Agreement and semantic concord: a spurious unification

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January 2015

Abstract

This paper argues against the spate of recent proposals aiming to reverse the direction of the formal operation underlying agreement in φ-features. We contend that these proposals are an outgrowth of a reasonable—but ultimately, ill-fated—urge to reduce any and all correspondence between two elements (be it agreement, or semantic concord) to the same underlying operation. In other words, they constitute a spurious unification.

We focus here on Bjorkman & Zeijlstra's (2014) recent "hybrid" proposal—which is, in title, an attempt to argue for the reversal of agreement, but which sanctions both directions of agreement under different sets of circumstances, for the sake of unifying φ-feature agreement with semantic concord. First, we address instances where Bjorkman & Zeijlstra attempt to argue from data that, upon closer inspection, fail to distinguish regular from reverse agreement. These include fully local agreement (in Bantu), whose irrelevance to the debate was already noted in Preminger 2013; and agreement asymmetries between SV and VS word orders.

Next, we address long-distance agreement (LDA) in Tsez and in Basque, the two empirical domains put forth in Preminger 2013 as challenges to reverse agreement. Bjorkman & Zeijlstra attempt to reanalyze these two domains within their hybrid system. We present empirical and conceptual arguments against their analysis. We then review further crosslinguistic evidence demonstrating the same basic point: that a reversal in the direction of agreement is empirically unsupported.

Finally, we argue that even if it were successful, Bjorkman & Zeijlstra's proposal would not have achieved what such a unification sets out to achieve: a reduction in the amount of machinery required in the overall theory. Instead, they have to propose several principles which overgenerate and make incorrect predictions.

1. Introduction

Ever since the work of Lasnik & Saito (1991) and Den Dikken (1995)—and until very recently—there has been a fairly broad consensus, within a derivational approach to agreement, regarding the directionality of agreement relations. In particular, it has been uncontroversial that the "agreement controller" (i.e., the bearer of semantically meaningful feature values, a.k.a. the goal) must be located lower, structurally speaking, than the "agreement bearer" (i.e., the element whose feature values appear to depend on those of the "agreement controller", a.k.a. the probe). This is schematized in (1).
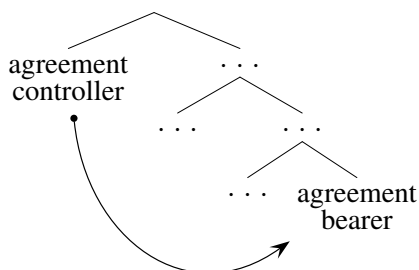
(1)   UPWARD VALUATION
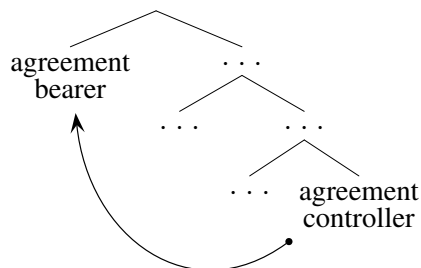
We refer to this model of agreement as UPWARD VALUATION, because the valued features are being 'transmitted' (derivationally speaking) upward in the syntactic structure.

More recently, however, this model has been called into question by researchers advocating the reverse—that agreement requires a configuration in which the "agreement controller" is located higher in the structure than the "agreement bearer" is, as in (2). By way of terminological parity, we refer to this model as DOWNWARD VALUATION.

(2)   DOWNWARD VALUATION

In the case where the structural distance in (2) is minimal, DOWNWARD VALUATION amounts to a resurrection of *spec-head* agreement (Kayne 1989) and its associated cadre of primitives (e.g. *m-command*). Arguments in favor of DOWNWARD VALUATION more generally have been put forth recently by Wurmbrand (2011, 2012) and Zeijlstra (2012).[1] In response, Preminger (2013) has demonstrated that at least some UPWARD VALUATION is indispensable (i.e., that there are instances of feature values being transmitted upward in the syntactic structure that cannot be reanalyzed as downward valuation), in particular when it comes to agreement in φ-features (henceforth, φ-agreement). In response, Bjorkman & Zeijlstra (2014) propose a "hybrid" theory, according to which features are transmitted mostly as shown in (2), but with a provision allowing for (1) in particular circumstances.

There is an obvious argument from parsimony against hybrid theories: contrary to Bjorkman & Zeijlstra's claim, a theory that allows both DOWNWARD VALUATION and UPWARD VALUATION is, by definition, less restrictive than a theory that allows only one of the two. Hybrid theories are viable, then, only insofar as they deliver a payoff that justifies the price of hybridity. For Bjorkman & Zeijlstra, this payoff comes in the form of bringing phenomena such as negative concord and sequence-of-tense under the same set of mechanisms that derive φ-feature agreement. In this paper, we argue that **(i)** this payoff is illusory; and **(ii)** the price of this unification of agreement with these semantic concord phenomena is that it leaves us with a weaker account of φ-agreement itself.

Let us consider how models that propose to unify multiple phenomena are to be judged. Suppose we are given a proposal P that seeks to unify some X (in this case, φ-agreement) with some Y (in this case, a family of semantic concord phenomena). P should be considered successful insofar as it preserves the successes of existing accounts of X and Y while decreasing, through unification, the overall amount of required theoretical machinery. As we will see, it is not clear that the unification proposed by Bjorkman & Zeijlstra, regardless of whether it succeeds as a theory of agreement, would be able to achieve such a decrease.

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[1]See also Koopman (2006) and Wurmbrand (2014)—as well as Bjorkman & Zeijlstra (2014), to which we turn immediately below.

Conversely, P should be considered unsuccessful (setting aside purely logical failures) insofar as it has deleterious effects on our ability to account for X and/or for Y themselves. As we will show, the unification of agreement with semantic concord (e.g. sequence-of-tense, negative concord) has precisely such effects on the account of agreement.

The paper is organized as follows. In section 2, we provide a brief synopsis of Bjorkman & Zeijlstra's proposal. Next, in section 3, we address instances in which Bjorkman & Zeijlstra attempt to argue from data that, upon closer inspection, fail to distinguish UPWARD VALUATION from DOWNWARD VALUATION, and we highlight a particular type of reanalysis that their proposal invites, which turns out to be unfalsifiable.

In section 4, we turn to Bjorkman & Zeijlstra's attempt to reanalyze long-distance agreement (LDA) in Tsez and in Basque within their hybrid system, presenting both empirical and conceptual arguments against their analysis. And in section 5, we present novel evidence from Algonquian, further militating against DOWNWARD VALUATION. We then turn, in section 6, to the *Case-Linked Agree generalization*, which constitutes an important component of the hybrid theory advanced by Bjorkman & Zeijlstra. We show that this generalization does not hold, and therefore, that deriving it from a given proposal cannot be counted in favor of said proposal.

In section 7, we present a novel argument from the crosslinguistic typology of non-local agreement relations in favor of UPWARD VALUATION.

Finally, in section 8, we show that unification proposals of the kind put forth by Bjorkman & Zeijlstra do not automatically stand to reduce the total amount of machinery needed in the overall theory, and thus, that there is no a priori argument in favor of such proposals. Section 9 concludes.

2. Bjorkman & Zeijlstra's (2014) proposal

Bjorkman & Zeijlstra (2014) (henceforth, B&Z) propose a revision to the pure DOWNWARD VALUATION theory, which was originally presented in Zeijlstra 2012 (see Preminger 2013 for discussion). Their revision allows UPWARD VALUATION to apply under specific circumstances. As discussed in §1, the result is a "hybrid" theory, allowing UPWARD VALUATION and DOWNWARD VALUATION under different sets of circumstances. The proposed revision is given in (3):

(3)   ACCESSIBILITY CONDITION: α (a goal) is accessible to β (a probe) **iff –**   [*B&Z:13*]

    (i) α c-commands β (respecting additional locality restrictions)

         · in this case, call the relation between α and β an "*Upwards Agree*" relation

    – or –

    (ii) α and β are members of an *Upwards Agree*-chain

         · where $\langle x_n, \ldots, x_1 \rangle$ is an "*Upwards Agree*-chain" **iff** every chain member x_{i+1} stands in an *Upwards Agree* relation with x_i

B&Z consider a number of empirical phenomena, including: EPP effects, the link between φ-agreement and case (where they follow Baker's 2008 *CDAP*), complementizer agreement, closest conjunct agreement, and long-distance agreement. It is not our intention to mount a point-wise response to their paper here. Rather, we will consider its main premises, and identify those empirical domains where we feel B&Z's response to the earlier criticism in Preminger 2013 has fallen short of achieving a successful analysis. Specifically, B&Z contend that (3) is able to handle

the counterexamples raised in Preminger 2013, involving Tsez and Basque. In §4, we demonstrate that this claim is incorrect; that just like its pure DOWNWARD VALUATION predecessor (Zeijlstra 2012), (3) fails as an account of φ-feature agreement—even in the two empirical domains, Tsez and Basque, that it was purported to improve upon. But beforehand, in §3, we address some inconclusive and unfalsifiable components of B&Z's argumentation.

3. Arguing from inconclusive data

In this section, we review instances in which B&Z attempt to argue from data that, upon closer inspection, fail to distinguish between UPWARD VALUATION and DOWNWARD VALUATION. These data include maximally local agreement relations (§3.1), as well as agreement asymmetries between SV and VS word orders (§3.2). Additionally, we highlight one particular kind of reanalysis of UPWARD VALUATION that B&Z's proposal invites, which turns out to be unfalsifiable (§3.3).

