapter 8 in support of (228b) come from the complement set of languages (namely, non-quirky-subject languages, like French and English). There is therefore no single language in our sample so far that provides support for an independent notion of morphological case as well as for a feeding relation between $\varphi$-agreement and MtoCSP (though see the discussion of Sakha, in §9.3, which may be precisely such a language).

It is therefore logically possible that in non-quirky-subject languages, it is abstract case (rather than morphological case) that feeds $\varphi$-agreement, and therefore $\varphi$-agreement in these languages can be a part of syntax proper, and feed MtoCSP; whereas in quirky-subject languages, $\varphi$-agreement relies on morphological case for its input, does not feed MtoCSP (cf. (228a)), and takes place post-syntactically. This kind of system is schematized in (229):

(229)

| | SYNTAX | | MORPHOLOGY |
|---|---|---|---|

English/French/etc.: $\begin{matrix} abstract \\ case \end{matrix} \rightarrow \boxed{\varphi\text{-agreement}}$

Icelandic: $\begin{pmatrix} abstract \\ case \end{pmatrix}$ $\quad\quad \begin{matrix} morphological \\ case \end{matrix} \rightarrow \boxed{\varphi\text{-agreement}}$
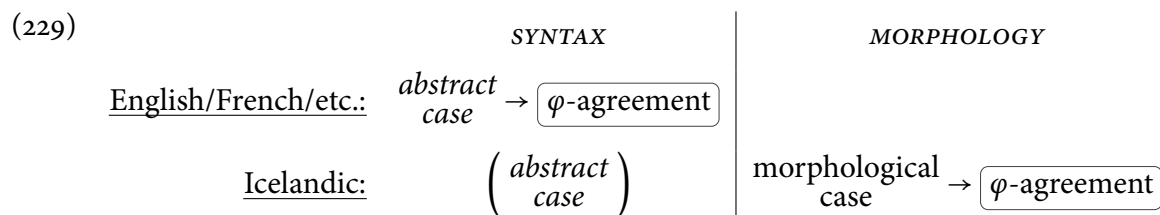
Such a theory, however, would take $\varphi$-agreement in French/English/etc., on the one hand, and $\varphi$-agreement in Icelandic, on the other hand, to be not only two different processes, but processes that occur in two different computational modules (syntax proper for $\varphi$-agreement in French/English/etc., and morphology for $\varphi$-agreement in Icelandic). This would mean that the overarching similarities between $\varphi$-agreement in French/English and in Icelandic—that they both involve overt matching in $\varphi$-features between a verb or TAM-marker and a verbal argument; that they are both sensitive to the structural height of their respective targets; that they can both be intervened with by dative nominals—are all coincidental. I therefore take this type of theory to be a non-starter.

Given Bobaljik's argument that $\varphi$-agreement operates on the basis of morphological case in quirky-subject languages, any unified theory of $\varphi$-agreement is forced to concede that the notion of case to which $\varphi$-agreement is sensitive is morphological case. Given the results of chapter 8, movement to canonical subject position in a non-quirky-subject language (MtoCSP$_{\text{NQSL}}$) is computed on the basis of (successful) $\varphi$-agreement. By transitivity, MtoCSP$_{\text{NQSL}}$ is computed on the basis of morphological case; and crucially, MtoCSP$_{\text{NQSL}}$ is a syntactic process par excellence: it has both phonological effects (i.e., where the subject is pronounced), and semantic ones (e.g. it can create new binding relations).

We have now found an instance where morphological case feeds a process that is purely syntactic—exactly the type of evidence that Marantz (1991) conjectured did not exist, and whose alleged absence motivated the assertion that morphological case is computed post-syntactically. This means, of course, that morphological case *cannot* be computed post-syntactically, and that the 'morphological' part of this term is a misnomer:

(230)

$$
\left\{
\begin{array}{c}
\text{English/} \\
\text{French/} \\
\text{Icelandic/} \\
\text{etc.}
\end{array}
\right\} :
\quad
\boxed{\begin{array}{c}\text{``morphological''} \\ \text{case}\end{array}} \rightarrow \varphi\text{-agreement} \rightarrow \boxed{\text{MtoCSP}}
\qquad \cdots
$$

*SYNTAX* | *MORPHOLOGY*
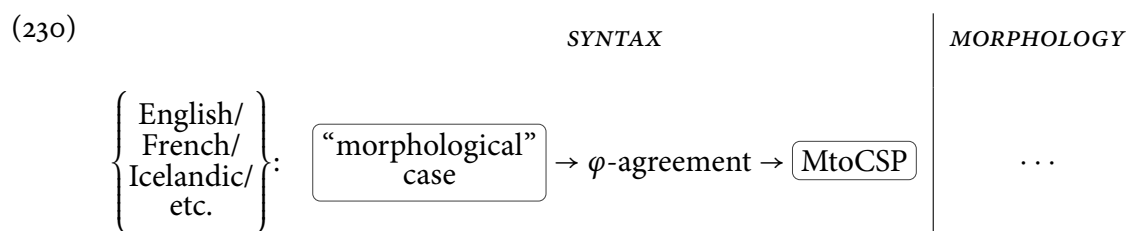
To preserve the success of Marantz 1991 in accounting for the patterns of observable case in a language like Icelandic, we must now assume that the disjunctive case hierarchy, repeated in (231), operates within syntax itself:

(231)  DISJUNCTIVE CASE HIERARCHY                                                    [*Marantz 1991*]

   lexical/oblique case → dependent case → unmarked case                            *[=(224)]*
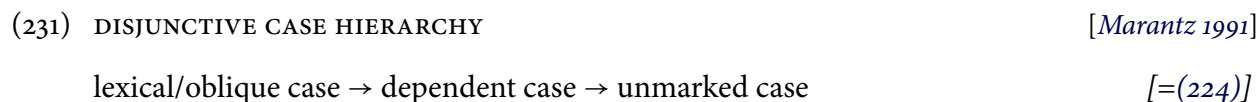
There is nothing particularly problematic in assuming that the assignment of lexical/oblique case occurs within syntax, if we conceive of it as a featural relation between the lexical case assigner and the nominal it (c-)selects. On the other end of the disjunctive case hierarchy, unmarked case can be handled as the morphological realization of a noun phrase that has not been assigned case-related feature values in the course of the entire syntactic computation. Recall that in Marantz's (1991) system, case plays no role in licensing; therefore, nothing goes wrong with a (syntactically) caseless nominal. We can thus conceive of unmarked case similarly to how we have conceived of 3rd person singular morphology (see §8.4): just like the latter is the morphological form given to a node that lacks [plural], [participant] and [author] values, the former can be the morphological form given to a nominal that lacks any case features.

It is dependent case that does not have an immediately evident correlate in existing syntactic theory. The reason is that case-competition involves the assignment of case as the result of a local relation between two DPs—whereas syntactic relations are typically modeled as relations between a maximal projection and a head, not between two maximal projections.[2]

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[2]Bittner & Hale (1996) come close to positing a relation between two maximal projections in syntax, precisely to model dependent case. For them, however, this relation is still mediated through a functional head that enters into a "traditional" syntactic relation with each of the two maximal projections in question. In §9.3.1.1, we will see evidence

In the next section, I review Baker & Vinokurova's (2010) analysis of case in Sakha (Turkic), which demonstrates that case-competition is necessary even in this language. Since Sakha is not a quirky-subject language, MtoCSP in Sakha is (definitionally) case-discriminating. Given that MtoCSP is obviously syntactic, if case-competition is part of the calculus of case even in this language, we have an even stronger argument that despite the aforementioned difficulties, case-competition belongs in syntax.

I then proceed to show how Marantz's disjunctive case hierarchy can be implemented within syntax, subsuming the "morphological" implementation of case and enabling syntax-internal assignment of case that is nevertheless morphologically faithful (e.g. it correctly generates the observed case markings of nominals in Icelandic), and can therefore serve as the input to φ-agreement (as per Bobaljik 2008). Interestingly, this syntactic implementation may be able to derive the very ordering of categories that the disjunctive case hierarchy stipulates.

## 9.3. Case-competition in syntax

In §9.1, I noted that the argument for morphological case being computed post-syntactically was based on the conjecture that there are no processes in syntax itself that operate on the basis of the output of this computation. In §9.2, I showed that the results of chapter 8 furnish precisely this missing feeding relation: movement to canonical subject position—an operation that must be part of syntax proper (since it informs components of semantic interpretation)—is fed by φ-agreement, which in turn, is fed by what corresponds to observable surface case in a language like Icelandic.

This forces us to adopt a theory where the computation of so-called "morphological" case takes place within syntax itself; in other words, where the logic of case-competition employed by Marantz (1991) operates as part of the syntactic derivation, rather than part of the morphological one.

---

from Sakha (from the work of Baker & Vinokurova 2010) that militates against such mediation by functional heads in establishing dependent case relations.

In §9.3.1, I review Baker & Vinokurova's (2010) analysis of Sakha (Turkic), which provides evidence that case-competition is necessary to account for the distribution of accusative (and dative) in this language. The necessity of case-competition in a language like Sakha demonstrates that this mechanism is part and parcel of the general calculus of case, rather than a property of case realization only in quirky-subject languages like Icelandic. Since Sakha is a non-quirky-subject language, subjecthood in Sakha is sensitive to precisely the case distinctions that arise via case-competition; given the fundamentally syntactic nature of subjecthood, these findings constitute a direct argument for case-competition feeding syntax, adding to the argument made in §9.2 that case-competition belongs within syntax itself.[3]

Because Baker & Vinokurova's original arguments regarding Sakha came packaged together with a non-configurational, functional head based treatment of nominative and genitive in the language, I also present Levin & Preminger's (to appear) argument that nominative and genitive too can be treated configurationally in Sakha, as unmarked cases in the CP and DP/PP domains, respectively.

In §9.3.2, I discuss the prospects for implementing case-competition in syntax, showing not only that a syntactic implementation of Marantz's configurational case system is possible, but that it may also be able to derive the ordering of the disjunctive case hierarchy itself.

### 9.3.1. Case assignment in Sakha (Baker & Vinokurova 2010, Levin & Preminger to appear)

Baker & Vinokurova (2010) (henceforth, B&V) present a detailed analysis of case in Sakha, a Turkic language spoken in Northern Siberia. They argue that the patterns of observable case marking in Sakha require a hybrid system of case assignment, one that is based partly on case-competition (Marantz 1991), and partly on case assignment through agreement with functional heads (Chomsky 2000, 2001).

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[3]This is also the position taken by Baker & Vinokurova (2010:597) themselves regarding the modular locus of this computation.

Levin & Preminger (to appear) challenge the latter half of B&V's assertion, arguing that while B&V's arguments for case-competition hold up to scrutiny, their arguments for the necessity of case assignment by functional heads do not. Levin & Preminger show that given the conclusions of previous chapters, regarding the logic of failed agreement and grammaticality, *all* case markings in Sakha can be accounted for within a fully configurational system (like the one of Marantz 1991).[4]

In §9.3.1.1, I present B&V's arguments for accusative in Sakha as dependent case. In §9.3.1.2, I survey their argument for genitive and nominative in Sakha as case that is assigned through agreement with functional heads, and proceed to present Levin & Preminger's (to appear) reanalysis of these facts in purely configurational terms. The discussion of Sakha is summarized in §9.3.1.3.

## 9.3.1.1.  Accusative in Sakha as dependent case

Like other languages in the Turkic family, Sakha exhibits *Differential Object Marking* (DOM): the accusative marker is not realized on all direct objects, only on those that are interpreted as definite/specific. This contrast between direct objects that are and are not marked with accusative case is illustrated in (232a–b):

(232)  a.  Erel kinige-**ni**  atyylas-ta                                                        (Sakha)

       Erel book-**ACC** buy-PAST.3sg.SUBJ

       'Erel bought the book.'                                                      [*B&V:599*]

    b.  Erel kinige atyylas-ta

       Erel book   buy-PAST.3sg.SUBJ

       'Erel bought a book/books.'                                          [*Vinokurova 2005:322*]

Overt accusative marking and definiteness/specificity also co-vary with the position of the direct object relative to certain VP-peripheral adverbs:

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[4]Levin & Preminger (to appear) base their arguments on earlier versions of these chapters, which appeared in Preminger 2011a.

(233)  a.  Masha salamaat-*(**y**)      **turgennik** sie-te

Masha porridge-*(**ACC**) **quickly**      eat-PAST.3sg.SUBJ

'Masha ate the porridge quickly.'

b.  Masha **turgennik** salamaat-(#**y**)      sie-te

Masha **quickly**      porridge-(#**ACC**) eat-PAST.3sg.SUBJ

'Masha ate porridge quickly.'                                              [*B&V:602*]

B&V adopt the widely accepted analysis of these facts in terms of short movement of the direct object to some position outside of VP, which—when it occurs—allows the direct object to escape the scope of existential closure (following Diesing 1992; but see §10.1.1).

As B&V show, this pattern can easily be handled within the case-competition approach. Movement of the direct object out of VP brings it into a position that is in the same local domain as the subject (and still c-commanded by the subject). This results in the assignment of dependent(='accusative') case to the direct object (225a). On the other hand, if the direct object has remained VP-internal, it remains separated from the subject by the verb-phrase-level phase boundary—which B&V assume to be VP, rather than $v$P, in Sakha. The conditions for (225a) are therefore not met, and accusative is not assigned.[5]

But as B&V concede, the same basic pattern can also be handled within a theory where accusative is assigned by a functional head in the extended verbal projection (e.g. $v^0$). One could assume that the reason accusative can only be assigned if the object exits the VP is because that is the only way to establish a local enough relation to the functional head in question. This would derive the same correlation between movement out of VP, accusative case marking, and—following Diesing (1992)—definiteness/specificity.

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[5]For Baker & Vinokurova (2010), this creates a potential problem vis-à-vis the Case Filter (Chomsky 1981), which they assume is operative in Sakha, and its application to the Patient in (233b). The problem is circumvented, on their account, through (pseudo-)incorporation of this VP-internal object into the verb. Levin & Preminger (to appear) argue that recourse to the Case Filter can be dispensed with in the account of Sakha, and handle the apparent evidence for (pseudo-)incorporation in terms of anti-locality.

There are, however, instances of accusative in Sakha that do not lend themselves as readily to the functional head analysis of accusative case assignment. Consider first the case of passives:

(234)  caakky / caakky-**ny** aldjat-ylyn-na

cup     / cup-**ACC**  break-PASV-PAST.3sg.SUBJ

'The cup was broken.'                                                                                    [*B&V:608*]

As shown in (234), the Patient in Sakha passives can bear nominative or accusative case, a fact that B&V explain in terms of the presence or absence of an uncontrolled PRO in [Spec,*v*P] (cf. Collins 2005b). If this PRO counts as a case-competitor for the purposes of (225a), its presence will trigger accusative case on the Patient, while its absence will prevent accusative from arising.

Support for this view comes from the fact that implicit Agent interpretations require the accusative-marked variant of the passive:[6]

(235)  caakky-*(**ny**) **sorujan**       ötüje-nen      aldjat-ylyn-na

cup-*(**ACC**)  **intentionally** hammer-INST break-PASV-PAST.3sg.SUBJ

'The cup was intentionally broken with a hammer.'                           [*B&V:609*]

A second, stronger case for accusative as dependent case comes from the behavior of raising-to-object constructions in Sakha. Raising-to-object has been subject to considerable debate in generative linguistics, mostly concerning whether or not it is the correct analysis of ECM constructions in a language like English (an analysis that goes back to Postal 1974). To avoid confusion with this debate concerning English ECM, I will use the term *raising-to-accusative*, instead.

The existence of raising-to-accusative in the Turkic languages is quite well-established (cf. George & Kornfilt 1981, Moore 1998, Sener to appear, *a.o.*). An example from Sakha is given in (236):

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[6]Baker & Vinokurova (2010:609) point out that implicit Agent interpretations of passives in Sakha simply cannot occur with indefinite/non-specific Patients.

(236)   min ehigi(-**ni**) bügün kyaj-byk-kyt-yn    ihit-ti-im

> I   you-ACC today win-PRT-2pl.SUBJ-ACC heard-PAST-1sg.SUBJ

> 'I heard you won today.'           [*B&V:615*]

The distribution of raising-to-accusative in a language like Sakha is much wider than the distribution of ECM in a language like English; for example, it is possible out of embedded finite clauses:

(237)   min ehigi(-**ni**) bügün kyaj-yax-xyt    dien erem-mit-im

> I   you-ACC today win-FUT-2pl.SUBJ that hope-PAST-1sg.SUBJ

> 'I hoped you would win today.'         [*B&V:615*]

As B&V demonstrate, one can be fairly sure that the variably marked nominals in (236–237) (*ehigi(-ni)* "you(-ACC)") are indeed the subjects of the respective embedded clauses, since they are agreed with by the embedded verb—both in the finite embedded clause in (237), and in the participial embedded clause in (236).

B&V provide several arguments showing that these are indeed raising-to-accusative structures (i.e., that they involve raising of the subject of the embedded clause into a position where it receives accusative case). First, note that the subject of a finite embedded clause cannot bear accusative if it appears to the right of an embedded clause modifier; compare (237), above, with (238):

(238)   min [ sarsyn    ehigi(\*-**ni**) kel-iex-xit     dien ] ihit-ti-m

> I    tomorrow you(\*-ACC) come-FUT-2pl.SUBJ that   hear-PAST-1sg.SUBJ

> 'I heard that tomorrow you will come.'       [*B&V:616*]

Second, overt accusative marking on a raised embedded subject (as in (236–237)) co-varies with the embedded subject behaving as if it is in the matrix clause for the purposes of Binding Theory. Thus, when it lacks overt accusative marking, a pronominal embedded subject can be co-referential with the matrix subject (239a); but when it carries overt accusative marking, it cannot (239b)— a violation of Condition B.

(239)  a.      [ sarsyn      **min**ᵢ bar-a-byn            dien ] ihit-ti-**m**ᵢ

              tomorrow **I**     leave-AOR-1sg.SUBJ that    hear-PAST-**1sg.SUBJ**

              'I heard that I am leaving tomorrow.'

       b.  *  **miigin**ᵢ sarsyn      bar-a-byn           dien ihit-ti-**m**ᵢ

              **I.ACC**    tomorrow leave-AOR-1sg.SUBJ that  hear-PAST-**1sg.SUBJ**                    [*B&V:616*]

B&V also provide evidence against what they call a 'proleptic object' analysis of these constructions. On that analysis, the accusative-marked nominals in question would actually be (non-obligatory) arguments of the matrix predicates *erem* ("hope") and *ihit* ("hear"), respectively; and the embedded clause would contain a null subject bound by this matrix argument. If this were true, a better translation of an example like (237) might have been *I heard of you that you would win today*. The evidence against this analysis concerns the availability of an accusative-marked NPI in raising-to-accusative constructions, in cases where the negation licensing this NPI is inside the embedded clause. The NPI in question is *kim daqany* ("who PCL"):

(240)  a.  min kim-**i**     daqany [ kyaj-ba-ta               dien ] eren-e-bin

           I     who-**ACC** PCL      win-NEG-PAST-3sg.SUBJ that    hope-AOR-1sg.SUBJ

           'I hope that nobody won.'

       b.  min kim-**i**     daqany [ kyaj-bataq-yn                   ] ihit-ti-m

           I     who-**ACC** PCL      win-NEG.PRT-3sg.POSS.ACC   hear-PAST-1sg.SUBJ

           'I heard that nobody won.'                                                          [*B&V:616–617*]

If the overt accusative NPI in an example like (240a–b) were base-generated as an argument of the matrix predicate, it would be unexpected that it could be licensed by embedded-clause negation, given that negation cannot generally license this NPI's appearance in a superordinate clause:

(241) * min [**kim-ŋe    daqany**] [ kel-bet              dien ] et-ti-m

       I      **who-DAT PCL**    come-NEG.AOR.3sg.SUBJ that    tell-PAST-1sg.SUBJ

       'I told no one that he should come.'                                    [*B&V:617*]

Taken together, these facts indicate that the construction in question indeed involves raising of the embedded subject, to a position where it is assigned accusative. So far, though, these data are still compatible with a theory where accusative is assigned by a functional head in the extended verbal projection, as well as with a dependent case theory of accusative. Before sketching how both analyses would work, it is important to note that B&V (617, fn. 19) assume embedded clauses in raising-to-accusative contexts undergo the same short movement out of VP implicated in DOM of nominal direct objects (see the discussion of (232–233), above). In support of this, they point out that when the embedded clause is participial, the clause itself is marked with accusative case (236, 240b). This means that the verb-phrase-level phase boundary (VP, on B&V's analysis of Sakha) will not intervene between this embedded clause and higher syntactic material.

Suppose, first, that accusative is assigned by a head like $v^0$. Given familiar assumptions regarding locality, $v^0$ would be unable to assign case to a nominal that is properly contained within an embedded CP (note that Sakha, like other Turkic languages, is verb-final; these diagrams are formatted verb-initially to align left-to-right order in the schematization with descending structural prominence):

(242) $v^0$ ... $[_{CP}$ ... $[_{C'}$ ... DP ... $]$ $]$                  *(assignment of ACC ruled out by locality)*

On the other hand, a DP that has moved at least as far as the periphery of the embedded CP will be in a local enough configuration with $v^0$ to facilitate case assignment:

(243) $v^0$ ... $[_{CP}$ DP$_1^{ACC}$ $[_{C'}$ ... t$_1$ ... $]$ $]$                  *(assignment of ACC possible)*

Conversely, suppose that accusative is assigned through case-competition. On this view, the assignment of accusative (a dependent case) requires two noun phrases, neither of which is assigned

lexical/oblique case, to occur within a single locality domain. The availability of accusative case on the subject of the embedded clause will therefore co-vary, once again, with whether or not a locality boundary separates it from the matrix subject:

(244) $\underline{\text{DP}^{\text{NOM}}}$ … $\big[_{\text{CP}}$ … $\big[_{\text{C'}}$ … $\underline{\text{DP}}$ … $\big]\,\big]$        *(dependent case ruled out by locality)*

(245) $\underline{\text{DP}^{\text{NOM}}}$ … $\big[_{\text{CP}}$ $\underline{\text{DP}^{\text{ACC}}_1}$ $\big[_{\text{C'}}$ … t$_1$ … $\big]\,\big]$        *(dependent case possible)*

While both approaches can account for the raising-to-accusative data we have seen so far, B&V proceed to present raising-to-accusative data that is quite problematic for the idea that accusative is assigned by a functional head in the extended verbal projection.

First, it is the case that Sakha allows raised subjects to receive accusative even in matrix clauses where the relevant functional head (e.g. $v^0$) should not have accusative-assigning capabilities:

(246) a. Keskil Aisen-**y**     kel-bet               dien xomoj-do

      Keskil Aisen-**ACC** come-NAG.AOR.3sg.SUBJ that become-sad-PAST.3sg.SUBJ

      'Keskil became sad that Aisen is not coming.'        [*Vinokurova 2005:366*]

    b. Masha Misha-**ny**     yaldj-ya             dien tönün-ne

      Masha Misha-**ACC** fall.sick-FUT.3sg.SUBJ that return-PAST.3sg.SUBJ

      'Masha returned (for fear) that Misha would fall sick.'        [*B&V:618*]

The verbs in (246a–b) are the intransitive members of a transitivity alternation (cf. (247a–b)); and in Sakha, as in other languages, the intransitive member of a transitivity alternation does not allow its sole argument to bear accusative case—as demonstrated in (248a–b):

(247)    a.   *xomoj* "become sad"    —    *xomot* "make sad"        [*B&V:617*]

      b.   *tönün* "return"          —    *tönnör* "make return"

(248)  a.  min      oloppoh-**u** aldjat-ty-m

          I(NOM) chair-**ACC**  break-PAST-1sg.SUBJ

          'I broke the chair.'

      b.  caakky(*-**ny**) aldjan-na

          cup(*-**ACC**)   break-PAST.3sg.SUBJ

          'The cup broke.'                                                   [*B&V:608*]

Thus, if the ability to assign accusative were tied to the presence of a particular functional head (e.g. transitive $v^0$) in the extended verbal projection, data like (248b) would indicate that this head cannot be present in unaccusatives—generating the wrong prediction regarding the assignment of accusative case in examples like (246a–b).

A related but distinct problem for the functional head theory of accusative in Sakha comes from cases like (249). Here, raising feeds the assignment of accusative case to a raised embedded subject even though the superordinate clause already contains an accusative-marked argument of its own:

(249)  Masha [Misha-**ny**]$_i$ [t$_i$ kel-ie          dien] djie-**ni**     xomuj-da

       Masha Misha-**ACC**     come-fut.3sg.SUBJ that   house-**ACC** tidy-past.3sg.SUBJ
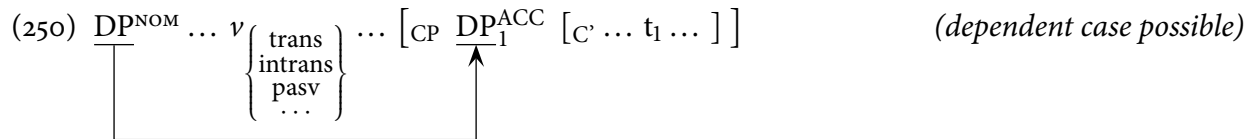
       'Masha tidied up the house (thinking) that Misha would come.'        [*Vinokurova 2005:368*]
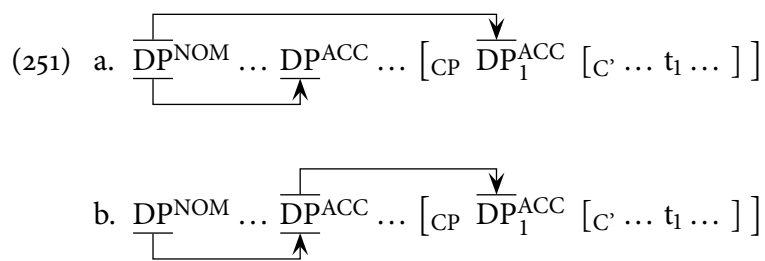
If accusative were assigned by a functional head in the extended verbal projection, data like (249) would require a one-to-many relation between case-assigner and case-assignees to be possible; but if that were so, we would predict ACC-ACC dyadic predicates to be possible in Sakha, contrary to fact (B&V:595–599).

In contrast, the dependent case theory of accusative readily handles data like (246a–b, 249). On this theory, accusative case arises when one (non-lexically-case-marked) noun phrase is in a local enough configuration with another (non-lexically-case-marked) noun phrase; and it does not depend on the thematic or argument-structural properties of the predicates that take these noun phrases as their arguments.

Thus, raising-to-accusative into a superordinate clause anchored by an unaccusative predicate should not preclude the raised embedded subject from qualifying for accusative case under case-competition:

(250) $DP^{NOM}$ … $v\begin{Bmatrix} \text{trans} \\ \text{intrans} \\ \text{pasv} \\ \dots \end{Bmatrix}$ … $[_{CP}\ DP_1^{ACC}\ [_{C'}\ \dots\ t_1\ \dots\ ]\ ]$      *(dependent case possible)*

Similarly, on this approach, nothing precludes two noun phrases for qualifying for dependent case based on case-competition with the same, third noun phrase (251a); or alternatively, one accusative noun phrase depending on another accusative noun phrase, in a "daisy chain" of case-competition (251b).

(251) a. $DP^{NOM}$ … $DP^{ACC}$ … $[_{CP}\ DP_1^{ACC}\ [_{C'}\ \dots\ t_1\ \dots\ ]\ ]$

    b. $DP^{NOM}$ … $DP^{ACC}$ … $[_{CP}\ DP_1^{ACC}\ [_{C'}\ \dots\ t_1\ \dots\ ]\ ]$

In fact, as noted in §6.2.1, the latter, "daisy chain" configuration is precisely the case-competition analysis that Marantz's (1991) system assigns to the English ECM construction:

(252) $He^{NOM}$ expects $them^{ACC}$ to invite $her^{ACC}$.      *[=(139)]*
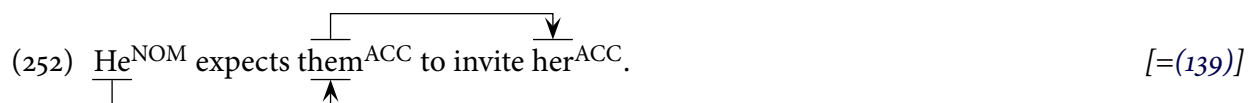
Importantly, just as in (252)—and in contrast to the functional head account of an example like (249)—the analyses in (251a–b) do not have the undesirable consequence of predicting dyadic ACC-ACC predicates should exist. That is because the case-competition relation is not a reciprocal one (at least, not in the languages in question; see the discussion in §9.1).

We have seen arguments by B&V in favor of a case-competition approach to the assignment of accusative case in Sakha, and against the assignment of accusative by a functional head in

the extended verbal projection. (B&V provide additional arguments to this effect, with regard to both accusative and dative in Sakha, which I will not review here.) This supports the argument made in §9.2 that case-competition belongs within syntax itself: since Sakha is a non-quirky-subject language, subjecthood in Sakha—a property that is clearly syntactic—is sensitive to the case distinctions resulting from this case-competition mechanism.

These arguments by B&V were originally packaged together with the claim that genitive and nominative in Sakha could not be handled configurationally, as per Marantz's (1991) disjunctive case hierarchy algorithm, and required the assignment of case through agreement with functional heads (à la Chomsky 2000, 2001). If this were correct, it would undermine the prospects for a uniform, syntax-internal implementation of Marantz's algorithm, of the kind that will be undertaken in §9.3.2. I therefore turn now to B&V's claims regarding genitive and nominative in Sakha—and to Levin & Preminger's (to appear) proposal, reanalyzing these facts, too, in a purely configurational manner.

### 9.3.1.2. Genitive and nominative in Sakha

I will begin this sub-section by reviewing B&V's argument that the behavior and distribution of genitive case in Sakha, in contrast to accusative (§9.3.1.1), favors an account where genitive is assigned by a functional head. (As with accusative and dative, B&V provide a parallel set of arguments for genitive and nominative; I concentrate here on the arguments pertaining to genitive case, since unlike nominative, genitive case is at least sometimes overtly detectable in Sakha; see below.)

Consider the behavior of participial relative clauses in Sakha:

(253)  [ aaq-ar     ] kinige

         read-AOR   book

      'a book for reading'                                                             [B&V:631]

Overt subjects can be realized in these participial relatives only under very specific conditions. One such condition involves a nominal that is indefinite and bare, and appears immediately adjacent to the participial verb (which itself must be unaccusative, in this condition):

(254) a. [ **sibekki** tyll-ar       ] kem

         **flower**  bloom-AOR   time

         'a time when flowers bloom'

    b. [ **oton**  buh-ar     ] sir

         **berry** ripen-AOR   place

         'a place where berries ripen'

(255) [ (\***Masha**) cej ih-er       ] caakky

        (\***Masha**) tea drink-AOR   cup

       'a cup that one drinks tea from / \*a cup that Masha drinks tea from'          [*B&V:631*]

B&V analyze embedded subjects like those in (254a–b) in terms of (pseudo-)incorporation of the Patient into the unaccusative verb. Examples that do not obey these restrictions (cf. (255)) are ruled out, on their account, by the Case Filter (Chomsky 1981).

   Importantly, participial relatives involving non-incorporable subjects can be salvaged if the head noun shows agreement with the embedded subject:

(256) a.   **sibekki-ler** emiske    tyll-ar        kem-\***(nere)**

           **flower-PL**   suddenly bloom-AOR time-\***(3sg.POSS)**

           'a time when the flowers suddenly bloom'

    b.   **Masha** cej ih-er        caakky-\***(ta)**

           **Masha** tea drink-AOR cup-\***(3sg.POSS)**

           'a cup that Masha drinks tea from'                                  [*B&V:631–632*]

As B&V point out (Baker & Vinokurova 2010:598), Sakha has lost its overt genitive marking in all but one context: on genitive nominals that are themselves possessed. Therefore, it can be demonstrated

that the overt subjects in examples like (256a–b) are genitive (rather than nominative) by placing a possessed nominal in the same position:

(257)  [**Masha aqa-ty**]-**n**  atyylas-pyt at-*(**a**)

　　　 [**Masha father-3sg.POSS**]-**GEN** buy-PRT　horse-**3sg.POSS**

　　　 'the horse that Masha's father bought'  [*B&V:626*]

B&V take possessive agreement on the head noun in examples like (256a–b, 257) to be the overt realization of a $D^0$ head, which assigns genitive case to the embedded subject, thus averting a violation of the Case Filter. (B&V argue for a similar mode of assignment for nominative case, except that the functional head implicated in the assignment of nominative is $T^0$, rather than $D^0$.)

Possessive agreement is absent in examples like (253, 254a–b), on this view, because this $D^0$ head is only required in the presence of a non-incorporable embedded subject—which in turn, requires case for licensing purposes (vis-à-vis the Case Filter).[7]

B&V take it for granted that patterns of co-occurrence of case marking with agreement morphology reflect a causal relationship in which agreement *leads* to the assignment of case, as in Chomsky 2000, 2001. Thus, they take this pattern and others like it to show that nominative and genitive arise, in Sakha, through agreement with $T^0$ and $D^0$, respectively. But as noted in chapter 8, this approach—where case arises as a result of $\varphi$-agreement—is not generally tenable, given the existence of full, non-incorporated noun phrases which agreement has demonstrably failed to reach. (See the discussion in chapter 8 of grammatical sentences in Icelandic where dative intervention has prevented agreement with a lower noun phrase, but the noun phrase in question nevertheless bears nominative case morphology; and see Preminger 2011b for a similar argument regarding absolutive case in Basque. Also, see §5.1, on why case-assignment-by-agreement is untenable in Kichean.)

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[7] To be precise, this explains why $D^0$ is not required in these examples, not why its appearance is ruled out. On B&V's analysis, this is because if $D^0$ were to appear in such examples, it would not have an accessible agreement target, resulting in unchecked uninterpretable features. Crucially, in chapters 5–6, we saw arguments that unchecked uninterpretable features do not, in fact, lead to ungrammaticality; therefore, this fact, too, must be derived in some other way. The analysis by Levin & Preminger (to appear), presented below, assimilates this to the cases of "gratuitous agreement" discussed in §5.3.