3.1. The irrelevance of maximally local agreement relations

B&Z dismiss the possibility that agreement in φ-features <u>invariably</u> adheres to the traditional, UPWARD VALUATION model (B&Z:11; though, as we will see shortly, this possibility remains very much intact). The dismissal is based on the following type of data:

(4) a. omo-mulongo   mw-a-hik-a   mukali.   (Kinande; Bantu)
         18(LOC)village.3 18s-T-arrive-FV 1peanuts
         'At the village arrived a woman.'

     b. oko-mesa   kw-a-hir-aw-a   ehilanga.
         17(LOC)table 17s-T-put-PASV-FV 19woman
         'On the table were put peanuts.'   [*Baker 2003, via Baker 2008:158*]

B&Z take data like (4a–b) to show that DOWNWARD VALUATION is necessary to account for φ-feature agreement in at least some languages.

    However, as Preminger (2013:492–493) has shown, attempting to argue from data like these, where the agreement controller and the agreement bearer are maximally close to one another, to conclusions regarding the direction of valuation, is ineffective. Simply put, such data do not adjudicate between the competing theories of agreement and as such pose no bigger challenge to UPWARD VALUATION than they do to DOWNWARD VALUATION. Let us make another attempt at elucidating the issue.

    Let us assume for the sake of argument that, on the surface, φ-agreement in Bantu languages indeed appears to obey DOWNWARD VALUATION (though in actuality, there are reasons to doubt this, even on Bantu-internal grounds; see Wal 2012). Let X^0 be the head that hosts the relevant agreement morphology, and let FP refer to whatever category is X^0's complement. All that is needed in order to bring data like these into compliance with traditional UPWARD VALUATION, instead of DOWNWARD VALUATION, is that the DP that ends up in pre-verbal position make an obligatory stop in the specifier of FP.[2]

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[2] Whatever factors determine which DP moves to [Spec,XP] on the original analysis, can now be repurposed to determine which DP moves to [Spec,FP].

(5)
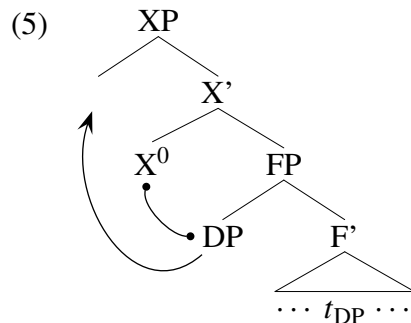
In (5), the agreeing head X^0 enters into a regular, UPWARD VALUATION agreement relation with the target DP, followed by short movement of DP to [Spec,XP]. Since short movement of this kind is extremely difficult to argue against, it is not clear that a derivation like (5) could ever be ruled out for data like (4a–b).

There is therefore a perfectly viable analysis for these data that resorts only to UPWARD VALUATION. We do not consider this to be some sort of achievement; we readily concede that (5) smacks of unfalsifiability—and that is exactly our point. Cases of maximally local agreement shed no light whatsoever on the debate between UPWARD VALUATION and DOWNWARD VALUATION, precisely because the kinds of changes required to alternate between one style of analysis and the other are virtually unfalsifiable. Elsewhere in their paper, B&Z resort to this very move in their approach to Kapampangan (Bjorkman & Zeijlstra 2014:20n3); they seem not to have noticed that the same move, applied to the data in (4a–b), invalidates the conclusions they attempt to draw from these data.

It is worth noting, more generally, that using data like (4a–b) to argue against universal UPWARD VALUATION is akin to using English, with its high surface subject position, to argue against the universality of the VP/*v*P-Internal Subject Hypothesis (Fukui & Speas 1986, Kitagawa 1985, 1986, Kuroda 1988, a.o.)—it disregards the existence of *opacity* in grammatical derivations (see also §3.2). Some processes or conditions may be operative in the course of a grammatical derivation, yet not be transparently visible in the resulting surface representation (see Kiparsky 1973 for the original discussion of the many ways in which linguistically significant generalizations are not always surface apparent).

The situation is similar for cases of maximally local agreement that appear, on the surface, to adhere to UPWARD VALUATION. Suppose we are faced with an agreement pattern that appears to instantiate UPWARD VALUATION between a DP and an immediately c-commanding head X^0. All that is needed to bring this pattern into compliance with DOWNWARD VALUATION is to assume that it is actually the head of FP, the maximal projection hosting the DP, that enters into the relevant agreement relation—followed by head movement of F^0 to X^0:

(6)   XP   [*Preminger 2013:493*]
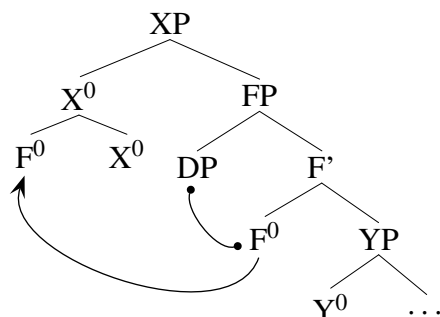
The existence of the movement operation assumed in (6) is again very hard to argue against, rendering this move similarly unfalsifiable (cf. (5)).

It is for these reasons that we choose to focus on cases of long-distance agreement: in such cases, the movement operations that would have to be posited to invert the direction of valuation would be non-local—and thus, hopefully, easier to diagnose. (See Preminger 2013 for a similar discussion.)

In summary, B&Z seem to have drawn mistaken conclusions from data like the Kinande (4a–b). This, in turn, has led them to mistakenly claim that a uniform approach to φ-feature agreement in terms of UPWARD VALUATION is untenable—while in reality, that possibility remains completely intact, even in light of data like (4a–b).

3.2. What we can (and can't) learn from agreement asymmetries

This sub-section is concerned with agreement asymmetries between SV and VS word orders in, e.g., Romance and Semitic languages, whose existence is often assumed to somehow favor a DOWNWARD VALUATION (or *spec-head*) agreement model. The pattern in question is exemplified in (7–8):

(7)   a. Trois filles **sont arrivées**.   (French; *Guasti & Rizzi 2002*)
         Three girls **are   arrived.F.pl**
         'Three girls arrived.'

      b. Il **est arrivé**   trois filles.
         It **is   arrived.M.sg** three girls
         'Three girls arrived.'

(8)   a. ʔal-ʔawlaad-u   **naam-uu/*naam-a**.   (Standard Arabic; *Aoun et al. 1994*)
         the-children-NOM **slept-3pl/*slept-M.3sg**
         'The children slept.'

      b. **naam-a/*naam-uu**   l-ʔawlaad-u.
         slept-M.3sg/*slept-3pl the-children-NOM
         'The children slept.'

B&Z write:

> "[…] Agreement with higher DPs, by contrast, appears never to be defective in these ways. If DA were the basic mechanism of agreement in natural language, and agreement with post-verbal DPs therefore the simplest expression of φ-agreement (agreement in the absence of movement), we would not expect the asymmetry to run

in this direction: we would expect instead that UA would exhibit gaps or deficiencies in φ-agreement. The existence of defective agreement in LDA, and only in LDA, thus lends support to a view in which UA is basic and DA epiphenomenal."

[*Bjorkman & Zeijlstra 2014:12*]

The logic that B&Z are expressing, as we understand it, goes as follows: if UPWARD VALUATION were the true configuration of agreement, one would expect VS word orders to exhibit full agreement, and SV orders to be a peripheral, potentially defective manifestation of agreement—whereas, what data like (7–8) show is the opposite pattern.

The flaw in this logic is that, once again, it denies the possibility of *opacity* in grammatical derivations (see the discussion in §3.1).

A first clue that B&Z's approach is off track can be seen in the fact that the difference between SV and VS—or more accurately, [S≫V] and [V≫S]—is not a difference between *full agreement* and *no agreement*. It is the difference between full agreement and *partial* agreement, where partial agreement may, under certain circumstances, amount to the appearance of no agreement at all. We can see this in Standard Arabic: compare (8b), above, with (9b), where gender agreement is preserved.

(9) a. ṭ-ṭaalibaat-u   ʔakal-na/*ʔakal-at
         the-student.F.pl-NOM **ate-F.3pl/*ate-F.3sg**
         'The students ate.'

     b. ʔakal-at/*ʔakal-na ṭ-ṭaalibaat-u
         ate-F.3sg/*ate-F.3pl the-student.F.pl-NOM
         'The students ate.'   [*Benmamoun & Lorimor 2006:2*]

If the logic of the above quote were correct—i.e., if feature values could only be transmitted downwards—we would have expected VS (or [V≫S]) to result in the absence of agreement. But as seen in (9b), this is not quite right; VS instantiates agreement in a different (and reduced) set of features, but not the empty set.

Our claim is not that a DOWNWARD VALUATION theory like B&Z's cannot accommodate facts like (9b), of course; B&Z present an analysis, successful on its own terms, that accounts for such facts. They do so by stipulating that some φ-probes (in particular, GENDER) are located in the v^0 area of the clause, whereas others (PERSON, NUMBER) are located in the T^0 area.[3]

What we wish to note, however, is that there is absolutely no argument to be had here in *favor* of DOWNWARD VALUATION over UPWARD VALUATION. It is widely accepted that agreement restrictions arise due to intervening structure (see Anagnostopoulou 2003, 2005, Preminger 2011b, 2014, Rezac 2008a,b, among many others).[4] This is schematically represented in (10):

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[3]One wonders whether this predicts that in languages with both subject and object agreement, the subject (agreed with by T^0) would never agree in gender and the object (agreed with by v^0) would never agree in person and/or number (a prediction that is clearly false).