Moreover, the observation that φ-agreement is case-discriminating (§8.3.3, §8.4) is incoherent unless case can be computed independently of (and prior to) φ-agreement; the Chomskyan approach of case-assignment-by-agreement is therefore also incompatible with case-discrimination and the results that it provides. This includes Bobaljik's (2008) original observations regarding dissociations between φ-agreement and grammatical function in quirky-case contexts, as well as the absence of languages with an ergative-absolutive agreement alignment but a nominative-accusative case alignment. It also includes the account proposed in chapter 8 for when dative intervention does and does not yield outright ungrammaticality.

If these results are to be preserved, it is important to show that genitive/nominative in Sakha, and their co-occurrence patterns with φ-agreement, can be accounted for without recourse to case-assignment-by-agreement. Levin & Preminger (to appear) (henceforth, L&P) put forth exactly such a proposal concerning genitive and nominative in Sakha, analyzing them in purely configurational terms, as *unmarked case* (Marantz 1991) in the CP and DP/PP domains, respectively.

L&P assume that the possessive φ-probe is always present in Sakha participial relatives—whether the relative clause contains a full, unincorporated subject, or not—and it is precisely when a viable, unincorporated agreement target is present in the participial relative that overt φ-agreement arises. They also assume the *case-discrimination* property of φ-agreement (§8.3.3, §8.4), and in particular, that φ-probes in Sakha can only target nominals bearing unmarked case.

In configurations where the participial relative does not contain a viable agreement target, probing by this always-present possessive φ-probe will simply fail. This situation arises when the participial verb takes no arguments, as in (253), or when the nominal in the participial relative has been incorporated into the verb, as in (254a–b). Crucially, as argued in detail in chapters 5–6, this failure to locate an agreement target will not result in ill-formedness; it will simply result in the φ-features on the possessive φ-probe remaining unvalued.[8]

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[8] For possessor agreement to ever target anything but the head noun—the immediate complement of $D^0$—the head noun must be skipped by the φ-probe (this is quite generally the case for possessor agreement, and therefore not unique to Sakha). I assume, with Levin & Preminger (to appear), that this is because the target of such probing must be a

One important difference between this pattern and those explored in chapters 4–8 is that here, a $\varphi$-probe that has successfully agreed with a 3rd person singular target results in an exponent that does not show up in cases where probing has failed outright—compare (253, 254a–b) with (256a–b, 257), for example. Following the discussion in §8.4, there are at least two ways this could come about. First, consider once more the $\varphi$-feature geometry used in chapter 4, adapted from Harley & Ritter (2002) and McGinnis (2005):

(258) A SIMPLIFIED $\varphi$-FEATURE GEOMETRY *[=(55)]*



Recall that within a feature-geometric approach to $\varphi$-agreement (§4.2.2–§4.2.3), valuation consists of copying the $\varphi$-geometric specification borne by the target noun phrase onto the probe. Crucially, 3rd person noun phrases are not quite empty $\varphi$-geometries. They lack [plural], [participant], and [author] nodes; but contain at least the root of the geometry, [$\varphi$] (and possibly, the 'meta-nodes' [PERSON] and [NUMBER]; see fn. 11, in chapter 4).

Suppose, then, that the "3sg.POSS" suffix in Sakha is actually the overt spellout of [$\varphi$]—specifically, the allomorph of valued [$\varphi$] on a possessive $\varphi$-probe that lacks [plural], [participant], and [author]. We would then predict that it would surface upon successful agreement with a 3rd person singular noun phrase, but be absent when agreement has failed altogether.

In §8.4, however, I suggested that there may be a cross-linguistic tendency (if not a universal) for [$\varphi$]/[PERSON]/[NUMBER] to receive no exponence of their own—based on the results of Preminger 2009, repeated here:

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complete extended nominal projection, which the complement of $D^0$ is not (though see Levin & Preminger to appear, for a more nuanced discussion, distinguishing between the behaviors of number- and person-agreement in this respect).

(259) DIAGNOSTIC FOR "PURE" AGREEMENT VS. CLITIC DOUBLING   [*Preminger 2009:623*]

> Given a scenario where the relation $\mathcal{R}$ between an agreement-morpheme $\mathcal{M}$ and the corresponding full noun phrase $\mathcal{F}$ is broken, but the result is still a grammatical utterance:
>
> a. $\mathcal{M}$ shows up expressing "default" φ-features $\Rightarrow$ $\mathcal{R}$ is *"pure" agreement*
>
> b. $\mathcal{M}$ disappears entirely $\Rightarrow$ $\mathcal{R}$ is *clitic doubling*   *[=(196)]*

If (259) holds of Sakha, as well, then we might instead conclude that what we have been calling 'possessive agreement' in Sakha is actually clitic doubling—triggered when a genitive noun phrase is probed by the possessive φ-probe. This would be akin to 1st/2nd person 'absolutive agreement' in Kichean (chapter 4), 'dative agreement and ergative agreement' in Basque (Arregi & Nevins 2008, 2012, Preminger 2009), and perhaps all instances of 'indirect object agreement' in PCC contexts (Anagnostopoulou 2003, Béjar & Rezac 2003, *a.o.*; §4.1). These are all instances of obligatory and semantically-indiscriminate clitic doubling, triggered when a designated probe targets the relevant argument; on this view, 'possessive agreement' in Sakha would arise in the same manner.

This would preserve the logic of successful vs. failed agreement, stated earlier. When there is no unincorporated nominal bearing unmarked case inside the participial relative, the possessive φ-probe will fail to locate an agreement target. Following chapters 5–6, this does not result in ill-formedness; but since no nominal has been targeted by the φ-probe, no clitic doubling will be triggered, resulting in the absence of 'possessive agreement' morphology on the head noun. When an appropriate noun phrase of this sort is present, however, it will be probed by the possessive φ-probe, resulting in clitic doubling, and the appearance of 'possessive agreement' reflecting the φ-features of this noun phrase.

On either of these views ('possessive agreement' as φ-agreement proper, or as clitic doubling), overt agreement morphology must be present when the participial relative contains a full, unincorporated nominal not because of the Case Filter, but rather for the same reason that any other instance of φ-agreement is obligatory. There is simply no derivation in which the enclosing noun

phrase (consisting of the head noun and the participial relative) lacks a possessive $\varphi$-probe; and thus, no derivation where FIND$_\varphi$ (§8.4) is not triggered. Thus, the ungrammatical variants of (256a–b, 257) constitute instances of "gratuitous non-agreement", and are ruled out like any other such instance would be (see §5.3).

It is in this way that L&P's proposal reverses the direction of causality between case and agreement, which B&V had inherited from Chomsky (2000, 2001). Genitive case is not *licensed* by possessive agreement; it is the presence of a non-incorporated genitive nominal within the domain of the possessive $\varphi$-probe that provides this probe with a viable agreement target, resulting in the appearance of possessive agreement. In a sense, we could actually say that "the presence of an appropriately case-marked noun phrase is what *licenses* agreement," a view already suggested by Bittner & Hale (1996:3).

On this account, genitive—like nominative, in the clausal domain—is simply the unmarked case (in the sense of Marantz 1991), assigned to DPs within the nominal domain that are not otherwise case-marked by a lexical/oblique case assigner, or through case-competition; its assignment is not triggered by any particular functional head.

There are additional patterns adduced by B&V in support of their analysis, and L&P show how each of these can be reanalyzed within the alternative approach described above. I will reproduce one such case here, involving what may be the strongest prima facie evidence for case-assignment-by-agreement in Sakha. The pattern in question concerns the unavailability of 'double agreement' in a construction where one might otherwise expect it to be possible. The examples in question involve a participial verb selected by an auxiliary:

(260)    **en**   süüj-büt e-bik-**kin**

         **you** win-PRT AUX-PRT-**2sg.SUBJ**

         'The result is that you won.'

(261)  **en**  süüj-büt-**kün**      e-bik

      **you** win-PRT-**2sg.SUBJ** AUX-PRT

      'The result is that you won.'                                              [*B&V:637*]

As (260–261) show, it is possible for either the participial lexical verb or the auxiliary to exhibit overt φ-agreement with the subject. As one might expect, a version of (260–261) where neither participle exhibits φ-agreement is impossible:

(262)  * **en**  süüj-büt e-bik

      **you** win-PRT AUX-PRT                                                    [*B&V:637*]

Perhaps more surprisingly, a version where both the lexical verb and the auxiliary bear overt agreement morphology is also impossible:

(263)  * **en**  süüj-büt-**kün**      e-bik-**kin**

      **you** win-PRT-**2sg.SUBJ** AUX-PRT-**2sg.SUBJ**                         [*B&V:637*]

B&V propose that participles optionally come with an abstract agreement-bearing head—call it $F^0$—that is generated immediately above them. The acceptability of both (260) and (261) is thus attributed to the variable position of this head: in (261), $F^0$ is generated immediately above the lexical verb, whereas in (260) it is generated immediately above the auxiliary. In either scenario, syntactic agreement obtains between the functional head $F^0$ and the subject, *en* ("you"), assigning case to the latter and valuing the φ-features on the former.

As was the case with the unincorporated subject in (255), for example, B&V attribute the ill-formedness of (262) to a violation of the Case Filter. In particular, the lack of agreement morphology is taken to indicate that no agreement-bearing head such as $F^0$ has been merged into the structure (neither above the verb, nor above the auxiliary), meaning case cannot be assigned to the nominal in question—yielding ungrammaticality.

Finally, the ill-formedness of (263) is taken to follow from Chomsky's (2000, 2001) *Activity Condition*: the inability of noun phrases which have already entered into successful agreement relations, and thus have been assigned case, to enter into subsequent agreement relations (though note that we have already seen evidence against the Activity Condition, in §8.3.1).

On B&V's account, the ungrammaticality of (262) and the ungrammaticality of (263) receive different explanations: agreement on neither participle, as in (262), is ruled out by the generalized Case Filter, while agreement on both participles, as in (263), is ruled out by the Activity Condition. It seems to me that this is an unnecessarily complicated way of capturing a rather simple pattern: *in a structure like (260–263), agreement must happen exactly once*. As L&P show, the same behavior is equally amenable to account that is based on the following premises:

(264)  a.  exactly one 'subject agreement' $\varphi$-probe is merged per clause

     b.  if there is an accessible nominal goal, the $\varphi$-probe must agree with it

     c.  the overt spellout of this $\varphi$-probe can end up affixed to either of the participles

Premise (264a) is hardly a stipulation, any more than the fact that finite clauses in English contain exactly one $\text{Infl}^0$ is a stipulation. Premise (264b) was discussed in detail, and independently motivated, in chapters 5–8 (and also earlier in this sub-section; see the discussion of (253–257), above, as well as the discussion of "gratuitous non-agreement" in §5.3).

This leaves (264c), which can follow from one of several fairly benign syntactic assumptions. First, the base-generated order of heads could be subject to variation, allowing the $\varphi$-probe to be generated immediately above either the verb or the auxiliary, as in (265a–b) (as noted earlier, this is precisely what Baker & Vinokurova themselves assume; see B&V:637–638). Alternatively, the two possible spellouts could arise via head-movement of the $\varphi$-probe, as in (266a–b).

(265)  a.  $\left[\left[\left[ \ldots \text{PrtV}^0 \right] \text{Infl}^0 \right] \text{PrtAux}^0 \right] \Rightarrow \ldots \text{PrtV}^0\text{-}[\varphi\text{-agr.}] \ \text{PrtAux}^0$

     b.  $\left[\left[\left[ \ldots \text{PrtV}^0 \right] \text{PrtAux}^0 \right] \text{Infl}^0 \right] \Rightarrow \ldots \text{PrtV}^0 \ \text{PrtAux}^0\text{-}[\varphi\text{-agr.}]$

(266) a. $\left[\left[\left[\ \ldots\ \mathrm{PrtV^0}\ \right]\mathrm{Infl^0}\ \right]\mathrm{PrtAux^0}\ \right]$  $\Rightarrow\ \ldots\ \mathrm{PrtV^0\text{-}[\varphi\text{-agr.}]\ PrtAux^0}$

   b. $\left[\left[\left[\ \ldots\ \mathrm{PrtV^0}\ \right]t_{\mathrm{Infl^0}}\ \right]\mathrm{PrtAux^0\text{-}Infl^0}\ \right]\Rightarrow\ \ldots\ \mathrm{PrtV^0\ PrtAux^0\text{-}[\varphi\text{-agr.}]}$

Aside from empirical problems that the Activity Condition faces (§8.3.1), there is another reason why an account like (264) may be preferable to one that uses the Activity Condition to account for the unacceptability of 'double agreement' (as B&V's does). The reason is that cross-linguistically, there are close counterparts of (263) which—unlike in Sakha—*do* allow (and in some cases, even demand) agreement on both the verb and the auxiliary. One example, from Hindi-Urdu, is given in (267):

(267) Rahul-ne **kitaab** par:h-**ii**       th**ii**                              (Hindi-Urdu)

   Rahul-ERG **book**<sub>FEM</sub> read-PRFV.**FEM** be.PAST.**FEM.sg**

   'Rahul had read the book.'                                              [*Bhatt 2005:759*]

If one accepts that (267) is indeed parallel to the complex tense constructions of Sakha, then one might be wary of accounting for the unacceptability of (263) by appealing to a *principle* (such as the Activity Condition). Instead, we might prefer an account appealing to a *parameter*, such as whether both links in a head-movement chain like (266b) can/must be simultaneously pronounced at PF (cf. Landau 2006a, for example).[9]

A proposal of the kind in (264) therefore has the following advantages: **(i)** it facilitates a unified account of (262) (the ungrammaticality of non-agreement) and (263) (the ungrammaticality of 'double agreement'); **(ii)** it eliminates any recourse to the Activity Condition; **(iii)** it eliminates any use of case-assignment-by-agreement.

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[9] As L&P point out, this issue has probably not gone unnoticed by B&V, who mention Baker's (2008:155ff.) proposal that the Activity Condition, or something very close to it, should itself be parameterizable (Baker & Vinokurova 2010:636, fn. 32). Nevertheless, the point in the main text stands: it is nearly uncontroversial that properties such as, say, the rules of pronunciation at PF, are subject to cross-linguistic variation. The approach pursued here is therefore better positioned to reduce the difference between Sakha on the one hand (263), and Hindi-Urdu on the other (267), to well-established parameters of linguistic variation.

It should also be mentioned that (266b), coupled with PF pronunciation of both links of the head movement chain, is not the analysis of (267) put forth by Bhatt (2005), from whom this example is taken. The point is merely that cross-linguistic counterparts of the Sakha (263) do exist, and that some behave in a fashion opposite of Sakha—suggesting the need for an account of (263) that is based on parameters, rather than principles alone.

As noted earlier, L&P survey this and other arguments offered by B&V in support of nominative and genitive as case-assigned-by-agreement (along the lines of Chomsky 2000, 2001), and show that each can be reanalyzed within a fully configurational approach to case assignment (namely, Marantz's 1991 disjunctive case hierarchy)—especially given the logic of failed agreement and grammaticality argued for in chapters 5–8.

### 9.3.1.3. Sakha: A summary

In the preceding two sub-sections, we have reviewed B&V's arguments that the patterns of case assignment in Sakha require a 'hybrid' theory, consisting of *case-competition* (Bittner & Hale 1996, Marantz 1991, *a.o.*) alongside case assignment by agreement with functional heads (Chomsky 2000, 2001). We have presented some of L&P's arguments that the latter part of B&V's argument is, in fact, underdetermined by the data they present (particularly in light of results such as those of chapters 5–8). Instead, it appears that the patterns of case assignment in Sakha are completely amenable to an account based on Marantz's (1991) disjunctive case hierarchy.

Crucially, however, the fact that Sakha shows robust evidence for case-competition is significant: it furnishes an instance where case-competition is required in a non-quirky-subject language. Given the results of chapter 8 and the discussion in §9.2, movement to canonical subject position in a non-quirky-subject language (MtoCSP$_{\text{NQSL}}$) is fed by $\varphi$-agreement, which is in turn fed by the calculus of case. Since movement to canonical subject position is clearly a syntactic operation, these results strengthen the conclusion reached in §9.2, that we are in need of a syntactic case calculus that is compatible with case-competition. That calculus is the topic of the next section.

## 9.3.2.  A syntactic case calculus[10]

In §9.2, as well as in §9.3.1.1, we saw the need for a case calculus that operates within syntax proper,

yet replicates the effects of case-competition (Marantz 1991).  In this sub-section, I present an

implementation of this type of case system, one that may in fact derive Marantz's (1991) *disjunctive*

*case hierarchy* itself.[11]

    The central idea is that the disjunctive case hierarchy is an artifact of the way in which syntactic

structure is built, and in particular, the way arguments are introduced into the syntactic structure.

Consider, first, the category of *lexical/oblique case*. This is case that is assigned to a noun phrase

by virtue of the idiosyncratic properties of the particular lexical head that selects it as an argument

(see §9.1). If lexical selection can only occur under sisterhood, this means that lexical/oblique case

is case assigned to a noun phrase upon first merge, immediately upon its introduction into the

derivation:

(268)  LEXICAL/OBLIQUE CASE – *CASE ASSIGNED UPON FIRST MERGE*
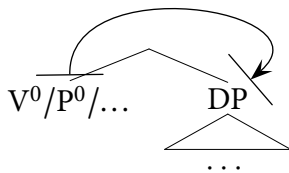


Since the case calculus being presented here is one that operates within syntax, I will assume that

the relation schematized in (268) is a featural one. DPs are merged into the structure with unvalued

case features. Crucially, just like their φ-feature counterparts, these case features are not *derivational*

*time-bombs* (§2.2.1, §5.1–§5.3); therefore, nothing goes wrong if they go through the entire derivation

without ever having been valued.  However, one of the ways these features *can* be valued is in a

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[10]The theory presented in this sub-section was developed, in large part, during a series of lectures at Leiden University in March of 2011; my deepest thanks go to the audiences there, and especially to Roberta D'Alessandro for giving me the opportunity to conduct these lectures in the first place.

[11]The proposal made here is similar, in certain respects, to Bittner & Hale's (1996) proposal; however, as will be shown below, the implementation of case-competition differs in certain ways that are crucial to correctly deriving the behavior of dependent case in Sakha.

configuration like (268), provided the syntactic head in question is, in fact, lexically specified to assign a particular case marking.

The specific case feature value transmitted to the DP in (268) will depend on the lexical properties of the selecting head. This is a desired result, as far as lexical/oblique case is concerned. This allows, for example, different verbs (or different prepositions) to idiosyncratically assign different cases to the noun phrases they select. This also allows for instances of $V^0$ that do not bear valued case features at all, which would result in no valuation of the case features on DP upon first merge. As will be shown below, this too is a desired result, for those instances where the noun phrase in question is assigned not lexical/oblique case, but rather some other kind of case marking (i.e., dependent or unmarked case).

Importantly, valuation of the case features on a given noun phrase by the head that selects that noun phrase will—given a bottom-up approach to syntactic structure-building—be the first opportunity for those case features to be valued.[12]  We therefore have an explanation, given the current syntactic reimplementation of Marantz's disjunctive case hierarchy, for why lexical/oblique case is the first step in this algorithm. (This point will be expanded upon, below.)

If the case features on a given noun phrase have not been valued upon first merger (i.e., by a lexical/oblique case assigner), it will have an opportunity to value them through other means. This is where case-competition comes into play. The results of §9.2 and §9.3.1 demonstrate that case-competition is a necessary component of syntax. The way I will implement case-competition in syntax is as follows. Assuming that case features are DP-level features (i.e., that they are visible at the level of the maximal extended projection of the nominal),[13] let us suppose that one of the

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[12]These observations are phrased here in a particularly derivationalist manner, to highlight the parallelism that is achieved between the current proposal Marantz's (1991) disjunctive case hierarchy—which itself is formulated as a serial algorithm. However, it seems to me that these derivational conditions have representationalist analogues, if we demand that the structural relations involved in case feature valuation relations be as local as possible. The reader should therefore not interpret the expository use of derivationalist terminology in this particular sub-section as an argument for, or even a commitment to, a derivational rather than representational generative engine.

[13]It is well-established that case is a feature of nominals at the phrasal level, even if it is morphologically instantiated on smaller pieces of the noun phrase (e.g. on the determiner alone, as is the case in Basque for example). I leave aside the question of whether this means that case features are phrasal features *sui generis*, or whether this is an instance of

ways valuation of case features can take place is when two DPs with as-of-yet unvalued case features stand in a c-command relation that does not cross relevant locality boundaries (e.g. the boundaries of a finite clause). One could then view dependent case as a feature value indicating *"I have (been) c-commanded (by) another DP with unvalued case features in the course of the derivation"* (where the directionality is parameterized, as discussed in §9.1).
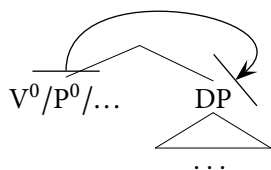
This is admittedly a stipulative addition to the logic of syntactic valuation—and one that seems restricted to the domain of case features, to boot. I have no soothing words to offer, in this respect, except to say that the conclusion that case-competition must be part of syntax is forced by the empirical state of affairs surveyed in this and previous chapters, and I see no simpler way at the present time of implementing it than the one outlined here. In particular, note the importance of case-competition being a direct relation between two DPs, rather than one that is mediated through a functional head (as in Bittner & Hale 1996)—in order to capture the assignment of dependent case in Sakha clauses that have an unaccusative functional infrastructure (see the discussion of (246a–b), above).

There is one interesting benefit, however, to viewing case-competition in this manner. If selection is restricted to sisterhood, and lexical/oblique case can only be assigned under selection (as discussed above), it *follows* that case-competition can only occur after lexical/oblique case assignment has had a chance to apply. The reason is that the structure consisting of a noun phrase and the head that selects it (i.e., its potential lexical/oblique case assigner) will necessarily be built prior to any larger structure that would include two noun phrases standing in a c-command relation:

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a more general syntactic principle that renders the maximal projection of a head featurally identical to the head itself (see, for example, Chomsky 1995:241–249).

(269)  a.  LEXICAL SELECTION (SISTERHOOD):          b.  LARGER STRUCTURE:

POTENTIAL FOR LEXICAL/OBLIQUE CASE          POTENTIAL FOR DEPENDENT CASE
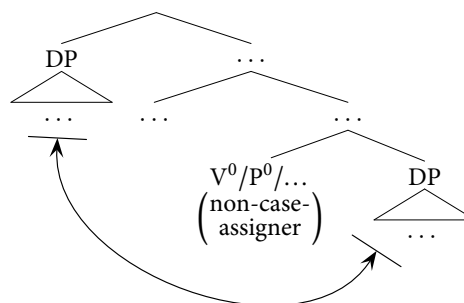


In other words, the proposed syntactic implementation of the disjunctive case hierarchy *derives* the fact that lexical/oblique case takes precedence over dependent case—as stipulated in Marantz's proposal—by virtue of how syntactic structure is built, incrementally, from the bottom up.

One final note regarding dependent case concerns its typically asymmetric nature. Let us set aside, for the moment, proposals regarding languages in which case-competition is either reciprocal or nullified (Deal to appear and Baker 2012, respectively). The normal state of affairs thus has either the lower of the two DPs (in a nominative-accusative language/construction) or the higher of the two (in an ergative-absolutive language/construction) receiving the dependent case that arises from case-competition.[14] Interestingly, there exist several proposals in the literature for a condition that would prohibit two DPs that stand in too close of a structural relation from staying in that relation (Alexiadou & Anagnostopoulou 2001, Moro 2000, Richards 2006, 2010). One such structural relation is illustrated in (270), where two DPs are specifier and complement of the same immediately-containing XP:

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[14]While normally asymmetric, the relation absolutely does not need to be *one-to-one*; see the discussion of (251–252), above.

(270) TWO DPs IN (TOO) CLOSE QUARTERS

XP
```
        XP
       /  \
    DP₁    X'
          /  \
        X⁰    DP₂
```
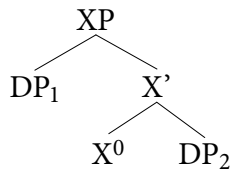
Strictly speaking, given the earlier discussion, there would be no obstacle to $DP_1$ and $DP_2$ in (270) entering into a case-competition relation, since $DP_1$ does asymmetrically c-command $DP_2$. However, imagine that the structural condition on case-competition was not asymmetric c-command, but rather asymmetric *m-command*. Since $DP_1$ and $DP_2$ stand, in (270), in a symmetric m-command relation, the structural configuration of these two nominals would have to be altered, if one if them is to be assigned dependent case:[15]

(271) A SUFFICIENTLY ASYMMETRIC CONFIGURATION FOR CASE-COMPETITION

```
        YP
       /  \
    DP₁    ...
          /  \
        ...   XP
             /  \
          t_DP₁  X'
                /  \
              X⁰    DP₂
```
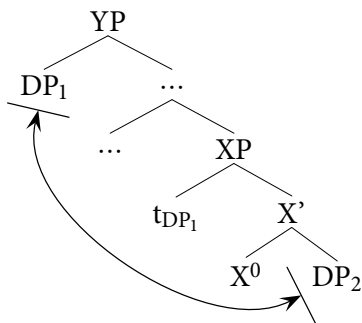
Since these effects (whereby structures like (270) are ruled out in favor of (271), for example) are not the topic of the current proposal, I will not speculate on them further here.

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[15]One potential challenge to viewing case-competition as the source for the prohibition observed by Alexiadou & Anagnostopoulou (2001) and Moro (2000) and Richards (2006, 2010), is the existence of superficially similar effects in derived positions:

(i)  a.  * I know everyone insulted someone, but I don't know [DP who] [DP whom].
     b.   I know everyone danced with someone, but I don't know [DP who] [PP with whom].

[*Richards 2010*:3]

Insofar as a contrast like (i) is an instance of the same phenomenon—and Richards (2010:49–50) provides some typological support for the view that it is—then deriving it from case-competition will be considerably more difficult, since the two DPs in question will presumably have had ample chance to establish an adequately asymmetric relation before moving to their ultimate clause-peripheral positions.

Returning now to the syntactic calculus of case: because the unvalued case features with which a noun phrase begins the syntactic derivation are not derivational time-bombs (§2.2.1), nothing will go wrong if they are not valued at all in the course of the derivation. This, I argue, is precisely what *unmarked case* is: it is the morphological form given to a noun phrase whose case features have never been valued—just like '3rd person singular agreement' is the morphological form given to a $\varphi$-probe whose features have never been valued (§4.2.2–§4.2.3, §8.4).

It therefore follows that this morphological form will only be available to a noun phrase that has failed to value its case features in one of the two ways described above (which we can continue to refer to, descriptively, as *lexical/oblique case* and *dependent case*).

In summary, by adopting the particular stipulation sketched earlier concerning case-competition (namely, that when two DPs with unvalued case features enter into a c-command relation, dependent case is assigned; normally, to one and not the other), we have effectively derived the very *disjunctive case hierarchy* that stands at the center of Marantz's (1991) configurational case assignment proposal:

(272)  DISJUNCTIVE CASE HIERARCHY                                            [*Marantz 1991*]

    lexical/oblique case → dependent case → unmarked case                    *[=(224)]*

The assignment of lexical/oblique case occurs first because selection (i.e., sisterhood) is the first structural relation that a noun phrase enters into. Conversely, unmarked case is the last possibility because it is nothing but the morphological expression of the absence of valued case features on a noun phrase. It will therefore arise only if the (other) case assignment strategies have not come to fruition (i.e., in the absence of a lexically-specified case assigner, and of an eligible case-competitor). As with $\varphi$-features and '3rd person singular' (§4.2.2–§4.2.3, §8.4), we have developed descriptive labels for the characteristic realization that the morphological component gives to this lack of valued case features—namely, 'nominative' or 'absolutive'; and within the nominal domain, 'genitive'.

## 9.4. Summary

In this chapter, we have seen that φ-agreement and what we have come to call 'morphological case' must both be computed within syntax—not as part of a post-syntactic, morphological computation. This is crucial if the results of chapters 5–8, concerning the logic that relates φ-agreement to grammaticality/ungrammaticality, are to tell us something about the adequacy (or inadequacy) of syntactic models such as Chomsky's (2000, 2001) 'interpretability'-based proposal, as I have claimed they do. The results of this chapter thus reaffirm that we can take these conclusions to be about syntax itself.

In §9.1, I reviewed Marantz's (1991) argument that 'morphological case' is post-syntactic, and Bobaljik's (2008) extension thereof to φ-agreement. We saw that they both rested on the following premise: that there are no instances in which 'morphological case' informs a process that could only be construed as syntactic. But in §9.2, we saw an argument that such a dependency does exist: φ-agreement feeds movement to canonical subject position in some languages (§8.4), and is fed by 'morphological case' in others (Bobaljik 2008; §8.3.3).

This argument was typological in nature, bringing together results obtained from quirky-subject and non-quirky-subject languages. In §9.3.1, however, we saw an argument—based on Baker & Vinokurova's (2010) work on Sakha—that case-competition (a central component of Marantz's case calculus) is required in order to determine the case marking of nominals even in a language where movement to canonical subject position attends to those case markings (i.e., a non-quirky-subject language like Sakha). We also saw that Baker & Vinokurova's claim, that not all the case facts of Sakha could be handled in this configurational manner, is unwarranted (Levin & Preminger to appear).

In §9.3.2, I presented a syntactic reimplementation of Marantz's configurational case algorithm. It was shown that this reimplementation may, in fact, be able to derive the *disjunctive case hierarchy*— the stipulated ordering that is at the center of this algorithm—from the bottom-up manner in which syntactic structure is built.

Given the existence of a syntactic case calculus that is faithful to the results of Marantz's (1991) algorithm, it becomes possible for $\varphi$-agreement to operate on the basis of case—as argued by Bobaljik (2008), and discussed in §8.3.3—while still feeding movement to canonical subject position (as was argued in §8.4).

Formally, the operation FIND$_\varphi(f)$ (273) can make reference to *case-discrimination*—which crucially, relies on a notion of case that includes the case-competition mechanism (274)—while still serving as the input to the syntactic operation of MtoCSP$_{\text{NQSL}}$ (275):

(273)  FIND$_\varphi(f)$: given an unvalued feature $f$ on a head H$^0$, look for an XP bearing a valued

instance of $f$. Upon finding such an XP, check if its case is acceptable with

respect to *case-discrimination* —                                              *[=(198)]*

a. **yes** → assign the value of $f$ found on XP to H$^0$

b. **no** → abort FIND$_\varphi(f)$                                           *(and continue with derivation)*

(274)  THE MORAVCSIK HIERARCHY (second and final revision; *Bobaljik 2008*)

unmarked case ≫ dependent case ≫ lexical/oblique case                          *[=(178)]*

(275)  MOVEMENT TO CANONICAL SUBJECT POSITION (MtoCSP):

TWO TYPOLOGICAL VARIATIONS (revised version)                                    *[=(207)]*

a. IN A QUIRKY-SUBJECT LANGUAGE                                              *(e.g. Icelandic)*

MtoCSP$_{\text{QSL}}$   = *Move*(DP)

b. IN A NON-QUIRKY-SUBJECT LANGUAGE                                         *(e.g. English, French)*

MtoCSP$_{\text{NQSL}}$ = *Move*(XP successfully targeted by FIND$_\varphi$)

Thus, the results of this chapter, taken together with the results of chapters 5–8, show that $\varphi$-agreement is a syntactic phenomenon proper, whose obligatoriness can nonetheless only be modeled successfully in terms of *obligatory operations* (§2.2.3)—and crucially, not in terms of *violable constraints* (§2.2.2) or *derivational time-bombs* (§2.2.1).

## 9.A.  Appendix: case assignment and case-discrimination in the Kichean Agent-Focus construction

Given that §9.2–§9.3 build on the results of chapter 8, which in turn, build on the results of chapters 4–5 concerning φ-agreement in the Kichean Agent-Focus (AF) construction, it may be worthwhile to reexamine the analysis of Kichean AF in light of the case-discrimination property of φ-agreement (chapter 8), as well as the syntactic system of case assignment developed in §9.3.[16]

Recall from chapter 3 that regular transitive verbs in Kichean contain two distinct agreement markers, one for each core argument:

(276)  MORPHEME ORDER IN THE KICHEAN TRANSITIVE VERB *[=(12)]*

$$\begin{pmatrix} \text{aspect} \\ \text{prefix} \end{pmatrix} - \begin{pmatrix} \textbf{ABS} \\ \textbf{marker} \end{pmatrix} - \begin{pmatrix} \textbf{ERG} \\ \textbf{marker} \end{pmatrix} - \begin{pmatrix} \text{verb} \\ \text{stem} \end{pmatrix} - \cdots$$

(277)  a.  rat        x-Ø-**aw**-ax-aj                    ri   achin        (Kaqchikel)

you(sg.) COM-**3sg.ABS**-**2sg.ERG**-hear-ACT the man

'You(sg.) heard the man.'

b.  ri   achin x-**a**-**r**-ax-aj                rat

the man   COM-**2sg.ABS**-**3sg.ERG**-hear-ACT you(sg.)

'The man heard you(sg.).'                    *[=(10a–b)]*

In the AF construction, however, we find only one agreement marker, whose form is taken from the absolutive series:

(278)  a.  ja    rat        x-**at/*Ø**-ax-<u>an</u>                ri   achin

FOC you(sg.) COM-**2sg/*3sg.ABS**-hear-<u>AF</u> the man

'It was you(sg.) that heard the man.'

---

[16]I thank a reviewer for helpful discussion of the issues in this appendix.

b. ja    ri   achin x-**at/\*Ø**-ax-<u>an</u>              rat

   FOC the man   COM-**2sg/\*3sg.ABS**-hear-<u>AF</u> you(sg.)

   'It was the man that heard you(sg.).'                    *[=(15a–b)]*

The way in which Kichean determines which argument will control the form of this single marker was the topic of chapters 3–4.

As far as regular transitives are concerned, it seems quite obvious that the 'absolutive agreement' probes $\pi^0$ and $\#^0$, posited in §4.4, would be parameterized to target only noun phrases bearing unmarked(='absolutive') case:

(279)  AGREEMENT ACCESSIBILITY: KICHEAN $\pi^0$, $\#^0$

   $\underbrace{\text{unmarked case}}_{\substack{\textit{accessible for} \\ \textit{φ-agreement}}}$ ≫ dependent case ≫ lexical/oblique case          *[=(179)]*

Next, let us consider the ergative markers. In §4.6.2, I suggested that all ergative agreement markers in Kichean may be clitics. This contrasts with the absolutive agreement paradigm, which was argued in §4.4 to be a combination of the spellout of valued features on the φ-probe (for 3rd person plural agreement), and clitics that arise when a [participant]-bearing argument is probed.