[4]This assumption is necessary even on the DOWNWARD VALUATION approach, e.g. to prevent the Infl⁰ node in an embedded VS clause from establishing a DOWNWARD VALUATION agreement relation with a noun phrase in a completely separate superordinate clause.

(10)
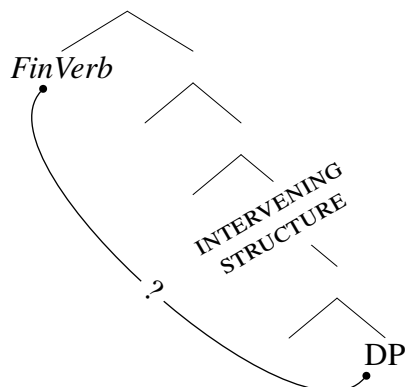
Since this has been explored elsewhere, we will not rehash here the various types of intervening structure that may occur in (10), and the effects that each type would have on the profile of agreement between the finite verb and the target DP; see Preminger 2011b:921–926, and references therein, for discussion. Crucially, this is precisely the type of derivation that would result in successful agreement in some φ-features (e.g. NUMBER) and unsuccessful agreement in others (e.g. PERSON or GENDER)—an observation that goes back to Anagnostopoulou 2003 and Béjar & Rezac 2003.

Any DP that has successfully moved across the finite verb (i.e., in a SV, or [S≫V], configuration) has *ipso facto* also moved across any such intervening structure. And so, it should come as no surprise that such a DP does not suffer the effects of the intervening structure: it can control full agreement, in all φ-features, with the finite verb.

(11)
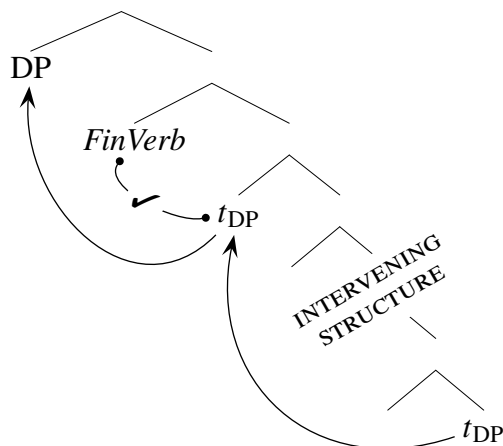
There is one particular piece of evidence, actually highlighted by B&Z themselves, suggesting that (10–11) is precisely the right approach to SV-VS agreement asymmetries. The evidence concerns the behavior of pronouns in Standard Arabic:

(12) **naam-uu/*naam-a** hum.
slept-3pl/*slept-M.3sg they
'They slept.' [B&Z:36]

When the subject is a pronoun, it shows full agreement even in the VS (or [V≫S]) configuration. B&Z attempt to account for this via a series of stipulations: a distinction concerning "inherently"

vs. "non-inherently" valued features; an ad hoc "overvaluation" operation for features on a probe; and more. In contrast, on the UPWARD VALUATION account, all that is needed to derive this pattern is that pronouns be *required* to move to a higher position than other, non-pronominal arguments are required to move to. Such a requirement is robustly attested, crosslinguistically; Object-Shift in Mainland Scandinavian (Holmberg 1986, and much subsequent literature), for example, instantiates precisely the same pattern. This high position would place pronouns—even those that did not end up moving all the way to pre-verbal subject position—above the intervening structure responsible for partial agreement. The result is full agreement, as attested:[5]

(13)
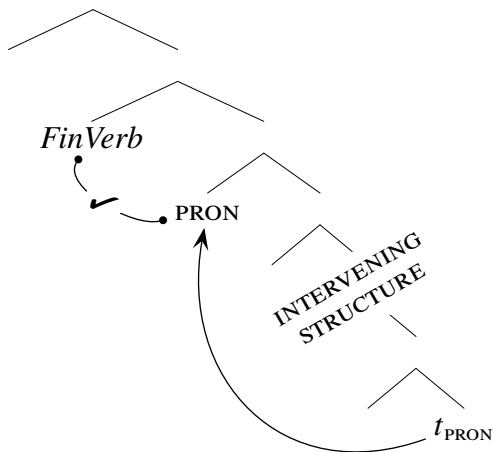
In summary, we have seen that there is no argument from SV-VS (or [S≫V] vs. [V≫S]) agreement asymmetries in favor of DOWNWARD VALUATION (or in favor of *spec-head*) over UPWARD VALUATION. If anything, the UPWARD VALUATION approach affords an account of the exceptional behavior of pronouns (12) that situates this behavior in the wider context of a crosslinguistically well-attested property of pronouns (namely, obligatory movement out of the verb phrase).

3.3. An unfalsifiable approach to long-distance UPWARD VALUATION

To the two unfalsifiable types of argumentation outlined earlier, B&Z's contribution now adds a third (see, e.g., B&Z:29–33)—this one applicable even to long-distance agreement relations.

Suppose we are faced with what, on the surface, looks like a long-distance UPWARD VALUATION agreement relation in φ-features between a head H^0 and a target DP α; and suppose that positing a separate DOWNWARD VALUATION relation between those same two elements (i.e., H^0 valuing some feature on α) strains credulity. B&Z propose the following: **(i)** decomposing the long-distance UPWARD VALUATION relation into a series of maximally local agreement relations between successive heads along the clausal spine between H^0 and α; and **(ii)** positing, for each successive pair of heads, some feature borne by the higher of the two that values its counterpart on the lower of the two (viz. DOWNWARD VALUATION). In light of this move, α, the series of intermediary heads, and H^0 together stand in what (3) defines as an "*Upwards Agree*-chain"—meaning B&Z's proposal now sanctions UPWARD VALUATION between H^0 and α:

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[5]B&Z state that "The different behaviour between pronouns and non-pronominal DPs, which [the UPWARD VALUATION] proposal does not capture, for us follows directly [...]"; but as the foregoing discussion shows, the exact opposite is the case.

(14)

The reason we characterize this move as unfalsifiable should be clear: to qualify as an *Upwards Agree*-chain, the featural relations between each pair of successive heads along the clausal spine need not involve the same feature(s) originally observed to stand in correspondence between H^0 and α (in our example, φ-features). These intermediary relations can involve EPP, 'Edge Features', or anything else really, and still qualify the resulting series of heads as an *Upwards Agree*-chain, facilitating UPWARD VALUATION in φ-features between the tail and head of the chain (α and H^0, in our example). Consequently, absent an explicit, restrictive theory of what kinds of feature relations can and cannot be posited for successive heads along the clausal spine, there is literally no long-distance UPWARD VALUATION relation that could not be recast in these terms (cf. Baker & Willie 2010, who allow such intermediary agreement only in φ-features, and only using UPWARD VALUATION). Crucially, B&Z does not make available any such restrictive theory—meaning their proposal (as given in (3)) effectively sanctions any and all instances of UPWARD VALUATION (which is precisely the theoretical state of affairs B&Z set out to argue *against*).

If B&Z's goal is to develop a new descriptive vocabulary with which to talk about agreement relations, that is of course welcome. But employing moves like the one described here robs the proposal of any substantive import it might have had concerning the actual mechanics of agreement. Thus, insofar as this move is required to bring a given empirical domain into compliance with (3), it is as much of a falsification of (3) as could ever exist.

4. Tsez & Basque: still only compatible with standard UPWARD VALUATION

4.1. Tsez LDA revisited

Tsez (Nakh-Daghestanian) exhibits a type of long-distance agreement (LDA) in which a given verb shows agreement with the absolutive argument of a distinct verb, contained in an embedded clause (see Polinsky 2003, 2014, Polinsky & Potsdam 2001):

(15) a. Eni-r   [**uži** ϕ-āy-ru-łi   ] ϕ-iy-xo.   (Tsez)
        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*]

Polinsky & Potsdam provide several arguments that the absolutive target DP in examples like (15a–b) is indeed contained in the embedded clause at all relevant levels of representation. Data like these, then, appear to instantiate UPWARD VALUATION in φ-features between the embedded absolutive DP and the matrix auxiliary, and consequently pose a serious problem for DOWNWARD VALUATION theories (see Preminger 2013 for a detailed discussion).

Polinsky & Potsdam argue that agreement between the matrix verb and the embedded absolutive DP in examples like (15a–b) is fed by covert movement of this DP to the specifier of the embedded Topic Phrase (TopP). In their discussion of Tsez, however, B&Z write:

> "Linking φ-agreement to covert movement, however, is problematic for any view in which syntactic agreement feeds a post-syntactic morphological component: if φ-agreement is delayed to LF (necessary if it results from covert movement), then its effects should be invisible on the PF branch of the derivation."
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> [*Bjorkman & Zeijlstra 2014:28*]

B&Z seem to presuppose the so-called *inverted-Y* model of grammar (Chomsky & Lasnik 1977). On this model, covert movement is distinguished from overt movement by whether it occurs after or prior to "spellout to PF." A prominent alternative is the so-called *single-output* model of grammar (Bobaljik 1995, 2002, Fox & Nissenbaum 1999, a.o.). On this model, the syntactic derivation produces a single representation that is delivered to both PF and LF, each of which then chooses a particular copy of each chain to interpret (where "interpret" on the PF side amounts to "pronounce"). And within this model, there is absolutely no obstacle to covert movement feeding overt φ-agreement (see Bobaljik 2002 for extensive discussion). It simply amounts to a movement chain where PF privileges the lower copy (in argument position) for pronunciation, but where the higher copy (in [Spec,TopP]) is nevertheless involved in a valuation relation at that position.

But B&Z's assertion is puzzling *even in the context of the inverted-Y model*. That is because the strict ordering of overt and covert operations in the inverted-Y model can only hold within a single cycle. If this were not the case, there would be no way to derive the inverse scope reading ($\forall \gg \exists$) of a sentence like (16), in which overt structure is added in a higher cycle (the matrix clause) after covert movement (QR) has occurred within the embedded clause:[6]

(16)   I heard that [some child ate every fruit].

Given that, on Polinsky & Potsdam's analysis, the embedded clause in (15a–b) hosts an A-bar landing site ([Spec,TopP]), it is presumably a cycle unto itself. And so, covert movement in this embedded cycle could easily feed overt agreement with the moved target on the next cycle, even in the inverted-Y model.

All of this should make it clear that there is no "problem that Polinsky & Potsdam's (2001) account faces" involving the "proposal that agreement results from covert movement at LF" (B&Z:27–29). Polinsky & Potsdam's proposal, coupled with a standard, UPWARD VALUATION theory of agreement, is perfectly capable of handling the facts, and is compatible with both the single-output model and the inverted-Y model, as we have shown.

The question, now, is whether B&Z's alternative fares equally well. Their analysis is based on the idea that structures like (15a–b) are actually much closer to their English translations than

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[6]Conversely, QR in the embedded clause cannot occur subsequent to the matrix clause being built because at that point, the embedded clause—or at least, the embedded *v*P—has already been spelled out.

Polinsky & Potsdam had assumed: they contain a topicalized null pronominal (which B&Z identify as *pro*, though more on that below), which is coindexed with the apparent target of LDA, the embedded absolute DP:

(17) Eni-r   [$_{TopP}$ ***pro*$_k$** [$_{TP}$ **uži$_k$** ϕ-āy-ru-ɬi   ]] ϕ-iy-xo.
      mother-DAT   **PRON.I** **boy.I(ABS)** I-arrive-PAST.PRT-NMZ   I-know-PRES
      'The mother knows that as for the boy, he arrived.'

On B&Z's view, the relation between *pro* in the [Spec,TopP] position and the overt absolute argument (*uži* "boy.I(ABS)") is not a movement relation, but one they dub "topic-doubling." It is then assumed that this clause-peripheral *pro* is assigned absolutive case by the matrix v^0, which, given the exemption created by their (3(ii)), qualifies it for UPWARD VALUATION of φ-features with that same head. (This is a variant of the prolepsis analysis, explicitly argued against by Polinsky & Potsdam 2001; the only difference is that the proleptic DP is in [Spec,TopP], rather than properly outside of the embedded clause.)

     There are several reasons why this fails as an account of the Tsez facts. First, coindexation, as a mechanism for achieving referential identity, does not enforce case-identity on its operands:

(18) **Every boy**$_k^{NOM}$ likes **his**$_k^{GEN}$ mother.

The same holds even within so-called "topic-doubling" constructions:

(19) As for **her**$_k^{ACC/OBJ}$, I think **she**$_k^{NOM}$ will be just fine.

This predicts that *pro* in a structure like (17) should be able to bear a different case than the TP-internal DP with which it is coindexed. Let us suppose, for the sake of argument, that the case of the clause-peripheral *pro* is fixed as absolutive by properties of the construction itself (e.g. case-marking by the matrix v^0, as B&Z assume); the TP-internal DP with which it is coindexed should still be able to bear case other than absolutive (cf. the case mismatch in the English (19)).

     As Polinsky & Potsdam already showed, this prediction is wrong; LDA is only possible in Tsez if the overt DP in the embedded clause, whose features are expressed on the matrix verb, bears absolutive case—not if it bears, e.g., dative (20a) or genitive (20b):

(20) a. * Eni-r   [užā   **kidbe-r**   magalu ϕ-tāƛ-ru-ɬi   ] y-iy-xo.
           mother-DAT   boy-ERG **girl.II-DAT** bread(ABS) I-give-PAST.PRT-NMZ   II-know-PRES
           Intended: 'The mother knows that as for the girl, the boy gave bread to her.'
      b. * Eni-r   [už-ā   **kidbe-s**   magalu   b-āc'-ru-ɬi   ] y-iy-xo.
           mother-DAT   boy-ERG **girl.II-GEN** bread(ABS) III-eat-PAST.PRT-NMZ   II-know-PRES
           Intended: 'The mother knows that as for the girl, the boy ate her bread.'
                                                                        [*Polinsky & Potsdam 2001:606–607*]

On a "topic-doubling" approach, there should be nothing wrong with such a structure:

(21) a. Eni-r   [$_{TopP}$ ***pro*$_k^{ABS}$** [$_{TP}$ užā   **kidbe-r$_k^{DAT}$** magalu ϕ-tāƛ-ru-ɬi   ]]
         mother-DAT   **PRON.II** boy-ERG **girl.II-DAT** bread(ABS) I-give-PAST.PRT-NMZ
         y-iy-xo.
         II-know-PRES

b. Eni-r　　　　　[TopP **pro**$_k^{ABS}$ [TP už-ā　　**kidbe-s**$_k^{GEN}$ magalu　　b-āc'-ru-łi　　　]]
　　mother-DAT　　**PRON.II**　　boy-ERG **girl.II-GEN** bread(ABS) III-eat-PAST.PRT-NMZ
　　y-iy-xo.
　　II-know-PRES

One way to try to handle this is to say that the clause-peripheral *pro* and the coindexed overt DP are base-generated together—e.g. in a "Big DP" structure (Arregi & Nevins 2012, Torrego 1988, Uriagereka 1995)—and that the overt DP and *pro* undergo case concord within this base-generated structure, prior to movement of the latter to its clause-peripheral position. But if this were so, there would be no remaining need for the moving *pro* to check its case features against anything in the matrix clause, which predicts that φ-agreement between the matrix v^0 and this *pro* would once again be impossible (since for B&Z, UPWARD VALUATION in φ-agreement must be parasitic on a DOWNWARD VALUATION case-checking relation with the matrix v^0). Conversely, if Tsez allowed a DP to be assigned case multiple times (cf. "case-stacking"; Pesetsky 2013, Richards 2007, 2012, Yoon 1996, 2004), structures like (20a–b) would once again be expected to be grammatical (since *pro* could be assigned dative or genitive in its "Big DP" base position, followed by that case being overwritten by absolutive in the clause-peripheral landing site).

While it provides no help regarding the facts in (20a–b), let us say a bit more regarding this possibility of a "Big DP" style derivation, in anticipation of the other issues enumerated below. For several of these issues, the problem B&Z's account faces is one of overgeneration: it predicts grammaticality for structures that are not in fact grammatical (as in (20a–b)). For the "Big DP" derivation to relieve such problems, it is not enough that it be possible; it must be the *only* possibility. But it is not clear, once we allow *pro* topics, how one would block *pro* as a hanging topic, base-generated in [Spec,TopP]. The analogy with the "Big DP" hypothesis, put forth to handle clitic doubling, does not seem to help, either: in "Big DP" treatments of clitic doubling, it is the overt, lexical noun phrase that undergoes subsequent movement operations, not the clitic; the latter, at most, affixes to the nearest verbal host (see also Iatridou 1995). Since *pro* assumes the role of the clitic here, there does not seem to be a way to force its movement to [Spec,TopP] other than by stipulating that *pro* can serve as a topic in Tsez—which in turn, predicts that base-generated *pro* topics would be fine.

Coupled with the case-related problems the "Big DP" style derivation would face (which would persist even if it were the only possible derivation), we think there is sufficient reason to set aside this kind of derivation for the remainder of the discussion.

The second problem faced by B&Z's analysis is that coindexation is not clause-bounded. Again, this can be seen generally (22) as well as in "topic-doubling" contexts (23):

(22)　**Every boy**$_k$ thinks [that the tooth fairy will come to visit **him**$_k$].

(23)　As for **this boy**$_k$, I think [that the tooth fairy will come to visit **him**$_k$].

This is markedly not what one finds when it comes to LDA in Tsez. As Polinsky & Potsdam showed, LDA in Tsez *is* clause-bounded. Configurations analogous to (22–23) are illicit:

(24)　Babir [enir　　[užā **magalu**　　　bāc'rułi] b-iyxosi-łi　　　] **r-/*b**-iy-xo.
　　father　mother　boy **bread.III.ABS** ate　　　III-know-NMLZ **IV-/*III**-know-PRES
　　'The father knows [the mother knows [the boy ate bread]].'　　[*Polinsky & Potsdam 2001:618*]

For Polinsky & Potsdam, this follows directly from the fact that all movement in Tsez is clause-bounded (Polinsky & Potsdam 2001:590–603), and therefore so is the (covert) movement of the absolutive agreement target to [Spec,TopP].