This bears significant similarity to the analyses of Basque put forth by Arregi & Nevins (2008, 2012) and in Preminger 2009—discussed briefly in §4.1. In Basque too, one finds both absolutive and ergative agreement markers on the finite verbal element (and in Basque, dative ones, too). But as argued by Arregi & Nevins and in Preminger 2009, the non-absolutive markers arise through completely indiscriminate clitic doubling of the corresponding (ergative or dative) argument. It is therefore not clear—in Basque or in Kichean—that these non-absolutive agreement markers involve syntactic probing per se, and therefore unclear that they fall under the purview of the Revised Moravcsik Hierarchy in the first place (see also the discussion of (202), in chapter 8).

This brings us to the AF construction. Here, we have two core arguments, *both* of which can be targeted by the $\varphi$-probes $\pi^0$ and $\#^0$ (see §4.4):

(280) RELATIVIZED PROBING FOR [PARTICIPANT] IN KICHEAN AF *[≈(66a–b)]*

    a. 1ST/2ND-PERSON SUBJECT, ANY OBJECT
    b. 3RD-PERSON SUBJECT, 1ST/2ND-PERSON OBJECT
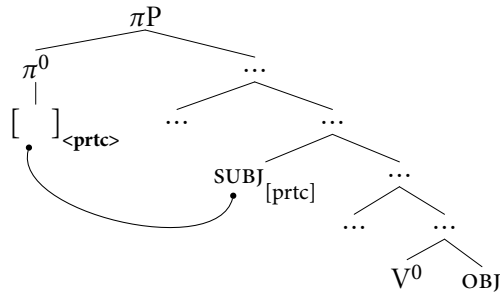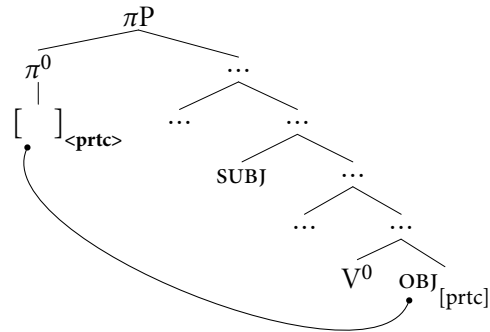


(281) RELATIVIZED PROBING FOR [PLURAL] IN KICHEAN AF *[≈(73a–b)]*
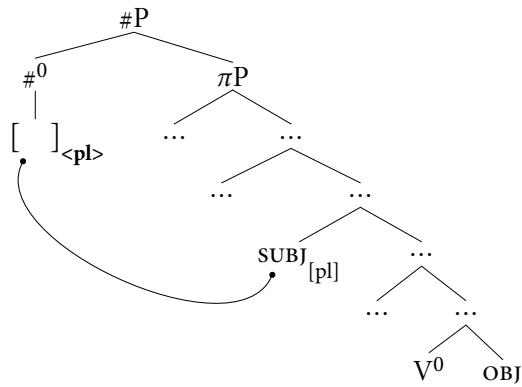
    a. PL SUBJECT, SG OBJECT
    b. SG SUBJECT, PL OBJECT
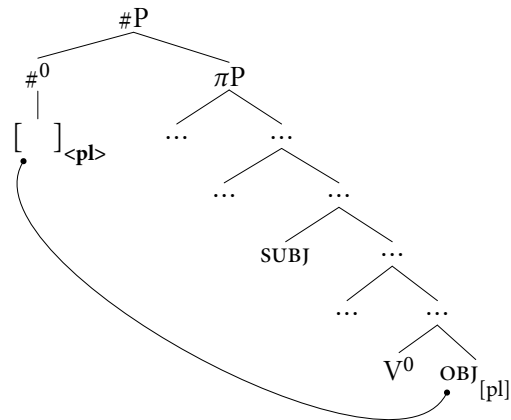


Clearly, given (279), this could only be possible if both arguments bear unmarked(='absolutive') case. The question how such a scenario could arise.

I follow Ordóñez (1995) in assuming that the Agent-Focus suffix (glossed "-AF") is similar to an applicative marker, in that it endows the VP with the ability to case-mark one more argument than it normally would; specifically, it assigns case to the Patient/internal argument. The AF marker is thus a case assigner, one that falls within the category of *lexical/oblique case*. Two notes are in order

regarding this categorization. First, while the AF marker is clearly a closed-class item, and would be classified as 'functional' in terms of the lexical-vs.-functional distinction, this is not the sense of the term 'lexical' in *lexical/oblique case*. The latter simply refers to case that is required by a particular lexical item (rather than, say, an entire category, or a particular syntactic configuration). The AF marker clearly satisfies this definition.

Second, while I have used the label 'lexical/oblique', this is meant as an (inclusive) disjunction. There is no requirement that the assigned case in fact be oblique; for example, some quirky-subject verbs in Icelandic assign accusative or genitive to their subjects (see Marantz 1991, Yip, Maling & Jackendoff 1987, Zaenen, Maling & Thráinsson 1985), even though neither of these two cases would be considered oblique.

The relevant question, then, is only how the assignment of absolutive by a dedicated lexical item can be implemented featurally—given that in §9.3.2, I suggested that unmarked case was the absence of otherwise valued case features. The answer, I believe, is the same one discussed in §8.4 and §9.3.1 with respect to the difference between failed agreement on the one hand, and successful agreement with a '3rd person singular' node, on the other. There, I argued that these two options, neither of which results in ill-formedness (or a "crash"), are often, if not always, given the same morphological spellout. Such morphological identity arises because what we call '3rd person singular' morphemes are the exponents inserted when a probe does not carry [plural], [participant] or [author] values. Featurally, however, the two could actually be distinguished—for example, by whether or not the probe carries a valued instance of $[\varphi]$, the root of the $\varphi$-feature geometry (§4.2.2–§4.2.3)—suggesting that there is a tendency (if not a universal) for no morphological exponence to be directly associated with feature-geometrical 'root' nodes like $[\varphi]$.

It has been argued that like the domain of $\varphi$-features, the domain of case values is also internally structured (see Caha 2009, for example). If so, it is possible that in this domain, too, there is a feature-geometrical 'root'; and there is the possibility for a valuation relation consisting *only* of this 'root' value. As with $\varphi$-features, neither this option nor the complete lack of valuation

would cause ill-formedness; but what we call 'unmarked case' in a given language could be the morphological form given to a nominal that lacked *marked* feature values—those associated with, e.g., dependent case, or oblique cases proper. This morphological form would then be afforded to a nominal lacking these marked case features, irrespective of whether the nominal carried a valued instance of this 'root' node. (And as with φ-features, there may be a tendency/universal not to associate any overt exponence with a 'root' node of this sort.)

On this view, what the AF marker does is simply value the case features on the internal argument, but without assigning it any of the *marked* values associated with dependent case or actual oblique cases. Just as with φ-features, a node that has been valued—even if the only feature value transmitted was the 'root' of the relevant feature-geometry—cannot enter into subsequent valuation relations (see the definitions of FIND and FIND$_φ$ in chapters 5 and 8, respectively).[17] This means that the internal argument cannot participate in subsequent case-competition relations, for example.

Case-discrimination in Kichean (schematized in (279)) would thus be sensitive to the absence marked case-feature values (dependent or oblique) on the target. This would render $π^0$ and $\#^0$ capable of targeting either a nominal that has not participated in case-feature valuation at all, or one that has participated in such valuation involving only the root node of the case feature structure. The former would be the fate of the external argument in the AF construction, while the latter would be the fate of the internal argument.

This would achieve the goal of rendering both core arguments in Kichean AF accessible, as far as case-discrimination is concerned, to φ-probing by $π^0$ and by $\#^0$ (as illustrated in (280–281), above).

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[17] This system will not be able to account for instances of 'case-stacking' (see Richards 2012, Schütze 2001a, Yoon 2004). I leave the question of how case-stacking can be integrated into this proposal for future research.

# Chapter 10

# Extensions & Outlook

## 10.1. The logic of $\varphi$-agreement as an exemplar of syntactic computation

We have seen in the previous chapters that $\varphi$-agreement adheres to the logic of *obligatory operations*: its obligatory nature *cannot* be reduced to representational properties of the structure it operates upon, or those that it leaves in its wake (as detail in chapter 5, in particular). Instead, the $\varphi$-agreement operation—which I have labeled FIND$_\varphi$—must be directly afforded obligatory status by the grammar.

There is an inherent tension between these results, and what many contemporary frameworks take the logic of syntactic computation to be. For concreteness, I will concentrate here on approaches that fall within the purview of the *Minimalist Program* (henceforth, MP; Chomsky 1995 *et seq.*)—though I believe the same tension exists with respect to other approaches as well, including unification-based frameworks such as HPSG (Pollard & Sag 1994, *a.o.*) and LFG (Bresnan 2001, *a.o.*).

As noted in the APPENDIX to chapter 5, syntactic computation in most MP-based accounts is driven by the need of certain features borne by lexical items to be 'checked' or 'deleted' (see also §2.2.1). The MP operations themselves (e.g. `Agree`, `Merge`) are neither *obligatory* nor *optional* in any meaningful sense; they are deployed by the computational system freely, constrained only by the need to ultimately reach a well-formed end-of-the-derivation representation.

At first glance, then, it may seem that the results of the previous chapters have the unfortunate consequence of casting $\varphi$-agreement as an outlier in the landscape of syntactic phenomena.

One logically possible response to this apparent exceptionality of $\varphi$-agreement is to argue that $\varphi$-agreement is an outlier in the landscape of syntactic phenomena because it is not actually part of that landscape; that it belongs in a distinct computational component of the grammar. This is essentially the approach taken by Bobaljik (2008) in arguing that $\varphi$-agreement is a post-syntactic operation (though the reasons cited here are not what motivated Bobaljik's proposal; see §9.1 for a review). But in chapters 8–9, we saw that such a move is not possible: $\varphi$-agreement, which operates on the basis of case, informs a syntactic process par excellence in movement to canonical subject

position (in non-quirky-subject languages). Relegating $\varphi$-agreement to an extra-syntactic module of the grammar is thus not possible.

Instead, in this section, I aim to show that such exceptionality is illusory; that the logic of $\varphi$-agreement, as argued for in the previous chapters, is not an outlier; and that syntactic phenomena that exhibit the same *obligatory operations* logic are actually quite common. I demonstrate this using examples from *Object Shift* (§10.1.1); the *Definiteness Effect* (§10.1.2); and finally, long-distance *wh*-movement (§10.1.3).

### 10.1.1. Object Shift

In this sub-section, I briefly discuss certain aspects of the phenomenon of *Object Shift* (OS), showing that it exhibits essentially the same obligatory operations logic that was argued for with respect to $\varphi$-agreement.

The literature on OS is quite vast (see Collins & Thráinsson 1996, Diesing 1996, 1997, Diesing & Jelinek 1993, Fox & Pesetsky 2005, Holmberg 1986, 1999, Rackowski 2002, Richards 2004, Sells 1998, Svenonius 2001, among many others); and one sub-section in a book devoted to a different topic cannot do it justice. Instead, in the context of this sub-section, I will treat OS largely as a given, focusing instead on the logic that relates its application or inapplication to other properties of the utterance—namely, *specificity*, as well as grammaticality/ungrammaticality.

There is a well-established correlation, in languages where OS is possible, between whether a noun phrase has undergone OS and whether it is interpreted as *specific* (Diesing 1992, 1996, Diesing & Jelinek 1993). Thus, for example, the noun phrase *þrjár bækur* ("three books") can only be interpreted specifically in the Icelandic (282a), where it has undergone OS; but in (282b), where it has stayed within the verb phrase, a non-specific interpretation is available (and, in fact, preferred).

(282)  a.  Ég las$_1$      [þrjár bækur]$_2$ aldrei [$_{VP}$ t$_1$ t$_2$ ]                    (Icelandic)

           I   read(PAST)  three books    never

           'There are three books that I never read.'

           (✔ *specific reading of "three books"* / ✗ *non-specific reading of "three books"*)

       b.  Ég las$_1$       aldrei [$_{VP}$ t$_1$ þrjár bækur ]

           I   read(PAST)  never        three books

           'I never read three books.'                          [*Thráinsson 2007:76*]

           (✔ *non-specific reading of "three books"* / **?** *specific reading of "three books"*)

But as (282b) already suggests, the alignment between OS and specificity is not perfect. To demonstrate this even more clearly, consider Holmberg's Generalization (Holmberg 1986, and much subsequent work; see also the references cited above with regard to OS). Holmberg's Generalization can be roughly characterized as follows: in Scandinavian, OS can only apply if the lexical verb has also vacated the verb phrase. Thus, in contexts where the verb cannot move (e.g. due to the presence of an auxiliary), the object is "trapped" (for OS purposes) within the VP. Interestingly, a specific interpretation is freely available for a "trapped" object of this sort, despite the fact that it has *not* undergone OS.

Thus, in (283a–b)—where OS is possible—specificity co-varies with the position of the object. In (284b), on the other hand, the presence of an auxiliary prevents verb-movement, which in turn precludes OS (284a). Crucially, in this scenario, the non-OS version is ambiguous between a specific reading and non-specific one:

(283)  VERB-MOVEMENT → SPECIFICITY CO-VARIES WITH OS

       a.  þau sýna$_1$ [viðtöl     við  Blair]$_2$ alltaf  [$_{VP}$ t$_1$ t$_2$ ] klukkan ellefu.

           they show  interviews with Blair   always          clock   eleven

           ~ 'Whenever there are interviews with Blair, they are always shown at 11 o'clock.'

                                                                    (*generic* **reading**)

b. þau sýna₁ alltaf   [_VP_ t₁ [viðtöl     við  Blair] ] klukkan ellefu.

    they show always       interviews with Blair   clock    eleven

    ~ 'It is always the case that they show interviews with Blair at 11 o'clock.'

<div align="right">(<b><i>existential</i></b> reading)</div>

(284) ꜱᴍᴍᴏʙɪʟᴇ ᴠᴇʀʙ → ꜱᴘᴇᴄɪꜰɪᴄɪᴛʏ-ɪɴ-ꜱɪᴛᴜ ᴘᴏꜱꜱɪʙʟᴇ ꜰᴏʀ "ᴛʀᴀᴘᴘᴇᴅ" ᴏʙᴊᴇᴄᴛ

    a. * þau hafa [viðtöl      við  Blair]₂ alltaf  [_VP_ sýnt     t₂ ] klukkan ellefu.

        they have  interviews with Blair   always       shown     clock    eleven

    b.     þau hafa alltaf  [_VP_ sýnt   [viðtöl      við  Blair] ] klukkan ellefu.

        they have always     shown  interviews with Blair   clock    eleven

        'They have always shown interviews with Blair at 11 o'clock.'       (<b><i>ambiguous</i></b>)

<div align="right">[<i>Thráinsson 2007:78; examples modeled after Vikner 1997</i>]</div>

Let us now turn to Tagalog. As shown by Rackowski (2002), when OS is ruled out in Tagalog, one finds the same suppression of the normal co-variance between OS and specificity; this, despite the fact that the actual structural conditions on OS in Tagalog are different than they are in Icelandic.

Since word order is rather free in Tagalog (a fact which Rackowski explains in terms of Richards' 1993 A-bar scrambling analysis), it is not a reliable indicator of whether or not OS has taken place. But as Rackowski shows, OS in Tagalog determines which argument will be agreed with by the verb (cf. the discussion of "positional" accounts of omnivorous agreement, in §4.5.3).

Thus, in an example like (285a), the object remains within VP, does not control agreement on the verb, and crucially, receives a non-specific interpretation. In (285b), on the other hand, the object has shifted out of VP, controls agreement on the verb, and receives a specific interpretation:

(285) a. **M**-aglu-luto    ang lalaki ng   adobo.                   (Tagalog)

       ɴᴏᴍ-ᴀꜱᴘ-cook ᴀɴɢ man  ᴄᴀꜱᴇ adobo

       'The man will cook adobo.'             (<b><i>non-specific reading of "adobo"</i></b>)

b. Lu-lutu-**in**     ng    lalaki ang  adobo.

   ASP-cook-**ACC** CASE man   ANG adobo

   'The man will cook the adobo.'              (***specific reading of "adobo"***)

                                        [*Rackowski & Richards 2005:569–570*]

The structural conditions on OS in Tagalog are quite simple: in order to undergo OS, a noun phrase must be the structurally highest argument within the VP. This much, in fact, is true of Icelandic, as well (though as discussed earlier, this does not exhaust the structural conditions on OS in Icelandic):

(286) a. **?*** Ég lánat$_1$ bækurnar$_2$ ekki [$_{VP}$ t$_1$ Maríu     t$_2$].

      I   lend  books.ACC not      Maria.DAT

b.   Ég lána$_1$ Maríu$_2$    ekki [$_{VP}$ t$_1$ t$_2$ bækurnar].

     I   lend  Maria.DAT not       books.ACC

     'I do not lend the books to Maria.'           [*Collins & Thráinsson 1996*]

Returning to Tagalog, if we use a non-prepositional benefactive—which Rackowski argues, forces a high-applicative structure (Pylkkänen 2002, 2008)—then only the benefactive argument can undergo OS:

(287) a. * Ni-luto-**Ø**      ni    Romeo ng   babae  ang  adobo.

      ASP-cook-**ACC** CASE Romeo CASE woman ANG adobo

b.   **I**-p.in.agluto  ni    Romeo ng    adobo ang  babae.