Once again, on a "topic-doubling" approach, there should be nothing wrong with such a structure:

(25) Babir [TopP **pro_k** [TP enir [užā **magalu_k** bāc'rułi] b-iyxosi-łi]]
father **PRON.III** mother boy **bread.III.ABS** ate III-know-NMLZ
b-iy-xo.
III-know-PRES

The third problem faced by B&Z's analysis is island-(in)sensitivity. Coindexation is not island-sensitive, in the general case (26) or in "topic-doubling" contexts (27):

(26) **Every painter_k** thinks that [**he_k** and Picasso] are the two greatest ever.

(27) As for **this painter_k**, I'm told that [**he_k** and Picasso] are the two greatest ever.

But LDA in Tsez *is* island-sensitive. Below, we present three examples of island violations: a coordinate structure, a relative clause, and an adjunct clause. In each of these, LDA is categorically impossible, contrary to the expectations created by B&Z's analysis.

In (28a), the absolutive argument in the embedded clause consists of two coordinated DPs, in noun-class *II* and noun-class *I*; the noun-class of the entire coordination is *I.plural*. The matrix verb *iy* ("know") can agree with the I.plural coordinate DP, but it cannot agree with either of the conjuncts in the coordination. Meanwhile, as (28b.i) and (28b.ii) show, there is nothing on B&Z's account that would rule this out.

(28) a. Učitele-r **b-/*y-/*φ**-iy-x [**Pat'i-n** ʕ**ali-n** hič'č'a
teacher-DAT **I.PL-/*II-/*I**-know-PRES **Fatima.II(ABS)-AND** **Ali.I(ABS)-AND** most
ʕaq'luyaw yāł-ru-łi].
clever be.PRES-PAST.PRT-NMZ
'The teacher knows that Fatima and Ali are the smartest.'

b. i. Učitele-r **y**-iy-x [TopP **pro_k** [TP **Pat'i_k-n** ʕ**ali-n**
teacher-DAT **II**-know-pres **PRON.II** **Fatima.II(ABS)-AND** **Ali.I(ABS)-AND**
hič'č'a ʕaq'luyaw yāł-ru-łi]].
most clever be.PRES-PAST.PRT-NMZ

ii. Učitele-r **φ**-iy-x [TopP **pro_j** [TP **Pat'i-n** ʕ**ali_j-n**
teacher-DAT **I**-know-pres **PRON.I** **Fatima.II(ABS)-AND** **Ali.I(ABS)-AND**
hič'č'a ʕaq'luyaw yāł-ru-łi]].
most clever be.PRES-PAST.PRT-NMZ

Similarly, in (29a), the putative absolutive agreement target ħ*alti* "work.III(ABS)" is in a relative clause; LDA is impossible, which is unexpected if it had the structure shown in (29b):

(29) a. [Nesis-tow   ħ**alti**   b-āy-ru   ] šibaw ustare-s   rok'-ƛor
        him.GEN.I-EMPH **work.III(ABS)** III-make-PAST.PRT   every master-GEN.I heart-upon
        r-/*b-ay-xo.
        IV-/*III-come-PRES
        'Every master remembers (the place) where he did his work.'

    b. [TopP ***pro*k**   [TP Nesis-tow   **ħalti**k   b-āy-ru   ]] šibaw
         PRON.III   him.GEN.I-EMPH **work.III(ABS)** III-make-PAST.PRT   every
        ustare-s   rok'-ƛor   b-ay-xo.
        master-GEN.I heart-upon **III**-come-PRES

Finally, in (30a), the putative absolutive agreement target ƛ*irba* ("guest.I(ABS)") occurs inside an adjunct clause, and LDA is again impossible. As shown in (30b), B&Z's analysis predicts that such a structure would be possible. (Note that *šida* "why" in (30) is the matrix question-word, and not part of the periphery of the embedded clause.)

(30) a. [ƛ**irba**   debe-r φ-esu-nāy] šida mi   **r-/*φ-**iy-r-inč'u?
        guest.I(ABS) 2sg-LAT I-find-COND   why 2sg.ERG **IV-/*I-**know-CAUS-PAST.EVID.NEG
        'If you noticed the guest why did you not make that known?'

    b. [TopP ***pro*k**   [TP ƛ**irba**k   debe-r   φ-esu-nāy   ]] šida mi
         PRON.I   **guest.I(ABS)** 2sg-LAT I-find-COND   why 2sg.ERG
        φ-iy-r-inč'u?
        I-know-CAUS-PAST.EVID.NEG

It is clear that Tsez LDA is decidedly island-sensitive, which is inconsistent with B&Z's analysis.

The fourth problem faced by B&Z's analysis concerns binding condition C. Assuming the prolepsis account proposed by B&Z, Tsez LDA is really agreement between the matrix verb and a base-generated pronoun. This base-generated pronoun, however, can determine agreement with the matrix verb only under certain conditions—namely, when the "coindexed" R-expression is contained in the complement clause in what appears to be the absolutive position. As noted above, such a restriction on co-indexation is surprising in and of itself; but even more troubling, the lexical DP in the complement clause ends up being c-commanded by the proleptic pronoun—which is a condition C violation (see also Polinsky & Potsdam 2001). There is considerable independent evidence that Principle C plays an active role in Tsez syntax (see Polinsky 2014, Polinsky & Potsdam 2001), and so its selective violation in the context of LDA would be unexpected.

The next problem faced by B&Z's analysis has to do with the idea that a pronominal topic binds a fully specified lexical DP in argument position. Such a configuration would be highly unusual, and cannot be posited without careful motivation. What B&Z propose is that the topic is expressed by a null pronominal, which would render this configuration an instance of *topic-drop*. Topic-drop is probably not a homogeneous phenomenon; it may subsume both base-generation and movement (Erteschik-Shir 2007, Frascarelli 2007, Frascarelli & Hinterhölzl 2007, Huang 1984, Reinhart 1981, Rizzi 1986, Saito 2007, a.o.). What is crucial for the discussion here is that, regardless of the licensing conditions on the null pronominal, that pronominal has to be *identified* (Rizzi 1986). Such an identification and interpretation is discourse-related, bound to an already available topic in the context. The relevant context could be supplied either by the general encyclopedic knowledge

shared in the speech act, or by the preceding discourse. The preceding-discourse identifier could be either in a separate utterance prior to the one with the null pronominal, or a constituent located in a structurally higher position; the identifying expression never appears in a structurally lower position. But that is exactly what B&Z's proposal entails in Tsez. In other words, even if the proposal were correct on all other counts, it achieves its goal by turning the established theory of information structure on its head.

Relatedly, the *pro* topic that B&Z posit would be the only instance in the language where *pro* does not alternate with an overt DP. This, too, is at odds with the facts: Tsez is certainly a pro-drop language; but anywhere where *pro* shows up, an overt form is also possible.

To summarize, there are several problems facing B&Z's analysis of long-distance agreement in Tsez, and their analysis makes incorrect predictions which we have discussed throughout this sub-section. Our conclusion is that the Tsez facts strongly favor the standard, UPWARD VALUATION approach—not only over DOWNWARD VALUATION in its simple form (e.g. Zeijlstra 2012), but also over B&Z's "hybrid" version.

4.2. Basque LDA revisited

"Substandard" Basque allows finite agreement in a given clause to be controlled, under certain circumstances, by the features of an argument in an embedded clause (Etxepare 2006). There are actually two constructions that realize this pattern; let us concentrate here on the one Preminger (2009) dubs the *adpositional construction*, exemplified in (31):

(31) [**Harri   horiek**   altxa-tze-n] probatu [d-   **it**-   u- zte]$_{aux}$.
         stone(s) those$_{pl}$(ABS) lift-NMZ-LOC   attempted 3.ABS- **pl.ABS**- √- 3pl.ERG
      'They have attempted to lift those stones.'
      (subject is [*pro*-3pl.ERG])   [*Etxepare 2006*]

In this construction, the embedded clause is introduced by the locative adposition *-n*, which itself selects a nominalized clause headed by *-tze*.

The exemption for UPWARD VALUATION under B&Z's proposal allows it precisely when the two elements that enter into UPWARD VALUATION are also related by a (possibly singleton) sequence of DOWNWARD VALUATION relations. For the construction in (31), B&Z posit the following series of DOWNWARD VALUATION relations, to facilitate the UPWARD VALUATION relation between the embedded absolutive argument and the matrix auxiliary:

(32) a. *-tze* to the embedded DP argument: assignment of absolutive case

      b. matrix v^0(=the auxiliary) to *-tze*(P): assignment of absolutive case

There are at least four reasons why this fails as an account of the Basque facts. First, the assumption (embodied by (32a)) that embedded objects in a structure like (31) receive their case from a functional head like v^0 is problematic. This is discussed by Preminger (2011b:929–930), and we reproduce an abbreviated version here. The crucial fact is that embedded dative arguments can co-occur with embedded absolutive arguments in this construction, and when they do, LDA of the kind seen in (31) is blocked:

(33) [[**Lankide-e-i**]$_{DAT}$ [**liburu   horiek**]$_{(ABS)}$ irakur-tze-n   ] probatu   [d-
      colleague(s)-ART$_{pl}$-DAT book(s) those$_{pl}$ read-NMZ-LOC   attempted 3.ABS-

      ϕ/*it-   u- (z)te]$_{aux}$.
      sg/*pl.ABS- √ - 3pl.ERG

      'They have attempted to read those books to the colleagues.'

      (subject is *pro*<3pl.ERG>)   [*Preminger 2009:640*]

That LDA is impossible in (33) indicates that the dative DP is indeed located higher than its absolutive co-argument. Given this, and given that *-tze* is higher than both arguments, the dative should equally intervene in the assignment of absolutive to the object. On this, B&Z say: "Even though the absolutive object may still have its case feature checked against *v* (as absolutives are fine in these constructions), the intervening dative interrupts the valuation relationship between the embedded absolutive DP and the nominalizing head realized by *-tze*" (B&Z:33). This seems like an acknowledgement of the problem, presented with no solution beyond the observation that it is so.

   There is, of course, copious evidence that the assignment of case is sensitive to locality—e.g. the inability of *believe* to assign accusative case to *him* in (34a), in comparison with (34b):

(34) a. * Mary believes that John is fond her$_{ACC}$.

   b.   Mary believes him$_{ACC}$ to be nice.

B&Z explicitly assimilate the treatment of case assignment to that of agreement, as evidenced by their discussion of the multiple-nominatives construction in Japanese as evidence of *Multiple Agree* (B&Z:4–5), making this result—that case assignment is not sensitive to an intervening dative even when φ-agreement is—more puzzling still.[7]

   The conclusion is that absolutive in Basque cannot generally come from a (VP-external) functional head. A more successful alternative, as far as the distribution of absolutive in Basque is concerned, is a configurational approach like that of Marantz (1991), where absolutive is assigned to any noun phrase that does not c-command another noun phrase bearing non-quirky case (ergative or absolutive) in the same local domain (see also McFadden 2004, Preminger 2014). Regardless of whether one adopts this particular alternative, however, (32a) is problematic.

   The second problem faced by B&Z's analysis concerns the status of *-tze*. The standard view is that *-tze* is a nominalizer, on par with English gerund morphology (see, e.g., Artiagoitia 2003:737ff., Trask 2003:167). This is also the view adopted by Preminger (2009) in his analysis of Basque LDA. B&Z depart from this analysis, however. They analyze *-tze* as "a variant of v^0, thus able to assign absolutive case, but that given its nominal nature it also bears its own uninterpretable Case feature" (B&Z:32). This, however, cannot be the case. What it means for something to be (a variant of) v^0 is that it is a verbalizer, assigning the category 'verb' to its complement (see, e.g., Marantz 1997). But if the result of affixation of *-tze* is nominal, the result must be headed by n^0, not v^0. All evidence suggests that this is indeed so: *-tze* can combine with the article (e.g. *-tze-a*, in the absolutive singular), as well as various postpositions.

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   [7]We do not intend this statement as an endorsement of *Multiple Agree*; see Haegeman & Lohndal 2010 for arguments against it. Our point, here, is merely that B&Z (contrary to, e.g., Bobaljik 2008, Preminger 2014) argue for a single type of structural relation underlying both φ-agreement and case.

Of course, the complement of this n^0 may *contain* an instance of v^0. This means that the lexeme *-tze* might be the spellout of n^0 (as assumed in Preminger 2009), or it could be the spellout of v^0 when the latter has been selected by n^0 (and the spellout of n^0 itself would then be null). All of these do not change the basic fact that if the embedded structure in (31) contains a v^0, it is in addition to— and distinct from—the n^0 that it unquestionably contains:

(35)
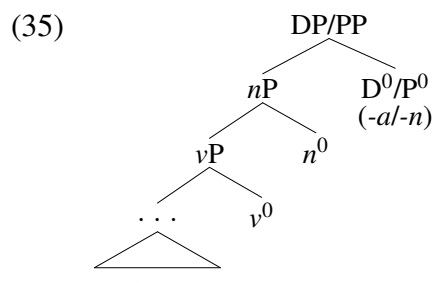
Once we have clarified the status of *-tze* nominalizations, it becomes evident that B&Z's (32a) and (32b) actually fail to overlap. The former involves agreement between v^0 and the embedded object; the latter involves agreement between some matrix case assigner and n^0 (or D^0). This means that the embedded object and the matrix auxiliary are no longer part of the same "*Upwards Agree-chain*" and so should not, according to B&Z's (3), be able to agree in φ-features.[8]

The third and fourth problems faced by B&Z's analysis concern (32b), and the assumption that the *-tze* nominalization in the adpositional construction is assigned case by the functional structure of the higher clause. First, for this to work, B&Z must assume that a phrase headed by the locative *-n* requires case from the outside (which they explicitly state; B&Z:32). This is an untenable assumption: *-n* locatives can be added to clauses that already contain canonical absolutive, dative, and ergative arguments. This can be seen even within the adpositional construction itself:

(36) [Liburu-a   irakur-tze-n   ] saiatu **dira**   *pro*-3pl.ABS.
      book-ART$_{sg}$(ABS) read-NMZ-LOC   tried **3pl.ABS.**$\sqrt{}$
      'They tried to read the book.'   [*Etxepare 2006*]

In (36), the embedded absolutive argument (*liburu-a* "book-ART$_{sg}$(ABS)") is singular; the plural features on the matrix auxiliary come from the matrix subject, which is *pro*-3pl.ABS (note the interpretation of the sentence). Agreement with the embedded absolutive is ruled out, here, since locality considerations force agreement with the structurally-closer matrix absolutive; the point, however, is that absolutive case is already assigned to *pro*, and so it cannot be that the *-tze-n* clause requires absolutive case in its own right.

Further still, if the *-tze* nominalization is assigned case by the functional structure of the higher clause, one would expect to find not only "absolutive" instances of the adpositional construction, but "dative" ones too—just like in the *case-marked construction* (Preminger 2009). In these hypothetical cases, the *-tze* nominalization would be assigned *dative*, rather than absolutive, by the functional structure of the higher clause (again, the equivalent of this is well-attested for the

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[8]One could, of course, posit that the n^0 in the *-tze* area and the immediately-c-commanded v^0 stand in a DOWNWARD VALUATION agreement relation in some feature or other. Note, however, that the feature in question cannot be selectional, since such a feature would reside on the higher of the two (n^0), and be checked by the lower (v^0). Thus, it would lead to the kind of ad hoc, unfalsifiable stipulation discussed in §3.3.

case-marked construction). Given B&Z's (32b), we would expect such "dative" versions of the adpositional construction, where the features of an embedded argument would control dative (rather than absolute) agreement morphology on the matrix auxiliary. To the best of our knowledge, however, such examples are unattested (with absolutive *or* dative embedded arguments). It therefore appears that it is B&Z's proposal, not the standard, UPWARD VALUATION one, that is "not directly able to account for the case-based restrictions on Basque LDA" (B&Z:32).[9]

To summarize, we have seen several problems facing B&Z's analysis of long-distance agreement in Basque. The conclusion, as in §4.1, is that the facts strongly favor the standard, UPWARD VALUATION approach—not only over DOWNWARD VALUATION in its simple form (e.g. Zeijlstra 2012), but also over B&Z's "hybrid" version.

5. Further empirical evidence against DOWNWARD VALUATION: Algonquian

Agreement with a DP located at the left periphery of a complement clause is not unique to Tsez (§4.1); similar patterns are observed in several other Nakh-Dagestanian languages (see below), and in some Algonquian languages. For example, Branigan & MacKenzie (2002) present a pattern of LDA in Innu-Aimûn (Montagnais), where the DP in the complement clause determines long-distance object agreement on the matrix verb. Such agreement is possible as long as the embedded DP is interpreted as the topic of that complement clause, just as in Tsez. Unlike Tsez, LDA in Innu-Aimûn can be determined by an embedded subject or object, as long as the relevant DP is in the topic position. (In order to follow the examples below, it is necessary to keep in mind that a matrix verb that selects a complement clause can either show what Alqonquianists call the TI agreement, reflecting agreement with the entire complement clause, illustrated in the (a) examples; or object agreement with the embedded subject or the embedded direct object, illustrated in the (b) examples.)

(37) OPTIONAL AGREEMENT WITH THE EMBEDDED SUBJECT
    a. ni-tshissenit-en [Pûn kâ-mûpisht-âshk].   (Innu-Aimûn)
       1-know-TI   Paul PRT-visited-2/INV
       'I know that Paul visited you.'
    b. ni-tshissenim-âu [Pûn kâ-mûpisht-âshk].
       1-know-3   Paul PRT-visited-2/INV
       'I know that Paul visited you.'   [*Branigan & MacKenzie 2002:389, ex. (5)*]

(38) OPTIONAL AGREEMENT WITH THE EMBEDDED OBJECT
    a. ni-tshissît-en   [kâ-uîtshi-shk   Pûn utâuia].
       1-remember-TI   PRT-helped-3/2pl Paul father
       'I remember that Paul's father helped you.'
    b. tshi-tshissît-âtin   [kâ-uîtshi-shk   Pûn utâuia].
       2-remember-1/2pl   PRT-helped-3/2pl Paul father
       'I remember that Paul's father helped you.'   [*Branigan & MacKenzie 2002:389, ex. (4)*]

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[9]B&Z originally level this criticism against standard, UPWARD VALUATION analyses of LDA in Basque: "the [UPWARD VALUATION] approach is not directly able to account for the case-based restrictions on Basque LDA." We are not sure what they have in mind, though, given that Preminger 2009 proposes precisely an UPWARD VALUATION analysis of these facts, one which successfully predicts the various case interactions in these two constructions.