     **OBL**-ASP.cook CASE romeo   CASE adobo ANG woman

     'Romeo cooked (the) adobo for the woman.'     [*Rackowski & Richards 2005:571–572*]

                (***specific reading of "woman", specific/non-specific reading of "adobo"***)

As expected, OS of *babae* ("woman") forces a specific reading of this argument; but what is of greater interest here is the fate of the noun phrase *adobo* in (287b): it can now receive *either* a specific reading or a non-specific one. This contrasts with the fate of the same Patient argument, of the very same verb (*luto* "cook"), in (285a). There, this Patient argument did not undergo OS either—but crucially, *could have* (as demonstrated by (285b)); and it is there that non-OS entailed non-specificity.

As noted above, the conditions under which OS is possible or impossible are subject to cross-linguistic variation. In Tagalog, OS is possible only when a noun phrase is the highest argument in the VP; in Icelandic, this same condition is operative, but there is the added condition of verb-movement (Holmberg's Generalization). However, if we modularize the language-particular conditions on OS, the following consistent pattern (already highlighted by Vikner 1997) emerges:

(288)

|  | OS possible | OS impossible |
|---|---|---|
| non-shifted noun phrase | *non-specific* | *ambiguous (specific/non-specific)* |
| shifted noun phrase | *specific* | N/A |

Crucially, this pattern lends itself remarkably well to an *obligatory operations* approach. The idea is that OS, like $\varphi$-agreement (or more accurately, like FIND$_\varphi$), is an operation; and it can culminate successfully or unsuccessfully, depending on (partially language-specific) structural conditions. But it applies, indiscriminately and obligatorily, to *every specific noun phrase*:

(289) AN *OBLIGATORY OPERATIONS* MODEL OF OS

$x_{[+specific]} \rightarrow Shift[x]$

where *Shift* is the operation that causes a noun phrase to vacate the VP, and is subject to language-particular structural conditions on its successful culmination

On this view, triggering *Shift* on a noun phrase that does not satisfy the relevant structural conditions—e.g. a noun phrase that is not the highest argument in VP; or in Icelandic, a noun

phrase in a VP that has not been vacated by the lexical verb—is akin to triggering $\text{FIND}_\varphi(f)$ in a structure where there is no accessible target bearing $f$. In both cases, the operation in question will fail to culminate successfully; but in neither will the result be ill-formedness (or a "crash"). The only result will be the lack of the effects that successful culmination of the operation would have brought about: for $\text{FIND}_\varphi$, this would have been the valuation of $f$ on the probe; for *Shift*, this would have been the movement of the argument in question out of the VP.

Thus, we can assume that *Shift* is triggered for every [+specific] noun phrase in the derivation. Consider, for example, the sub-case of (287b), above, in which all the arguments are in fact specific ("Romeo cooked the adobo for the woman"). Given (289), *Shift*["the adobo"], *Shift*["the woman"], and even *Shift*["Romeo"], will all be obligatorily triggered. Since *Romeo* is already outside of the VP, the application of *Shift*["Romeo"] will be vacuous. *Shift*["the woman"] will be successful, moving that noun phrase out of the VP. Finally, since the noun phrase "the adobo" is not the highest argument in the VP, *Shift*["the adobo"] will fail; but the only result of this failure will be that this Patient argument will not, in fact, vacate the VP.

The overall result will be exactly as shown in (288): for noun phrases that can undergo OS, specificity will co-vary with whether OS has applied; but for those that cannot, specificity will be possible in situ.

This mirrors precisely what we saw in earlier chapters concerning $\varphi$-agreement: in syntactic configurations where $\varphi$-agreement is possible, its application will co-vary with grammaticality; but precisely in those configurations where $\varphi$-agreement is impossible—e.g. due to the outright absence of an appropriate target in the derivation—grammaticality is possible *without* $\varphi$-agreement.

None of this is meant to suggest that the obligatory operations account of OS sketched in (289) is the only possible account of the pattern in (288), Diesing (1997) and Vikner (1997) offer different accounts, based on covert movement and ranked violable constraints, respectively. The point of the current discussion, as noted at the outset, is merely to show that the logic of obligatory operations

exhibited by $\varphi$-agreement is by no means unique in the landscape of syntactic phenomena; and thus, that there is no argument to be had from "exceptionality" against the results of previous chapters.

## 10.1.2. The Definiteness Effect

The *Definiteness Effect* (DE; Milsark 1974, and much subsequent work) furnishes a very similar case to that of Object Shift (§10.1.1), demonstrating the existence of yet another syntactic phenomenon whose logic mirrors the obligatory operations logic argued to hold of $\varphi$-agreement.

Broadly speaking, the DE is a prohibition against 'strong' determiners (such as *the*) heading noun phrases that fail to move to subject position:[1]

(290)  a.  <u>The boy/a boy</u> seems to be playing in the garden.

b.  There seems to be <u>a boy/*the boy</u> playing in the garden.

However, this restriction is crucially lifted when it comes to noun phrases that *cannot* become subjects. For example, a dative experiencer can be freely added to (290), and it can have a definite determiner even though it does not move to subject position:

(291)  a.  The boy/a boy seems **to <u>the girls</u>** to be playing in the garden.

b.  There seems **to <u>the girls</u>** to be a boy playing in the garden.

One could imagine that the relevant factor in the suspension of the DE for *the girls* in (291a–b) is its thematic role, its obliqueness, or some other property other than its inability to become a subject per se. But the juxtaposition of these data with their Icelandic counterparts demonstrates quite vividly that what is at stake is indeed the ability to move to subject position. In the Icelandic counterpart of (291), it is the dative experiencer—not the embedded nominative subject—to which the DE applies (Sigurðsson 1989):

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[1]The empirical patterns surveyed in this sub-section—and in fact, in all of §10.1—are highly reminiscent of what Bobaljik & Wurmbrand (2012) have called '3/4 signature' effects. Unfortunately, a detailed comparison of the two is beyond the scope of the current work.

(292) a. * það   virtist   [**dómurunum**]$_{\text{DAT}}$ [kona/konan]$_{\text{NOM}}$        hafa      skrifað

    **EXPL** seemed **judges.the.DAT**      woman.NOM/woman.the.NOM have.INF written

    bókina.

    book.the.ACC

    'It seemed to the judges that a/the woman had written the book.'

  b. ? það   virtist   [**bara tveim af dómurunum**]$_{\text{DAT}}$ [kona/konan]$_{\text{NOM}}$

    **EXPL** seemed **just two  of judges.the.DAT**      woman.NOM/woman.the.NOM

    hafa      skrifað bókina.

    have.INF written book.the.ACC

    'It seemed to only two of the judges that a/the woman had written the book.'   *[≈(213)]*

    [*Halldór Ármann Sigurðsson, p.c.*]

As already noted in §8.4, in Icelandic dative experiencer constructions like (292), it is the dative argument—rather than the nominative subject of the embedded non-finite clause—that moves to subject position of the matrix clause when an expletive is absent, as in (293). (Note also that despite their English translations, the embedded clauses in (292–293) are both non-finite.)

(293) [**Dómurunum**]$_{\text{DAT}}$ virtist   **t**$_1$ [kona/konan]$_{\text{NOM}}$        hafa      skrifað bókina.

    **judges.the.DAT**      seemed    woman.NOM/woman.the.NOM have.INF written book.the.ACC

    'It seemed to the judges that a/the woman had written the book.'                   *[≈(214)]*

Crucially, as a comparison of (293) with (292a) reveals, movement of this dative experiencer to subject position—just as with movement of nominatives to subject position in English—alleviates the ungrammaticality brought on by the DE.

  It is also not the case that the DE in Icelandic simply applies to datives instead of nominatives. When the closest DP to subject position is nominative, Icelandic reverts to the behavior seen

in English—i.e., the DE applies to the nominative argument—confirming that the ability to move to subject position is indeed the relevant factor:[2]

(294) a.  **Konan** hefur skrifað bókina.

    **woman.the.NOM** has    written book.the.acc

    'The woman has written the book.'

  b. * það  hefur **konan** skrifað bókina.

    EXPL has   **woman.the.NOM** written book.the.ACC

(295) a. **?? Kona** hefur skrifað bókina.

    **woman.NOM** has   written book.the.ACC

    'A woman has written the book.'

  b. ? það  hefur **kona** skrifað bókina.

    EXPL has   **woman.NOM** written book.the.ACC

    'A woman has written the book.'       [*adapted from Hrafnbjargarson 2004:155;*

                                    *judgments are Halldór Ármann Sigurðsson's, p.c.*]

We thus have a very similar state of affairs to the one involving Object Shift (§10.1.1):

(296)                                                       (cf. (288))

| | MtoCSP possible | MtoCSP impossible |
|---|---|---|
| non-subject noun phrase | *indefinite only* | *both possible (definite/indefinite)* |
| subject noun phrase | *definite* (but see below) | N/A |

As with Object Shift, the conditions on MtoCSP (movement to canonical subject position) are subject to cross linguistic variation—an issue discussed extensively in chapter 8. Crucially, however, once we abstract away from these language specific conditions, a familiar picture emerges: with

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[2]Note also that (294–295) are run-of-the-mill transitives—highlighting that the Definiteness Effect is not necessarily restricted, cross-linguistically, to what are traditionally thought of as 'existential' constructions.

noun phrases for which MtoCSP is possible, definiteness forces MtoCSP; but when MtoCSP is impossible, definiteness appears to come "for free", and is available to a noun phrase in situ.

We can therefore capture this behavior in terms of an *obligatory operation* (§2.2.3), along the same lines of the one proposed for Object Shift in (289), above. Suppose that MtoCSP itself is an operation (in this technical sense), and that the conditions formulated in chapter 8, repeated below, represent the structural conditions on its successful culmination:

(297)  MOVEMENT TO CANONICAL SUBJECT POSITION (MtoCSP):

    TWO TYPOLOGICAL VARIATIONS (revised version)                       *[=(207)]*

    a.  IN A QUIRKY-SUBJECT LANGUAGE                            *(e.g. Icelandic)*

        $\text{MtoCSP}_{\text{QSL}}$  = *Move*(DP)

    b.  IN A NON-QUIRKY-SUBJECT LANGUAGE                 *(e.g. English, French)*

        $\text{MtoCSP}_{\text{NQSL}}$  = *Move*(XP successfully targeted by FIND$_\varphi$)

In other words, the structural conditions on the application of the MtoCSP operation are: in a quirky-subject language (like Icelandic), its target must be the closest DP to the landing site; and in a non-quirky-subject language (like English or French), its target must be a noun phrase successfully targeted by $\varphi$-agreement (i.e., FIND$_\varphi$).

Now suppose that definiteness of a noun phrase invariably triggers the application of the MtoCSP operation to that noun phrase; and that the insertion of an expletive to occupy an otherwise empty canonical subject position occurs in the morpho-phonological component, to satisfy what is essentially a morpho-phonological requirement (see Bobaljik 2002, Landau 2007, and references therein, as well as §10.2).

(298)  AN *OBLIGATORY OPERATIONS* MODEL OF THE DE (first revision)

    $x_{[+definite]} \rightarrow MtoCSP[x]$

    where $MtoCSP[x]$ will fail if the relevant condition in (297) is not met

In a structure like (299–301), below, the MtoCSP operation will be triggered for *both* the dative experiencer and the embedded nominative subject—since both are definite:

(299) * There seems to **the girls** to be **the boy** playing in the garden.

(300)   **The boy**$_1$ seems to **the girls** to be **t**$_1$ playing in the garden.

(301) a. * **The girls**$_1$ seems to **t**$_1$ to be **the boys** playing in the garden.

    b. * To **the girls**$_1$ seems **t**$_1$ to be **the boys** playing in the garden.

Due to the language-particular conditions on MtoCSP in English (297b), the operation will succeed when applied to the embedded nominative subject (300), and fail when applied to the dative experiencer (301). (See the discussion at the end of §8.4, regarding the somewhat exceptional properties of dative intervention in English.)

Given that the triggering of the MtoCSP operation is obligatory for every definite noun phrase, there will simply be no derivation allowed by the grammar that leads to (299). This example is therefore on a par with instances of "gratuitous non-agreement" (§5.3).

The MtoCSP operation will fail when applied to the dative noun phrase because that argument, in English, is not targeted by $\varphi$-agreement (i.e., by FIND$_\varphi$), in violation of (297b). But crucially, given the logic of the obligatory operations model (§2.2.3), this failure does not result in ill-formedness. The result will simply be the absence of the effects that the successful culmination of the operation would have brought about—in this case, movement of the dative experiencer to subject position.

It is important to note that this does not conflict with the analysis in chapter 8, where it was argued that MtoCSP *can*, under certain conditions, give rise to outright ungrammaticality. The crucial distinction is that there, we were considering strings whose only parse was one where MtoCSP had successfully applied, but the noun phrase to which it had applied was such that the structural conditions in (297) could not have been met:

(302) * Jean₁ semble [à  Marie]_DAT [ t₁ avoir    du talent ].

   Jean  seems    to Marie        have.INF of  talent

   'Jean seems to Marie to have talent.'                                    *[=(185)]*
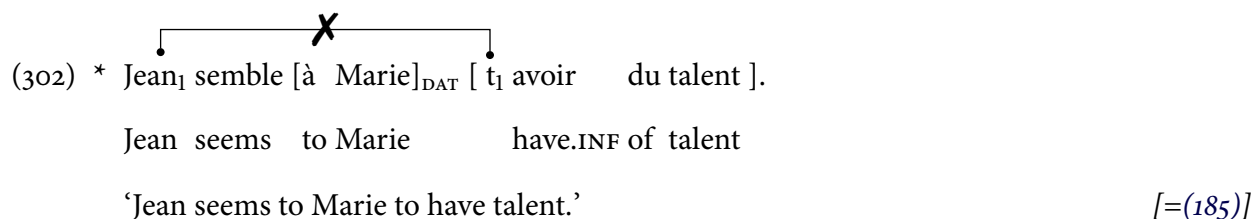
In (302), the subject is to the left of the finite verb; the only possible parse is therefore one in which MtoCSP has successfully applied to *Jean*. However, as discussed extensively in chapter 8, minimality prevents FIND$_\varphi$ from targeting this subject in (302). Thus, (302) is ungrammatical because there is no derivation in which MtoCSP has been supplied with the necessary input for its application—meaning there is no derivation allowed by the grammar that generates this output string (see §2.2.3 for a general discussion of ungrammaticality of this sort).

In fact, we have already seen this type of ungrammaticality in English, as well. In examples like (301a–b), above, the string is only compatible with a parse in which MtoCSP has applied to the dative experiencer (with or without the preposition, *to*). But since datives never control $\varphi$-agreement in English, we can be certain that FIND$_\varphi$ has not successfully applied to this dative experiencer, meaning the input to MtoCSP was in fact unavailable—resulting in the attendant ungrammaticality.

Crucially, nothing said so far—including the claim that MtoCSP is obligatorily triggered for any [+definite] noun phrase in the derivation—rules out the possibility that MtoCSP could be triggered in other ways, as well. This seems to be a genuine point of variation between Icelandic and, e.g., English: in English, MtoCSP is also obligatorily triggered for any External Argument; whereas in Icelandic, it is not. This is the equivalent, in the proposed system, of the typological observation that Icelandic has a *Transitive Expletive Construction* (see, e.g., (295b), as well as numerous examples in chapter 8), whereas English does not—a point of cross-linguistic variation that must be captured one way or another. In the current system, this can be captured as follows:

(303) AN *OBLIGATORY OPERATIONS* MODEL OF THE DE (second revision)

    a. $x_{[+definite]} \rightarrow MtoCSP[x]$                                  *(universal)*

    b. $x_{[\text{Ext Arg}]} \rightarrow MtoCSP[x]$         *(parameterized; active in English, but not in Icelandic)*

This derives the contrast between the Icelandic (304a–b), repeated from earlier, and their English counterparts, given in (305a–b):

(304)   a. **??** **Kona**         hefur skrifað bókina.

         **woman.NOM** has     written book.the.ACC

         'A woman has written the book.'

    b. **?** það  hefur **kona**         skrifað bókina.

         EXPL has    **woman.NOM** written book.the.ACC

         'A woman has written the book.'                        *[=(295a–b)]*

(305)   a.   **A woman** has written the book.

    b. * There has **a woman** written the book.

Note that on the proposed approach, MtoCSP is also triggered for *bókina* ("book.the.ACC") in (304) and *the book* in (305), since both are [+definite]. In both cases, the operation fails, because the noun phrase in question does not meet the structural conditions for the successful application of MtoCSP in that language (it is neither the closest DP to subject position, as required in Icelandic, nor is it targeted for $\varphi$-agreement, as required in English). As before, no ill-formedness arises from this failure; instead, the noun phrases *bókina* ("book.the.ACC") and *the book* simply fail to move to canonical subject position, as attested.

Finally, if we allow the MtoCSP operation to optionally apply in English to *any* argument (regardless of definiteness)—or perhaps, have its application to indefinites be regulated by discourse properties of the nominal in question—we can derive the behavior of *derived* subjects with respect to definiteness:

(306) a.   **A woman** has arrived.

    b.   There has arrived **a woman**.

(307) a.   **The woman** has arrived.

    b.  * There has arrived **the woman**.