Branigan & MacKenzie (2002:389–395) present arguments against a prolepsis analysis (a "prothetic object" analysis, in their terminology), which echo the arguments against this analysis in Tsez (§4.1, and references therein). For example, they indicate that Condition C effects are active in Innu-Aimûn; any version of a proleptic analysis (either placing a topic *pro* in [Spec,TopP] of the complement clause, or locating the proleptic pronoun in the matrix clause) would lead to a Condition C violation. The end result is that the agreed-with DP is indeed within the complement clause, and is not doubled by a silent topic.[10]

Rejecting the prolepsis analysis leaves us with some version of an account that establishes a feature-checking relation between the matrix verb and the LDA-triggering DP. There are two ways to establish such a relation, either via case licensing, or via the checking of an A-bar feature such as [topic], [focus], or [*wh*]. Branigan & MacKenzie present an explicit argument against a case-checking relation between the matrix verb and the embedded DP:

> "Only if the target raises to Spec,CP should agreement be possible. But DPs with unchecked Case features cannot raise to a Spec,C position, because the ultimate result will be a non-uniform chain. Therefore, they can be checked by a matrix probe only if there is no CP phase in place, as in English ECM constructions. In contrast, DPs with an A-bar feature [...] may raise freely to Spec,C to become accessible to external probes."

[*Branigan & MacKenzie 2002:397*]

Branigan & MacKenzie conclude that the object agreement morphology of Innu-Aimûn transitive verbs has a dual function: it signals a case-checking relation between the verb and a clausemate accusative object, and it functions "altruistically" to signal that an embedded clause contains a topicalization structure. Under the latter scenario, the result is a configuration very much like the one seen in Tsez, where agreement is established following UPWARD VALUATION, and the optionality of that agreement is accounted for by the absence vs. presence of topicalization in the embedded clause.

The account of LDA put forth by Branigan & MacKenzie relies on the availability of an A-bar feature that motivates the raising of the agreed-with DP to the left periphery of the complement clause. Since A-bar feature features may vary, this makes a prediction that LDA of the Tsez or Innu-Aimûn type can be triggered by DPs bearing different A-bar features, not just [topic] (see Polinsky 2014: "Agreement" for further discussion). This prediction is confirmed by the cross-linguistic distribution of LDA. In Passamaquoddy, another Algonquian language, LDA is structurally quite similar to what is observed in Innu-Aimûn, but is determined by a DP that bears the feature [focus], rather than [topic] (Bruening 2001). Likewise, in Khwarshi, a Nakh-Dagestanian language closely related to Tsez, LDA is established between the matrix verb and a focus (or a contrastive focus) in the next embedded clause (Khalilova 2009:383–390). In another related language, Hinuq, LDA is triggered by the absolutive DP which can be interpreted as topic or as focus (Forker 2013:634–638). Such variation in A-bar features of the embedded DP would be unexpected or arbitrary under any analysis that posits a case-licensing relation between the matrix probe and a lower DP (as B&Z's approach would have to do).

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[10]While the arguments against prolepsis in Tsez and Innu-Aimûn are quite solid, that does not preclude the possibility of such prolepsis in other languages, even closely related ones. For example, there is good evidence for prolepsis in Blackfoot, a related Algonquian language (Frantz 1978, 1980, Polinsky 2003).

6. On the *Case-Linked Agree generalization*

B&Z present, as an advantage of their proposal, the fact that it derives what they call the *Case-Linked Agree generalization*:

(39)   Case-Linked Agree generalization   [*B&Z:19*]
       F may φ-Agree with a DP/NP that it c-commands **iff** F also stands in a Case-Agree relation
       with that DP/NP (otherwise, F must φ-agree with a c-commanding DP/NP).

In this section, we will argue that this target generalization does not hold.

Both Tsez and Basque, discussed in §4.1–§4.2, counterexemplify (39). As shown in §4.1, the analysis that places a null *pro* in the periphery of the embedded clause in Tsez LDA cannot be maintained. Along with the other arguments put forth by Polinsky & Potsdam (2001) themselves, against any matrix-clause representation of the downstairs absolutive agreement target, we arrive at the conclusion that examples like (40) involve direct agreement between an element in the matrix clause and the embedded absolutive DP, *magalu* ("bread.III(ABS)"):

(40)   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*]

However, it is also clear that absolutive case is not assigned to *magalu* ("bread.III(ABS)") by an element in the matrix clause; the embedded clause is an independent case domain, with its own v^0 and T^0 heads, and its own ergative and absolutive arguments. Thus, we have an instance of agreement between a head (say, the matrix v^0) and a nominal that it c-commands, even though that nominal could not have possibly received case from that head—showing that (39) is incorrect.

Similarly, the adpositional construction in Basque, discussed in §4.2, involves a direct agreement relation between an auxiliary verb and an absolutive DP contained in a nominalized embedded clause:

(41)   [Miren-entzat **harri   horiek**   altxa-tze-n] probatu [d-   **it**-   u- zte]$_{aux}$
       Miren-BEN   **stone(s) those$_{pl}$ABS** lift-NMZ-LOC   attempted 3.ABS- **pl.ABS**- √- 3pl.ERG
       'They have attempted to lift those stones for Miren.'
       (subject is *pro*<3pl.ERG>)   [*Preminger 2009:641*]

We have seen, in §4.2, that there is no "case chain" that would connect the matrix auxiliary to the embedded absolutive DP by a series of case-assigners/assignees. And certainly, the matrix v^0 does not assign case directly to the absolutive argument in an embedded clause, one that has its own v^0. (Moreover, as noted above, there is reason to doubt that even the more local instance of v^0 assigns absolutive case in Basque.) Consequently, data like (41) furnish another instance of agreement between a head (in this case, the matrix auxiliary) and a nominal that it c-commands (the embedded absolutive DP), where case could not have possibly been assigned to the latter by the former.

The Innu-Aimûn data presented in §5 also argue against the Case-Linked Agree generalization. We have already rehearsed the arguments, put forth by Branigan & MacKenzie (2002), that the embedded DP which the matrix verb agrees with cannot be case-licensed in situ by that verb, and cannot be case-licensed in [Spec,CP].

Furthermore, recall that object agreement on the Innu-Aimûn matrix verb can be controlled by the embedded subject *or* the embedded object, depending on which of these arguments is a topic. Given that there is no evidence that there is a special case assigned to topics in Innu-Aimûn, this means that the same matrix verb is expected to license two different cases in the same configuration. And note that, if there were a special case assign to topics, it would render the topic in question a hanging topic, which would then undermine B&Z's account in the same manner already explicated in §4.1 for Tsez.

All told, we have seen evidence that B&Z's *Case-Linked Agree generalization*, given in (39), is untenable. Therefore, to the extent that (39) is derivable from B&Z's proposal, that constitutes an additional argument against the proposal itself.

7. The crosslinguistic landscape

In this section, we address the broader crosslinguistic predictions of each approach to the directionality of valuation in φ-agreement, and show that the attested picture argues against DOWNWARD VALUATION.

Consider the following two surface-representations; in each, H^0 is a head that agrees in φ-features with some DP α (not shown in these schemata), and Pred is the predicate that assigns α its thematic role.[11] The brackets represent clause boundaries (finite or non-finite). In (42), Pred is in a lower clause than H^0, whereas in (43), it is in a higher clause than H^0.

(42) $[\dots H^0_{(\text{agrees with } \alpha)} \dots [\dots \text{Pred}_{(\alpha\text{'s } \theta\text{-assigner})} \dots] \dots]$

(43) $[\dots \text{Pred}_{(\alpha\text{'s } \theta\text{-assigner})} \dots [\dots H^0_{(\text{agrees with } \alpha)} \dots] \dots]$

Now, neither (42) nor (43) are by any means *common*; by far the most common situation is for H^0 and Pred to be clausemates (i.e., for a head to agree with an argument of a predicate in its own clause). But (42) is still relatively well-attested: in addition to LDA in Tsez and several other Nakh-Dagestanian languages, in Basque, in Innu-Aimûn, and in Passamaquoddy—all of which were discussed above—one finds similar patterns in Latin (Haug 2014, Haug & Nikitina 2012), in Romanian and Greek (Alexiadou et al. 2012), and elsewhere.[12]

To the best of our knowledge, however, the configuration in (43) is completely unattested. There arguably are instances of agreement between a head H^0 and a DP located in a higher clause; but in all such cases that we know of, the DP in question receives its thematic role in the clause where H^0 is located (or lower still). This is what is observed in ECM (or raising-to-object) constructions in which there is agreement on the downstairs predicate. An example is given in (44):

(44) Min **ehigi₁-ni** [bügün *t₁* kyaj-yax-**xyt**   dien] erem-mit-im.   (Sakha)
      I   **you-ACC** today   win-FUT-**2pl.SUBJ** that hope-PST-1sg.SUBJ
      'I hoped you would win today.'   [*Vinokurova 2005:369*]

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[11]If one adopts the view articulated in, e.g., Hornstein 2001, whereby phrases can receive multiple thematic roles, let Pred in (42–43) be the predicate that assigns α its *first* (i.e., lowest) thematic role.

[12]See Preminger 2011b:919–926 for one possible explanation for why cases like this are still somewhat rare.

Let us assume that in (44), *ehigi-ni* ("you-ACC") is located in the matrix clause (though see Baker & Vinokurova 2010 for a more nuanced view). Crucially, though, *ehigi-ni* is an argument of a predicate *in the embedded clause* (idem). Thus, examples like (44) do not instantiate the pattern in (43).

We think that this result—that (42) is attested, while (43) is not—represents perhaps the strongest kind of evidence in favor of UPWARD VALUATION, and against DOWNWARD VALUATION in all of its forms. The reason is as follows. Assuming arguments cannot be merged any lower than their theta positions (or their first theta positions; see fn. 11), a theory that allows only UPWARD VALUATION categorically excludes (43), since in this case, there will be no copy of the argument α that is c-commanded by the head H^0. These assumptions, then, yield exactly the attested crosslinguistic picture.

But once we allow DOWNWARD VALUATION, both (42) and (43) should in principle be possible. The possibility of (43), on this view, is trivial. As for (42), it is made possible because syntactic movement is upward; and unlike head-movement, which is extremely local, phrasal movement could always bring the argument α into a position c-commanding the head H^0. Further stipulations could of course be added to block (43)—e.g. CPs block DOWNWARD VALUATION, lower arguments intervene, etc.; but it would remain puzzling why language-particular and construction-particular factors absolutely never conspire to alleviate these interfering factors and open the door to (43), the way they conspire, in particular cases, to permit (42).[13]

We therefore conclude that the crosslinguistic state of affairs surveyed in this section furnishes another argument in favor of a theory that allows only UPWARD VALUATION.

8. Taking stock: two limiting cases, and their consequences

In this section, we identify two limiting cases of correspondence between pairs of expressions in the surface structure, and show that they cannot be reduced to one another. We then discuss the consequences of this fact for proposals to unify other phenomena with verb-argument agreement, and how those proposals should be judged.

We take as our starting point the fact that agreement between a verb and its argument(s) is a purely morphosyntactic phenomenon. The occurrence of agreement in an individual utterance cannot be reduced to the needs of the interfaces that morphosyntax has with other cognitive modules, be they linguistic or extralinguistic (see Preminger 2014).[14]

However, it is not the case that all instances of apparent correspondence between pairs of expressions in natural language can be so described. Consider the following hypothetical dialog between two speakers, A and B:

(45)   A: I met the most fascinating woman yesterday.
         B: Oh yeah? Who was she/*he?

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[13]To cite one example: it is not clear what would block DOWNWARD VALUATION in (43) if the lower, embedded clause—containing H^0—was a VS unaccusative within an ECM/raising-sized agreeing infinitive.

[14]This leaves open the possibility that the existence of the verb-argument agreement mechanism, generally speaking, serves some non-grammatical purpose (e.g. reference tracking, error detection, etc.); but even if that is the case, it does not suffice to explain the obligatoriness of agreement in the individual utterance. See Preminger 2014 for discussion.

Informally, we can say that the expressions *woman* (or *fascinating woman*) in A's utterance and *she* in B's utterance stand in some sort of correspondence. The features of the former, in some sense, are the reason why the latter is *she* (and not, say, *he*). But assuming that our object of study, the grammar, is a mental entity—and that minds are confined to individual speakers—it is incoherent to speak of the grammar regulating the correspondence between *woman* in A's utterance and *she* in B's utterance. At most, what the grammar could do is regulate the correspondence between B's internal representation of A's utterance (or a subpart thereof) and the element *she* in B's own utterance.

It is equivocating, then, to speak of a "grammatical correspondence" between *woman* in A's utterance and *she* in B's utterance. Grammar has a part in mediating this correspondence (e.g. the distinction between the expressions *she* and *he* cannot be understood except in grammatical terms); but grammar alone cannot account for it. In this example, something like the pressure to have a pragmatically coherent discourse plays a crucial part, as well.

The same can arguably be said even for similar correspondence across multiple utterances by the same speaker:

(46)   I met the most fascinating <u>woman</u> yesterday. It turns out <u>she/*he</u> invented the asterisk.

On this view, the correspondence between *woman* and *she* in (46) is again pragmatic: there is a pragmatically salient individual for *she* to pick out, but (absent a richer context) there is no such individual available for *he*.

As alluded to above, these two limiting cases—verb-argument agreement on the one hand, and pragmatic correspondence on the other—cannot be reduced to one another. That is because the former cannot be reduced to semantic or pragmatic needs, and the latter cannot be afforded a purely grammatical explanation.

Consequently, given some third type of correspondence phenomenon C, it is not the case that reducing C to verb-argument agreement or to pragmatic correspondence stands to automatically reduce the amount of machinery required in the overall theory. For example, let us take as C the phenomenon of correspondence in φ-features between a bound indexical pronoun and its antecedent. One may attempt to reduce this C to verb-argument agreement (as Kratzer 2009 has). Or, one may claim that it arises in a manner similar to the correspondence between *woman* and *she* in (45–46) (as Sudo 2012 has).[15] But given our two limiting cases, neither position stands to reduce the total number of correspondence mechanisms from two to one, since the two limiting cases cannot be reduced to one another.

Thus, a proposal to unify some correspondence phenomenon C with verb-argument agreement cannot be favored, a priori, simply on the grounds that it reduces the total number of mechanisms required to explain surface correspondence—unless it is also shown that the type of mechanism underlying (45–46) cannot account for the phenomenon in question.

Against this backdrop, it is not at all clear that B&Z's proposal—even if it were successful— would serve to reduce the amount of machinery required in the overall theory.

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[15]To be clear, we are using this phenomenon here to illustrate the logic of the argument; in the context of this discussion, we are not committing to one analysis of it over the other.

9. Conclusion

This paper has addressed the structural relationship necessary to establish agreement. In particular, we have evaluated two possible structural relationships: one in which the constituent bearing the semantically meaningful features ("agreement controller", "agreement trigger", or "goal") is lower than the constituent that registers those features via agreement ("agreement bearer", "agreement target", or "probe"), and one in which it is higher.

Until recently, most approaches to agreement have assumed that the agreement bearer must be structurally higher than the controller, and the process of transmitting feature values to the agreement bearer could therefore be described as UPWARD VALUATION. Above, we have discussed and evaluated the recent proposal by Bjorkman & Zeijlstra (2014), which argues for the opposite: DOWNWARD VALUATION. On their conception, the default direction of valuation is always from the higher agreement controller to the structurally lower agreement bearer; nevertheless, UPWARD VALUATION is still allowed under specific conditions. The resulting approach to agreement is therefore a hybrid one, with a specified condition for UPWARD VALUATION, and DOWNWARD VALUATION as the elsewhere case. This proposal, based on a fairly wide range of data, seeks to unify several phenomena involving correspondence between pairs of position in the syntactic structure, which would be a welcome result if the general approach withstood scrutiny.

However, there are a number of analytical and empirical problems with this hybrid approach, which we have discussed in this paper. We would like to emphasize that it was not our goal to analyze each and every aspect of Bjorkman & Zeijlstra's proposal; the current paper is not intended as a point-by-point rebuttal, but rather as a discussion of those aspects of language design that a theory of agreement cannot avoid accounting for. We have also discussed, very briefly, phenomena that successful theories of agreement should probably *avoid* accounting for—e.g. the kind of pragmatic correspondences noted in §8.

From an architectural standpoint, a more restrictive theory is always preferable, which makes hybrid theories particularly challenging to defend. A hybrid theory is desirable if it reduces the theoretical machinery at hand and if it allows us to account for a broader range of facts. The hybrid theory of agreement put forth by Bjorkman & Zeijlstra's, however, does not achieve either of these goals. With respect to the theoretical machinery, the proposal is clearly more elaborate than a proposal that allows only one direction of valuation. Moreover, since it brings some cases of meaning-based correspondence into the fold but not others (§8), it is not clear that there is any reduction elsewhere in the theory that would mitigate this increase.

From the standpoint of empirical coverage, we have shown that the two challenging cases of long-distance agreement (LDA) in Tsez and in Basque, which have been at the center of this debate recently, can only be handled by a strict UPWARD VALUATION theory. The hybrid theory, in contrast, faces numerous problems internal to Tsez and Basque, as well as broader issues relating to the crosslinguistic typology of topic-drop and nominalizations. Additional empirical data on LDA, from Algonquian, offer further support for UPWARD VALUATION and against DOWNWARD VALUATION. The *Case-Linked Agree generalization*, presented as a benefit of the hybrid theory, has been shown to be incorrect. And perhaps most importantly, we have shown that only the strict UPWARD VALUATION theory predicts the attested crosslinguistic picture when it comes to the structural relations between the agreement bearer and the predicate that theta-marks the agreement controller.

Finally, we have also shown that not all agreement data can or should be used to adjudicate between these competing theories. In particular, we have presented three cases where the only way the data can be interpreted in favor of one approach or the other is by denying the existence of grammatical opacity, or by engaging in reanalyses that are fundamentally unfalsifiable (and therefore, do not constitute a restrictive theoretical treatment). Undoubtedly, there are other empirical domains that similarly have no bearing on debates about the direction of valuation, and we think that excluding such data from the debate is as important as finding new domains in which the relevant hypotheses can be tested.

In Preminger 2013, it was suggested that theorizers working on such phenomena as negative concord and sequence-of-tense would do well to find a new way to capture the relation underlying those phenomena—since there appeared to be irreducible differences between that relation and the relation underlying φ-feature agreement. Bjorkman & Zeijlstra push hard against this suggestion, arguing that both kinds of phenomena should be unified under the heading of 'agreement' after all. However, since the proposed unification comes at the cost of a less predictive theory of φ-feature agreement, it may be time to re-evaluate the purported link between correspondences such as negative concord and sequence-of-tense on the one hand, and agreement proper on the other.

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SVN revision code: 6440