In (307), the [+definite] noun phrase *the woman* triggers obligatory application of MtoCSP, ruling out (307b). But in (306), there is no [+definite] noun phrase, nor is there an External Argument (since the verb is unaccusative), meaning MtoCSP can apply optionally—yielding the observed pattern. Recall that allowing MtoCSP to apply freely to noun phrases that are unable to move to subject position (e.g. direct objects of transitives, etc.) is harmless in this system—since as with *bókina/the book* in (304–305), the failure of MtoCSP in such cases will have no adverse effects on the derivation.

As with the discussion of Object Shift in §10.1.1, the point here is not that there are no other possible accounts of these DE facts. Rather, the point is that the behavior of the DE vis-à-vis movement to canonical subject position is, at the very least, entirely compatible with an obligatory operations logic (where operations are obligatorily triggered that may or may not culminate successfully, and whose failure does not result in ungrammaticality).

In particular, the fact that the DE is active precisely when movement of a given nominal to subject position is possible—and is suspended elsewhere—can be accounted for straightforwardly if movement to canonical subject position is the consequence, rather than the cause, of definiteness. Movement to subject position is thus triggered *wherever* definiteness arises, succeeding only where structural conditions permit.

We therefore have another illustration that $\varphi$-agreement is not unique, in the landscape of syntactic phenomena, in the obligatory operations logic that it exhibits.

### 10.1.3. Long-distance *wh*-movement

In this sub-section, I consider the standard MP-style treatment of long-distance *wh*-movement, as in the accounts of Chomsky (2000, 2001) and McCloskey (2002). The relevant question is how movement of a *wh*-phrase that has completely exited an embedded (declarative) clause, such as the movement of *what* in (308), is driven:

(308)  What did Mary say that John wanted?

I will assume here, with most of the contemporary syntactic literature, that the *wh*-phrase has an intermediate landing site at the periphery of the embedded clause. Let us focus on the particular step of *wh*-movement that lands at the embedded clausal periphery:

(309)  **What** did Mary say $\left[ \mathbf{t_{what}} \left[ _{C^0} \text{ that} \right] \text{John wanted } \mathbf{t_{what}} \right]$?

This step of *wh*-movement cannot be the result of the matrix $C^0$ being interrogative, for at least two reasons. First, given reasonable notions of cyclicity, movement as a response to features of the matrix $C^0$ would land at the periphery of the matrix clause, not of the embedded one. Second, assuming syntactic structure is built incrementally from the bottom up, the matrix $C^0$ will not have even been merged into the structure at the point in the derivation at which *wh*-movement to the embedded clausal periphery occurs.

Thus, if we maintain (as Chomsky and McCloskey do) that *wh*-movement is feature-driven, then the embedded declarative $C^0$ in an example like (308) must carry a feature—call it *<wh>*— that attracts the *wh*-phrase to the periphery of its own clause:

(310)  What did Mary say $\left[ \mathbf{t_{what}} \left[ _{C^0} \text{ that} \right]_{<+\boldsymbol{wh}>} \text{John wanted } \mathbf{t_{what}} \right]$?

There is a problem, however, with this logic—one whose general form should by now be quite familiar: *wh*-movement is obligatory when possible, but when it is impossible, its absence is

tolerated.[3] What looks like the very same declarative $C^0$ has clearly failed to attract a *wh*-phrase (because there is none to attract) in an example like (311), and yet the result is well-formed:

(311)   Mary said $\left[\ \left[_{C^0} \text{that}\right] \text{John wanted an armadillo}\right]$.

Chomsky and McCloskey hold constant that features that drive movement are 'uninterpretable' (i.e., derivational time-bombs; §2.2.1). This forces them to assume that the embedded declarative $C^0$ in an example like (308) is not the same lexical item as the one found in an example like (311): the former comes equipped with the aforementioned *<wh>* feature, while the latter does not.

McCloskey (2002) takes the behavior of the Irish declarative complementizer system as support for the existence multiple featurally-distinct variants of declarative $C^0$. As is quite well-known, the Irish declarative complementizer takes a different form depending, among other things, on whether or not *wh*-movement has crossed it (Adger & Ramchand 2001, Duffield 1995, Harlow 1981, McCloskey 1976, 1979, 1990, 2001, Noonan 1997, Sells 1984). It seems to me, however, that these Irish facts do not actually demonstrate that the different variants of the complementizer in question are *featurally* distinct. Suppose there was only one possible feature structure associated with the declarative complementizer in Irish. The different forms that the complementizer takes could then just as easily be the result of context-sensitive spellout of $C^0$; in particular, the *aL* form would be the spellout of $C^0$ whose specifier is filled (by movement), and the *go* form would be the spellout of $C^0$ whose specifier is empty.[4] If context-sensitive spellout of terminals is a necessary property of grammar—and it certainly seems to be (Halle & Marantz 1993, among many others)—then there is nothing about the morphology of the Irish complementizer that favors an account involving multiple featurally-distinct lexical entries for declarative $C^0$.

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[3] See also Bošković 2007, Frampton & Gutmann 2006, and references therein, for a discussion of this treatment and the problems it faces.

[4] The caveat that *aL* is only inserted when the periphery is filled *by movement* is necessary to distinguish it from the *aN* form, associated with peripheries hosting base-generated operators (McCloskey 2002). One can avoid making direct reference to movement vs. base-generation in the morphological component by assuming that the context relevant to *aL* is merely a non-empty periphery (without direct reference to movement or lack thereof), but that *aN* is a more specific form whose insertion is triggered by specific types of operators associated with resumption. *aL* would then simply be the *elsewhere* form.

Treating declarative complementizers as a featurally-homogenous class, of course, resurrects the problem caused by the obligatoriness of *wh*-movement in an example like (308), given its tolerated absence in an example like (311). Below, I sketch an account of this effect within the obligatory operations model (§2.2.3); the point here is merely that the morphology of Irish complementizers does not, in fact, constitute an argument in favor of one of these approaches over the other.

More important for the current purposes, however, is the observation that the issue raised by cases like (308–311) is not actually restricted to declaratives, in the first place. It has been observed that there are languages where *wh*-movement out of interrogatives is possible (i.e., languages that tolerate violations of the *wh*-Island Condition). These include Italian, Hebrew, and—under certain circumstances—even English (Pesetsky 1982, Reinhart 1981, Rizzi 1982). In these languages, the very same issue identified above with respect to embedded declaratives arises with embedded interrogatives, as well:

(312)  eyzo    matana$_2$ Dina šaxex-a    [ t$_2$ le-mi$_1$    Dan natan t$_1$ t$_2$ ]?              (Hebrew)

which.F gift$_F$    Dina forgot-3sg.F    DAT-who Dan gave

'Which gift did Dina forget to whom Dan gave?'        [*adapted from* Preminger 2010b:201]

(≡'Which is the gift$_i$ such that Dina forgot who Dan gave that gift$_i$ to?')

(313)  Dina šaxex-a    [ le-mi$_1$    Dan natan t$_1$ et    ha-matana ].

Dina forgot-3sg.F    DAT-who Dan gave      ACC the-gift$_F$

'Dina forgot to whom Dan gave the gift.'

In both (312) and (313), the embedded clause is interrogative; but as with the English examples above, we have (secondary) *wh*-movement in (312), juxtaposed with the tolerated absence of (secondary) *wh*-movement in (313).

The feature-driven account of long-distance *wh*-movement would thus have to posit that there are two featurally-distinct variants of the interrogative complementizer, as well as two featurally-distinct variants of the declarative one (at least for languages of this sort).

The obligatory operations logic offers a rather appealing alternative to this proliferation of posited complementizer variants. Suppose that just like FIND$_\varphi$ is triggered upon merger of a $\varphi$-probe (i.e., a head H$^0$ bearing unvalued $\varphi$-features, or their feature-geometric equivalent; §4.2.3), the merger of a complementizer—be it declarative or interrogative—obligatorily triggers an operation that displaces a *wh*-phrase to the clausal periphery:[5]

(314)   AN *OBLIGATORY OPERATIONS* APPROACH TO *WH*-MOVEMENT

C$^0$ → *Displace*(*wh*)

It is not clear that the landing site of movement even needs to be specified in (314), since considerations of cyclicity will mandate that (314) be triggered immediately upon the merger of C$^0$ (and no later); and the same considerations will mandate that the landing site be at the root of the structure built up until that point (i.e., at the CP level). Similarly, minimality need not be specified, either (cf. the discussion of minimality with respect to MtoCSP, in §8.4).

Triggering *Displace*(*wh*) in a structure that lacks an accessible *wh*-phrase is akin to triggering FIND$_\varphi$($f$) in a structure that lacks an accessible $f$-bearing nominal (as is the case, for example, in Kichean AF clauses that lack 1st/2nd person or plural arguments; see §5.3). The operation will fail, but as with FIND$_\varphi$, this will not result in ill-formedness. It will simply result in no *wh*-phrase being displaced.

Thus, both in (315) and in (316) (repeated from earlier), merging of the embedded C$^0$ will obligatorily trigger *Displace*(*wh*):

(315)   What did Mary say $\left[t_{\text{what}} \left[_{C^0} \text{that}\right]\right.$ John wanted $t_{\text{what}}\left.\right]$?                    *[=(309)]*

(316)   Mary said $\left[ \left[_{C^0} \text{that}\right]\right.$ John wanted an armadillo$\left.\right]$.                    *[=(311)]*

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[5]I avoid using the term "Move(*wh*)", here, to prevent confusion with the *Government & Binding* notion of the same name (Chomsky 1981). The latter is crucially different, in that its application was assumed to be "free"—rather than obligatory, and triggered by specific lexical items.

The operation *Displace(wh)* will culminate successfully in (315), and fail in (316) (due to the absence of an appropriate target). Both derivations will then proceed unhindered; and in both cases, when the matrix $C^0$ is merged, *Displace(wh)* will again be triggered. As before, the operation will find a suitable target in (315) (where *what* is now at the edge of the embedded clause), but will find no such target in (316), again resulting only in the lack of displacement.

I assume here that in *pair-/tuple-list* questions (e.g. *Who thinks that the dog ate what?*), all *wh*-phrases undergo movement into the matrix clause (see Nissenbaum 2000); and that in a language like English, it happens to be the case that PF pronounces the highest/leftmost of these *wh*-chains at the head of the chain, and all others at the foot of the chain (compare this with Bulgarian, for example; Richards 2001, Rudin 1988).

If any $C^0$—be it declarative or interrogative—triggers the application of *Displace(wh)*, we must ask ourselves why the matrix $C^0$ in an example like (317), below, fails to displace the *wh*-phrase located at the periphery of the embedded interrogative:

(317)   John investigated [who $C^0$ the money was sent to $t_{who}$].

Note, however, that *any* theory of *wh*-movement needs to say something about why *wh*-phrases that are interpreted in the scope of an interrogative are unable to move further. This is equally necessary in the feature-driven approach to *wh*-movement. Suppose that the *<wh>*-equipped version of declarative $C^0$ is chosen to head the matrix clause in (317) (or, if root declaratives lack a CP layer, an essentially parallel example can be constructed by using (317) as the complement to a verb that takes declarative CP complements). Without further stipulation, this declarative $C^0$ should be able to attract *who* out of the embedded interrogative, contrary to fact.

The same issue is raised by the Hebrew example in (318), repeated from earlier:

(318)    eyzo     matana$_2$ Dina šaxex-a     [ $t_2$ le-mi$_1$     Dan natan $t_1$ $t_2$ ]?          (Hebrew)

      which.F gift$_F$     Dina forgot-3sg.F     DAT-who Dan gave

      'Which gift did Dina forget to whom Dan gave?'          *[=(312)]*

      ($\equiv$'Which is the gift$_i$ such that Dina forgot who Dan gave that gift$_i$ to?')

In Preminger 2010b, I argued that a *wh*-phrase like *le-mi* ("DAT-who") in the Hebrew (318) is not located in [Spec,CP] of the embedded interrogative, but rather in a lower position within the left periphery. If so, there must be something that prevents the embedded C$^0$ in (318) from targeting this very *wh*-phrase for further movement, instead of the lower *wh*-phrase *eyzo matana* ("which.F gift$_F$"). Examples like (318) therefore demonstrate, in one and the same datum, that while *wh*-phrase are capable of escaping an interrogative clause, they still cannot do so when the *wh*-phrase in question is interpreted within the scope of that interrogative clause.[6]

Perhaps the logic of *activity* and *inactivation* (which was shown, in §8.3.1, to be problematic when it came to $\varphi$-agreement) can be successfully applied to this empirical domain. Alternatively, one could pursue a more structurally-based approach, where the scope position of a *wh*-phrase is by its very nature a terminal position, inaccessible to further movement (as in Rizzi & Shlonsky's 2007 'Criterial Freezing' proposal, for example; see also Den Dikken 2009).[7]

Since this issue arises in both an obligatory operations approach to *wh*-movement (as in (314)), and in a feature-driven one (Chomsky 2000, 2001, McCloskey 2002)—and therefore, does not favor either approach over the other—I will not speculate on it further here.

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[6]Thanks to Bronwyn Bjorkman for helpful discussion.

[7]On either of these approaches, *Displace(wh)* triggered by the matrix C$^0$ in an example like (317) will simply fail to find an accessible, movable target. This is comparable to FIND$_\varphi$ being triggered when the closest nominal is inaccessible with respect to case-discrimination (e.g. a dative nominal in French; see §8.4). The operation will once again fail without any adverse effects on the derivation.

Let us now turn to the ungrammaticality of a case like (319):[8]

(319)  *  $\left[_{interrogative}\right.$ Mary said $\left[\left[_{C^0}\text{ that}\right]\right.$ John wanted what$\left]\right]$?

On the feature-driven approach, a lack of *wh*-displacement in the embedded clause in (319) would be possible, in and of itself, provided that the *<wh>*-less variant of declarative $C^0$ were selected as the head of the complement of *said*. But given that the matrix $C^0$ is interrogative, it must carry a *<wh>* feature. Locality considerations (e.g. the *Phase Impenetrability Condition*; Chomsky 2001) will now prevent this feature from displacing the *wh*-phrase directly from its position inside the embedded clause. Recall that on this feature-driven approach, the *<wh>* feature on $C^0$ constitutes a derivational time-bomb (§2.2.1); this failure to locate an accessible *wh*-phrase will therefore result in ungrammaticality.

On the obligatory operations approach sketched in (314), on the other hand, *Displace(wh)* is obligatorily triggered when the embedded $C^0$ is merged. Since the embedded clause in (319) contains an accessible *wh*-phrase (namely, *what*), there is no possible derivation in which this *wh*-phrase is not displaced to the periphery of the embedded clause.

Thus, under the obligatory operations approach, there do not have to be two variants of the declarative complementizer, or two variants of the interrogative complementizer.[9] This highlights a particular point of difference between the two approaches. On the feature-driven approach, long-distance *wh*-movement involves a choice of complementizer (between *<wh>*-bearing $C^0$, and "plain" $C^0$). Crucially, the correctness of a given choice cannot be evaluated until the matrix periphery has been constructed—since that, on this approach, is where the ill-formedness of an example like (319) arises.

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[8] As in many other accounts, I assume here that 'echo-questions' (e.g. *You ate WHAT?!*) involve a distinct kind of *wh*-element (as suggested by the unique stress/intonation contour on these particular *wh*-elements), and that these 'echo' *wh*-elements do not constitute viable targets for *Displace(wh)*.

[9] Moreover, while there might be other featural differences between declarative and interrogative complementizers, they need not differ from one another in their capacity to attract *wh*-phrases: both result in the obligatory triggering of *Displace(wh)*.

The feature-driven approach therefore requires computational lookahead—or the logically equivalent overgeneration-followed-by-filtration, as implicated by Chomsky's (1995) assertion that only derivations that are ultimately convergent are considered by the computational system. As discussed by Frampton & Gutmann (2006), this drives an unnecessary wedge between theories of competence and of performance, since choosing the "correct" $C^0$ requires knowledge of which one will result in a derivation that ultimately converges, and which will not. Indeed, this very issue has given rise to various attempts to refine the feature-based approach so that a decision regarding the fate of a derivation like (319) can be made during the derivation of the embedded clause itself (see, for example, Bošković 2007, Heck & Müller 2000).

On the obligatory operations approach, no such refinements are necessary. This approach is intrinsically *crash-proof* (to use Frampton & Gutmann's terminology), in that it provides a "recipe" for the operations that must be triggered in the course of the derivation—and crucially, if these derivations fail, no ungrammaticality (or "crash") arises.

As I have at the end of the previous two sub-sections, I will note again that the point of this discussion was not to provide a decisive argument in favor of an obligatory operations treatment of long-distance *wh*-movement, but rather to demonstrate that one is eminently possible. In particular, *wh*-movement exhibits what should by now be the familiar footprint of obligatory operations: it is obligatory when possible, but when it is not, its absence is tolerated.

We therefore have yet another example of a syntactic phenomenon that mirrors the obligatory operations logic exhibited by $\varphi$-agreement.

## 10.2.  Outlook: What is left for 'uninterpretable features'?

In §10.1.1–§10.1.3, I surveyed three empirical domains—Object Shift, the Definiteness Effect, and long-distance *wh*-movement—that proved to be quite amenable to an account along the lines of the obligatory operations account of $\varphi$-agreement, argued for in previous chapters. This survey was

undertaken primarily to demonstrate that the results concerning $\varphi$-agreement do not, in fact, cast it out as unique within the landscape of syntactic phenomena.

These observations might, however, lead one to wonder about the prospects for a theory that derives all instances of syntactic obligatoriness in a uniform manner. As demonstrated in detail in chapters 5–6, the obligatoriness of $\varphi$-agreement cannot be handled in terms of derivational time-bombs alone; and as demonstrated in chapters 8–9, $\varphi$-agreement is indeed part of syntax proper. Therefore, any theory that employs a device like, e.g., 'uninterpretable features' *anywhere* in syntax cannot hope to attain uniformity in the enforcement of syntactic obligatoriness.

In §10.1.3, we saw that another paradigm case where 'uninterpretable features' are typically used to enforce obligatoriness—namely, in *wh*-movement—is actually not a particularly good fit for such a device, either (at least, no better than its alternatives). We might therefore ponder the possibility of a syntax without derivational time-bombs altogether.

Surveying the totality of syntactic theory to evaluate the prospects of replacing each reference to 'uninterpretable features' or similar devices with an obligatory operation is a task whose enormity is far beyond anything I could hope to achieve here. Instead, I will merely offer some speculation on a couple of major cases that strike me as perhaps the most recalcitrant to the kind of treatment espoused here (both of which are, not coincidentally, among the 'filters' in Chomsky & Lasnik's 1977 *Filters and Control*).

The first case, already touched upon briefly in §10.1.2, is the (narrowly-defined) EPP: the requirement that all clauses in a language like English (or at least, all finite ones) have a subject. If expletives are base-generated directly in subject position, then the EPP is a requirement that can be satisfied in two different ways (movement, and expletive insertion), making it particularly well-suited for a representational filter along the lines of the derivational time-bombs model.

It seems that there are at least two possible courses to pursue, in this regard. First, there are numerous proposals in the literature that take expletives not to be inserted in their surface position, but rather to originate within—or alongside—their associates (Hartmann 2005, Hazout

2004, Hoekstra & Mulder 1990, Kayne 2006, Moro 1991, 1997, 2007, Williams 1994, *a.o.*). If so, then all instances of the EPP being satisfied are ultimately instances of MtoCSP, and the variation concerning which element undergoes this operation is a matter of the structural conditions on MtoCSP in a given language, and their interactions with various syntactic configurations (as already discussed in chapter 8).

Alternatively, one could take the approach mentioned in §10.1.2, that the EPP is essentially a morpho-phonological requirement (Bobaljik 2002, Landau 2007, *a.o.*), and that following Bobaljik (2002), expletives are inserted as a last-resort by the morpho-phonological component to satisfy this requirement in clauses that are syntactically subjectless.

This last possibility is particularly intriguing in light of the following dynamic. In the course of chapter 9, I discussed—and ultimately, argued against—the possibility of relegating $\varphi$-agreement to an extra-syntactic component of the grammar. The potential appeal of such a move would have been, among other things, to maintain the uniformity of syntactic computation—on the assumption that syntax followed the logic of derivational time-bombs, and therefore, phenomena that did not adhere to this logic belonged elsewhere in the grammar. We saw in chapter 9, however, that such a move is not possible, and that $\varphi$-agreement must be part of syntax itself. The incompatibility of this inescapably syntactic phenomenon with derivational time-bombs thus led to the current reexamination of the nature of syntactic computation. It is therefore interesting that others have suggested that the EPP—seemingly a bastion of actual, ungrammaticality-inducing filtration— might actually belong outside of the syntactic component.

The other case I will discuss here is the licensing of noun phrases. If nominals require licensing beyond their thematic roles—in particular, licensing that cannot be reduced to an interpretive requirement—then such licensing may also resist explanation in terms of obligatory operations. The *abstract case* proposal of Chomsky (1981) (as inspired by Vergnaud 1977/2006) is an instance of this; indeed, Chomsky (2000, 2001) reimplements Chomsky's *Case Filter* in the form of an 'uninterpretable' case feature on nominals.

However, it is not at all clear what the fate of nominal licensing is in contemporary syntactic theory. No doubt, *something* needs to account for the impossibility of an overt subject in infinitives like (320a–b):

(320) a. * It seems [Mary to be winning].

     b. * [Mary to be winning] is surprising.

But the theory of case no longer seems like a particularly good fit for this task. First, recent advances in the understanding of Control (e.g. Bobaljik & Landau 2009, Landau 2006b) have led to the understanding that PRO is eligible for case assignment just like overt DPs are. In addition, there has been work showing the existence of overt nominative subjects in infinitival complements in certain languages (e.g. Szabolcsi 2009a,b). Finally, there is the age-old observation by Postal (1974) that some ECM predicates in English resist the appearance of an overt infinitival subject only if that subject remains in situ—a resistance that can be alleviated, it seems, by literally any kind of movement:

(321) a. * I wagered this man to win the race.     *(where* 'this man' *is interpreted as the Agent of* 'win'*)*

     b.   This man was wagered to win the race.

     c.   The man who you wagered to win the race came in last.

     d.   Who did you wager to win the race?

        . . .

Taken together, these facts seem to indicate that whatever regulates the appearance of overt subjects of infinitives is as likely to be a PF factor—note in particular the heterogeneity of the movement operations in (321b–d)—as it is to be a syntactic factor; and I do not think contemporary syntax has a firm grasp of what that factor is, one way or another.[10]

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[10] I thank Stephanie Harves for helpful discussion of these matters (though that should not be taken to indicate her endorsement of my conclusions or speculations).

One might wonder regarding another empirical domain regulated by traditional Case Theory: the complementation possibilities of adjectives. It seems plausible to me that statements such as "adjectives do not take nominal complements" can be reinterpreted as "adjectives do not take complements with unmarked case" (taking English *of*, for example, to be an oblique case marker). On this view, the complementation possibilities of adjectives—while certainly a case-theoretic issue—are not an issue of nominal licensing. That, in turn, means that there is no need to appeal to 'uninterpretable features' or other derivational time-bombs in the account of this phenomenon, any more than there is in the account of any other selectional facts.[11]

A different kind of licensing, one which featured prominently in the account of $\varphi$-agreement in the Kichean AF construction (chapters 4–5), is the *Person Licensing Condition* (PLC), proposed by Béjar & Rezac (2003), and repeated here in its original form (cf. the alternative formulation in fn. 22, in chapter 4):

(322)  Person Licensing Condition (Béjar & Rezac 2003)

   Interpretable 1st/2nd person features must be licensed by entering into an `Agree` relation
   with an appropriate functional category.                                *[=(40)]*

As it stands, the PLC seems to constitute a bona fide filter on admissible and inadmissible syntactic configurations involving 1st/2nd person arguments. It would therefore appear that enforcing the PLC within syntax requires 1st/2nd person arguments to bear the equivalent of derivational time-bombs. Having established that the obligatoriness of $\varphi$-agreement cannot be derived using derivational time-bombs alone (chapters 5–6), this might seem to all but eliminate the possibility of a uniform treatment of obligatoriness in syntax. (Recall furthermore that an account of $\varphi$-agreement in terms of derivational time-bombs borne by the arguments themselves was ruled out, as well; see §5.1 for details).

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[11]Recall also that the Sakha facts discussed in chapter 9, which were taken by Baker & Vinokurova (2010) to require recourse to the Case Filter, were successfully reanalyzed by Levin & Preminger (to appear) with no appeal to such a filtering device.

Given that $\varphi$-agreement cannot be relegated to an extra-syntactic component of the grammar, it seems that the most promising avenue to pursue here would be relegating the PLC to a different component of the grammar. It does not seem out of the question that the distribution of indexical expression such as 1st/2nd person pronouns is ultimately regulated by the interpretive component. One challenge posed by such a move is how the interpretive component would be able to discern whether a given 1st/2nd person argument has or has not entered into a $\varphi$-agreement relation, in the syntax, with an appropriate head. (This would have been particularly vexing on the assumption that $\varphi$-features on probes are 'uninterpretable'; but as we saw throughout the previous chapters, that assumption can actually be dispensed with; see, in particular, the APPENDIX to chapter 5.)

Nevertheless, there is one source of evidence regarding the PLC that suggests that such a move may be on the right track. In Preminger 2011b, I demonstrated that the PLC is subject to what seems like a *clausemate* proviso: violations of the PLC are only incurred when the 1st/2nd person argument occurs in the same clause as a viable $\varphi$-probe.[12] Consider the difference between the mono-clausal Icelandic examples in (323a–c), and their bi-clausal counterparts in (324a–c) (all taken from the dialect Sigurðsson & Holmberg 2008 identify as 'Icelandic A'):

(323) a. * Honum  mundi     hafa likað við.                                    (Icelandic)
         him.DAT would.3sg have liked we.NOM

      b. * Honum  mundi     hafa likað þið.
         him.DAT would.3sg have liked you(pl).NOM

      c. ? Honum  mundi     hafa likað þeir.
         him.DAT would.3sg have liked they.NOM

         'He would have liked them.'

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[12]This may seem reminiscent of the *obligatory operations* logic discussed throughout §10.1.1–§10.1.3 (i.e., that satisfying the PLC is obligatory only when possible). But the PLC is not actually amenable to such a treatment. Recall that a 1st/2nd person object in Kichean AF, which has a clausemate $\varphi$-probe but still cannot agree with that $\varphi$-probe (due to the latter targeting the subject, instead), still incurs a PLC violation; see §4.4.2 for details.

(324)  a.  Honum   mundi/*mundum      virðast við      vera hæfir.

         him.DAT would.3sg/*would.1pl seem   we.NOM be    competent

         'We would seem competent to him.'

     b.  Honum   mundi/*munduð      virðast þið          vera hæfir.

         him.DAT would.3sg/*would.2pl seem   you(pl).NOM be   competent

         'Y'all would seem competent to him.'

     c.  Honum   mundi/mundu       virðast þeir      vera hæfir.

         him.DAT would.3sg/would.3pl seem   they.NOM be    competent

         'They would seem competent to him.'                      [*Sigurðsson & Holmberg 2008:255*]

The (a–b) cases in both (323) and (324) are instances of dative intervention (§8.2), preventing

agreement of the relevant person-probe with its target (on the success of number-agreement in this

very same construction, see Sigurðsson & Holmberg 2008 and Preminger 2011b, as well as fn. 3 in

chapter 4). Crucially, such intervention results in a morphological 'default' in (324a–b) (cf. §8.4),

whereas it results in outright ungrammaticality in (323a–b).

That the PLC would be subject to a *clausemate* proviso is surprising, given that $\varphi$-agreement itself

is not (cf. the Basque long-distance agreement cases discussed in §6.2.1, to cite one of many examples;

see also Preminger 2011b:920–921, on long-distance agreement in person features in particular).[13]

One way to make sense of this is if the evaluation of the PLC is restricted to a single 'domain of

predication', consisting of a predicate and its immediate arguments only. That would make some

sense, if the PLC were evaluated in the interpretive component of grammar, rather than in syntax.

This is, of course, far from a complete theory of the PLC. In particular, it is not immediately clear,

on this view, why the PLC would be sensitive to predication, given that it is usually (if not always)

a functional head—rather than the predicate itself—that acts as a $\varphi$-probe, and it is only through

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[13]The same may already be demonstrable on the basis of the availability of plural agreement in (324c). However,
Sigurðsson & Holmberg (2008) actually analyze such agreement in a way that renders it perfectly local; therefore, I do
not cite it as an example of long-distance agreement in the present context.

syntax and/or morphology that the predicate and this functional head come to be expressed together. Also, as noted earlier, it is not immediately clear how the interpretive component would recognize that an agreement relation had previously obtained between two nodes, once the derivation has already proceeded past that point. One possibility, already alluded to in §4.2.3, is that what we have referred to as *valuation* in the course of this book is in fact better characterized as *feature-sharing* (Frampton & Gutmann 2000, 2006, Pesetsky & Torrego 2007). From the perspective of the interface, there would be two (or more) nodes sharing the same feature or feature-set—a result that could only have come about through syntactic agreement.

It is clear that this treatment of the PLC is, at this point, extremely speculative. But given the results of previous chapters—and in particular, the necessity of *obligatory operations* in deriving the obligatoriness of $\varphi$-agreement—it is only insofar as moves of this sort prove successful, and all such 'filters' can be relegated to extra-syntactic modules of the grammar, that a uniform treatment of obligatoriness in syntax is possible.

# Conclusion

In this book, I have presented arguments that the obligatory nature of $\varphi$-agreement is best captured in terms of an *operation*—one that is obligatorily triggered, but whose successful culmination is not enforced by the grammar.

The central empirical domain has been the behavior of $\varphi$-agreement in the Agent-Focus construction, in languages of the Kichean branch of the Mayan language family. As I have shown, this construction cannot be analyzed without allowing for the possibility of failed agreement in utterances that are nonetheless fully grammatical. This, in turn, rules out an account that would derive the obligatoriness of $\varphi$-agreement in this construction from *derivational time-bombs* (including, but not limited to, Chomsky's 2000, 2001 'uninterpretable features').

The inadequacy of derivational time-bombs as a means of accounting for the obligatory nature of agreement was further supported by case studies from two other empirical domains. The first, based on the work of Halpert (2012), involves the *conjoint/disjoint* alternation in Zulu verbal morphology and its interaction with the distribution of nominals lacking the *augment* morpheme. The second involves the morphosyntax of finite agreement in three Basque constructions that have traditionally been classified as 'unergative' (Preminger 2009, 2012).

These results were subsequently extended to show that dative intervention (the disruption of $\varphi$-agreement by dative nominals) is itself an instance of failed agreement. In this case, failure is caused by a property of $\varphi$-agreement that was observed and formalized by Bobaljik (2008), and which I have labeled *case-discrimination*. This account was shown to explain another aspect of dative intervention, which competing accounts were ill-suited to handle: the circumstances under which

intervention results in outright ungrammaticality vs. those under which it results merely in 'default' agreement morphology.

This typology of dative intervention, juxtaposed with the typology of quirky-subject and non-quirky-subject languages, yields an argument that movement to canonical subject position depends on the aforementioned $\varphi$-agreement operation to identify the noun phrase that will be moved—though crucially, this dependence only holds in non-quirky-subject languages. Given the fundamentally syntactic nature of movement to canonical subject position, its dependence on $\varphi$-agreement constitutes an argument that the latter must be part of the syntactic computation as well (contrary to Bobaljik's 2008 own claim concerning modular loci).

The case-discrimination property of $\varphi$-agreement was shown, by Bobaljik, to attend to the so-called 'morphological case' borne by potential agreement targets (Marantz 1991), rather than to their *abstract case* or grammatical function. Since $\varphi$-agreement relies on case-discrimination, and is part of syntax, it follows that 'morphological case'—including the mechanism of *case-competition*— must also be computed within syntax. Additional support for this conclusion comes from Baker & Vinokurova's (2010) work on Sakha (Turkic), demonstrating the necessity of case-competition even in a non-quirky-subject language.

These results call for a purely syntactic mechanism of case assignment, which would nevertheless deliver equivalent results to Marantz's (1991) original, post-syntactic algorithm. I showed that such an implementation was indeed possible, and could potentially derive the *disjunctive case hierarchy*, which is at the core of Marantz's algorithm, from general principles of syntactic structure-building.

Finally, I surveyed several other empirical domains that adhere to the same *obligatory operations* logic implicated in the analysis of $\varphi$-agreement: the interaction of Object Shift with specificity, the interaction of movement to subject position with the Definiteness Effect, and the derivation of long-distance *wh*-movement. Together, these show that $\varphi$-agreement is not atypical within syntax in adhering to this logic.

Let us review the picture that emerges, concerning the grammar of $\varphi$-agreement and case. The property we had previously referred to as 'morphological case' is actually computed within syntax. The results of this computation, in turn, form the input to *case-discrimination*. The latter can cause $\varphi$-agreement, when it happens upon a nominal with the wrong case (e.g. in dative intervention), to fail to culminate successfully.

Another way in which agreement can fail is if a target with the requisite featural content is simply absent from the derivation entirely. This was the case in Kichean Agent-Focus clauses that lacked 1st/2nd person or plural arguments, as well as in Zulu $v$Ps with no in situ arguments, and Basque simplex unergatives (which lack an absolutive argument altogether).

Crucially, these failures of agreement do not result in ungrammaticality, only in the lack of valuation of the relevant features on the probe. The only way failed $\varphi$-agreement can give rise to actual ungrammaticality is if we consider a string whose only parse forces us to assume that some operation, which depends on successful $\varphi$-agreement, has been initiated in a derivation where $\varphi$-agreement cannot culminate successfully. This was shown to be the case in those instances of dative intervention where a noun phrase that could not have been agreed with is nevertheless moved to canonical subject position. As predicted, this state of affairs, in a non-quirky-subject language, results in outright ungrammaticality.

As noted in the APPENDIX to chapter 5, these conclusions represent a departure from what has become a major trend in contemporary syntactic theory, within the framework of the Minimalist Program (Chomsky 1995, *et seq.*), and in generative syntax more generally. The empirical burden has increasingly been shifted away from the generative engine itself, and onto more and more articulated representations. At the same time, the operations that remain—including the `Agree` operation put forth by Chomsky (2000, 2001) to account for $\varphi$-agreement—are seen as neither 'optional' nor 'obligatory', unto themselves. Instead, they are deployed by the computational system in the interest of creating what is ultimately a well-formed representation.

What we have seen here is that this kind of approach, where operations are triggered only in the service of creating a well-formed representation, is ill-suited to handle the facts of $\varphi$-agreement cross-linguistically; and furthermore, that $\varphi$-agreement may not be that much of an outlier in this regard.

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